TO READERS AND CORRESPONDENTS

OF THE

NEW-YORK JOURNAL OF MEDICINE.

With this number we commence the Twenty-second Volume (Twelfth of the New Series) of the New-York Journal of Medicine and the Collateral Sciences; and, in doing so, we embrace the opportunity offered of assuring our readers and contributors of the increasing prosperity of the work. In the history of medical periodical literature in this city, we doubt if an instance can be found where so much success, under so many embarrassing circumstances, has attended the development of a work. Based upon the only foundation which can here ensure success, an unreserved and honorable independence, its inception and growth thus far has been healthy, as is evidenced in a steadily increasing inquiry at home and abroad for the work, and a list of contributors second to no similar work published in this country. It is not for us to say whether the increasing patronage is owing to the earnest devotion of the editors and contributors to its interests, or to the peculiar advantages which it enjoys, coming as it does from the metropolis of America, or to all of these circumstances combined; but this much we can say, that the consciousness that the works meets with the approbation of those for whom it is intended, shall continue to throw around it that zeal and devotion which shall sustain, if not increase its reputation as a truthful mirror of the progress of practical medicine and surgery.

Our readers will observe that we give them in this issue 158 in place of 144 pages, the stipulated number.

The following works have been received:

To Readers and Correspondents.

A Text Book of Anatomy, and Guide in Dissections for the Use of Students of Medicine and Dental Surgery. By Washington R. Handy, M. D., Professor of Anatomy and Physiology in the Baltimore College of Dental Surgery, etc., etc. With two hundred and sixty-four illustrations. Philadelphia: Lindsay & Blakiston, 1854. 8vo, pp. 810. (From the Publishers.)


Chemistry and Metallurgy, as applied to the Study and Practice of Dental Surgery. By A. Snowden Piggot, M. D., etc. With numerous illustrations. Philadelphia: Blanchard & Lea. 1854, 8vo, pp. 516. (From the Publishers.)

An Address to the Public, in regard to the Affairs of the Medical Department of Hampden Sidney College. By Several Physicians of the City of Richmond, Va. Richmond, 1853, 8vo, pp. 59.

Valedictory Address delivered to the Graduating Class, at the 48th Commencement of the Castleton Medical College. By William Sweetser, M. D., Professor of the Theory and Practice of Medicine. Castleton, 1853, 8vo, pp. 20. (From the Author.)

The Legitimate Goal of Professional Ambition. An Address introductory to a Course of Lectures in the Medical Department of the St. Louis University. By Wm. M. McPheeters, M. D., Professor of Materia Medica and Therapeutics, delivered Oct. 31st, 1853. St. Louis, 1853, 8vo, pp. 16. (From the Author.)

Introductory Lecture, addressed to the Class of the Kentucky School of Medicine, Session of 1853-4. By H. M. Bullitt, M. D., Professor of Physiology and Pathology. Louisville, 1853, 8vo, pp. 19. (From the Author.)

The Claims of Medicine to be regarded a Science. An Introductory Lecture delivered at the opening of the Third Session of the Medical Department of the University of Nashville (21st Oct., 1853). By Paul F. Eve, M. D., Professor of Surgery. Nashville, 1853, 8vo, pp. 32. (From the Author.)

A Discourse Commemorative of the late William E. Horner, M.D., Professor of Anatomy, Delivered before the Faculty and Students of the University of Pennsylvania, October 10th, 1853. By Samuel Jackson, M. D., Professor of the Institutes of Medicine. Philadelphia: 1853, 8vo, pp. 46. (From the Author.)

Communications intended for publication, and Books for Review, should be sent, free of expense, directed to Drs. Purple and Smith, Editors of the New-York Journal of Medicine, 183 Hudson-street, New-York. Persons at a distance may direct parcels, or exchanges, (paid,) as above, under cover, to M. J. B. Bailliere, Rue Hautefeuille, Paris; or H. Bailliere, 219 Regent-street, London; or Lindsay and Blakiston, Philadelphia; or Wm. B. Ticknor & Co., Boston. The attention of Correspondents is respectfully requested to the above, as the publishers are frequently subjected to unnecessary expense for postage and carriage.

All remittances of money and letters on the business of the Journal, should be directed to the proprietors.

Particular attention is requested to the above, as parcels, communications and exchanges have failed to reach us, owing to inadvertence, or want of attention to these notices.
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ART. XIV.—A Practical Treatise on the Diseases of Children.
By J. Forsyth Meigs, M. D. Second edition, revised and enlarged. Philadelphia, 1853. 8vo, pp. 711. 130


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It is well known that different poisons act very differently upon the human body. Some act by combining directly with some of the proximate principles of the tissues, breaking up their organizations, and are hence called corrosive; others so influence the nervous system as to produce a soporific effect, and still others by decreasing vascular action, &c. The same may be said of medicinal agents. As the structure and organization of the plant is much more simple than that of the animal, it was thought that the action of poisons and medicinal agents upon living organized matter could be studied and arrived at with more precision and satisfactory accuracy when administered to the plant, than when given
to the animal. With this view, a series of experiments were commenced in the early part of September, 1851.

The first consideration was to fix upon some good means of introducing poisons and medicines into the circulation of the plant gradually, with as little organic lesion as possible. For this purpose I prepared a series of small glass pipettes or tubes, of various capacities, according to the size of the plant and the concentration of the material to be introduced. The drawing in the margin (Fig. 1), represents one of these; $a, b,$ is the pipette; $d,$ a cork, inserted into the mouth; $c, b,$ represents one end drawn out to a sharp point, leaving the orifice at $b$ very small. A small puncture is now made with a small, smooth, round, sharp awl, or other instrument, in a direction downwards, making an angle with the stem of the plant of about $15^\circ$, and perforations just beneath the inner bark. As soon as the pointed instrument is withdrawn, the capillary end of the pipette is carefully and snugly inserted into the puncture, as represented in fig. 2. The pipette is now nearly filled with the poison or medicine, as the case may be, and the cork, $g,$ inserted. The liquid material gradually passes from the tube into the plant. In Fig. 2, $h$ represents the puncture; $c,$ the capillary extremity of pipette; $f,$ the height of the material; and $g,$ the cork, which is fitted in to prevent evaporation.

Experiment I.—Selected a strong vigorous sunflower plant (Helianthus annuus,) four feet six inches high. Inserted into
the side of the stem, about midway between its top and base, a pipette of one-eighth inch bore and two inches long. The end inserted into the plant was drawn down to the size of a small knitting-needle. This end was inserted just beneath the inner bark. The tube, after being tightly fitted into the stem, was filled with concentrated sulphuric acid. This was done Sept. 6th, 11 a.m. At 1 p.m.—two hours after—the leaves in the immediate vicinity of the point where the sulphuric acid was inserted began to droop. At 3 p.m., these hung down almost in a line with the plant, and others farther removed began to show signs of the influence of the poison. At 6 p.m., one leaf below the incision, and six above it, were quite wilted, and had fallen down in the direction of the stem, being no longer able to support themselves. Four or five other leaves had commenced wilting. Death had advanced farther in the stalk and petioles than in the leaf blades.

Sept. 7th, 9 a.m.—Eight leaves above the point where poison was inserted, and three below it, were quite dead at the base of their petioles, and the whole of them were hanging down beside the stem, with the leaf blades quite wilted. The stem was quite dead to the distance of eight inches below the wound and twenty-two inches above it, and bleached to a gray white, and considerably shrunk. No sour taste could be distinguished in the dead parts. The sap gave an acid reaction with test paper. Six p.m.—The death of the stem has advanced since morning up the stem about six inches. The petioles of eight leaves are entirely dead, and bleached nearly white, and the leaf blades of the same quite wilted.

Sept. 9th, 6 p.m.—Almost entirely dead above the wound, and for eight inches below it.

Sept. 11th, 9 a.m.—Entirely dead above the wound. Death has not advanced downwards any since the 7th.

Experiment II.—Lilac (Syringa vulgaris). Sept. 6th, 11 a.m.—A branch of this plant, one inch in diameter, was sup-
plied with a tube or pipette in the same manner as the sunflower. The branch was about four feet long, several years of age, and very firm in texture. The pipette was filled with nitrate of silver. The solution was made with forty grains of the salt to an ounce of water.

_Sep. 7th, 9 A.M._—No change. _Six P.M._—No change. The leaves nearest the puncture were from two to three inches off.

_Sep. 9th, 6 P.M._—Leaves quite wilted, twelve inches above the wound. Above this they are less, yet considerably affected.

_Sep. 11th, 9 A.M._—Death advancing up the stem gradually. The whole limb is affected. The lower leaves are quite dead.

_Sep. 14th._—The whole limb quite dead.

Experiment III._—_Sep. 6th, 9 A.M._—Another branch of the lilac (Syringa vulgaris) on the same plant was supplied with a tube filled with a solution of corrosive sublimate, 10 grains to the ounce of water. The branch was of this year's growth, about 3 feet long and $\frac{1}{2}$ inch in diameter. A pipette was inserted at its base.

_Sep. 7th, 9 A.M._—The leaves just above, and nearest where the poison was inserted, had begun to wither and fall down beside the stem. The leaves affected at about 6 inches removed from where the poison was inserted. _6 P.M._—Two more leaves began to wilt since morning.

_Sep. 9th, 6 P.M._—Four of the leaves nearest the wound are quite wilted; the adjacent ones are also slightly affected.

_Sep. 11th, 9 A.M._—Death slowly but steadily advancing.

_Sep. 12th._—Leaves all wilted.

_Sep. 13th._—Branch quite dead.

Experiment IV._—Horse-chestnut (_Æsculus hippocastanum)._ _Sep. 6th, 11 A.M._—Inserted a pipette into a limb of a horse-chestnut tree, four feet from its extremity. Branch densely covered with large leaves and green fruit. Placed in the pipette 30 drops of a strong tincture of iodine.
Sept. 7th, 11 A.M.—No perceptible change in the appearance of the branch.

Sept. 8th, 9 A.M.—Slight signs of withering at the apex of the leaves on the farthest extremity of the branch.

Sept. 9th, 9 A.M.—Four of the leaves at the extremity of the branch considerably withered.

Sept. 10th, 9 A.M.—Five leaves at the extremity of branch nearly dead.

Sept. 11th, 9 A.M.—Five of the leaves at the extremity of the branch dead, and three more quite withered. Death advancing slowly towards the point where the iodine was inserted.

Sept. 12th, 9 A.M.—Appearance the same as on the 11th.

Sept. 13th, 9 A.M.—No further change, save that the leaves of the branch appear more fresh.

Sept. 14th, 9 A.M.—Branch appears to be recovering from the effects of the iodine. Leaves more healthy in appearance than on the 13th.

Sept. 20th, 9 A.M.—Branch quite recovered, where the leaves are not already dead.

Experiment V.—Stramonium (Datura stramonium). Sept. 6th, 12 M.—Inserted a pipette into a fine thrifty stramonium plant, near the base of a flower, as seen in Fig. 2. Placed in pipette a solution of sulphate of zinc, 60 grains to the ounce of water. Placed in tube 40 drops.

Sept. 7th, 9 A.M.—No perceptible change in the appearance of the plant. All the solution absorbed by the plant. Filled the tube a second time.

Sept. 8th, 9 A.M.—Slight appearance of wilting in the leaf next above the wound.

Sept. 9th, 9 A.M.—One leaf quite dead, and 3 others next above partially withered. 6 P. M.—Influence of medicine gradually advancing upwards. One more leaf and a flower affected.

Sept. 10th, 10 A.M.—The whole plant above wound quite sickly in appearance. Five leaves and one flower next above the wound dead.
Sept. 12th, 10 A.M.—The whole plant above the wound dead. Plant quite healthy below the wound.

Sept. 18th, 12 M.—Appearance of the plant about the same as on the 12th.

Experiment VI.—Castor-oil plant (Ricinus communis).

Sept. 7th, 9 A.M.—Selected four strong, healthy castor-oil plants, about four feet high. Into one was inserted a pipette, and into this 12 drops of creosote.

Sept. 8th, 9 A.M.—The leaf next the insertion of the creosote was quite withered and hung down beside the stem. The death was more perfect about the wound, and at the base of the petiole, than in the leaf blade. 6 P.M.—Four leaves were withered and two were hanging down beside the stem of the plant. The death commenced at the point where the creosote was inserted, and it gradually advanced up and down the stalk from that point with about equal rapidity.

Sept. 10th, 6 P.M.—All but the top leaves of the plant are either entirely dead or somewhat wilted. Three of the top leaves are yet unaffected.

Sept. 12th, 9 A.M.—Only one leaf on the plant unaffected.

Sept. 14th, 9 A.M.—Whole plant affected, nearly dead.

Sept. 18th, 9 A.M.—Plant dead.

Experiment VII.—Sept. 7th, 9 A.M.—Into another castor-oil plant was placed a pipette, and into this pipette 30 drops of oil of savin.

Sept. 8th, 9 A.M.—The leaf next above the point of insertion was quite dead, and had fallen down beside the stem. 6 P.M.—Death gradually advancing, both above and below the wound. Three leaves since morning have wilted and fallen down beside the stem.

Sept. 9th, 9 A.M.—The whole plant is wilting. Every leaf on the plant is affected.

Sept. 11th, 9 A.M.—Plant dead.

Experiment VIII.—Sept. 8th, 9 A.M.—Into another castor-oil plant a pipette was inserted, and into this 30 drops of oil of tansy.
Batchelder on Tracheotomy in Croup.

Sept. 9th, 9 A.M.—The leaf next above where the tansy was inserted, was quite wilted and hung down beside the stem. 6 P.M.—Death gradually advancing, both above and below the wound. Three new leaves have withered since morning.

Sept. 10th, 9 A.M.—The whole plant is affected. Every leaf is more or less withered. Those nearest the wound are entirely dead.

Sept. 12th, 9 A.M.—Whole plant dead.

Experiment IX. Sept. 8th, 9 A.M.—Into the fourth castor-oil plant a tube was inserted, and into this 15 drops of nitric acid.

Sept. 9th, 9 A.M.—The leaf next above the wound was quite withered, and hung down beside the stem, it being no longer able to support its own weight. Juice of wilted petiole gave an acid reaction with test paper. 6 P.M.—Death gradually advancing both above and below the wound. Three new leaves withered since morning.

Sept. 10th, 9 A.M.—The whole plant is affected, but to a less degree than those treated with oils of savin and tansy, and to a greater degree than that into which was transmitted creosote.

Sept. 12th, 9 A.M.—Plant nearly dead.

Sept. 14th, 9 A.M.—Plant entirely dead.

In all four of the castor-oil plants, the tubes were inserted about two feet from the base. The death, after the first few hours, in all the plants, proceeded faster above the wounds than below them.


I believe the subject of tracheotomy as a remedy in croup, although one of great importance to every member of the medical profession, and of surpassing interest to many out of it, has not been much discussed in any of our periodicals.
Although the operation has been introduced and performed by some members of the faculty, there are others who doubt, and others still who deny, its propriety or utility, from which it may be inferred that the principles, on which its performance or non-performance in cases of croup depend, have not yet been fully ascertained and settled. With the hope and intent of exciting discussion and eliciting information concerning what may yet be considered a problem in the science of medicine and the art of healing, I submit the following observations on tracheotomy, as a remedy or means of saving life in croup, for publication.

It would seem that the two great problems relating to this matter to be solved are:

1. The propriety of the operation of tracheotomy as a remedy or means of saving life in croup.
2. The pathological conditions and state of the patient, which on general principles warrant or forbid its performance in each particular case.

First. The propriety of the operation of tracheotomy, as a remedy or means of saving life in croup, must depend on its adaptedness to accomplish certain purposes or objects, the chief of which are:—1. To give greater freedom of ingress and egress of air to and from the lungs. 2. To effect the removal of bodies, which, acting as extraneous substances in the trachea or bronchial tubes, endanger life, or may ultimately destroy it. 3. To afford rest or comparative remission of effort to organs laboring under inflammatory action. 4. To facilitate the application of suitable remedies to the seat of the disease.

Related to these points are two others which will be adverted to as we proceed. Does croup indeed present the contingencies which give rise to these objects,—either or all? If so, is tracheotomy suited and competent to meet and obviate them; or, in other words, is it a proper remedy or means of saving life in that disease?

Now, croup is an inflammation of the trachea, involving all its tissues and structures, rendering them less movable
among themselves, and more contracted than in health; hence the calibre of this tube is actually smaller when affected with this disease than in health, and is still further diminished by the transudation of fibrine, which, deprived of its moisture by the passage of air and temperature of the part, is converted into a tolerably firm, but slightly adherent membrane.

This inflammation is not always confined to the windpipe, but often extends up to the larynx, involving its tissues and structures, muscles and ligaments, which, like muscles and ligaments in other parts when inflamed, become rigid and contracted, and subsequently impede the movements of the laryngeal cartilages and narrow the rima glottidis; it also sometimes descends below the bifurcation, involving the bronchi to a greater or less extent. Strictly speaking, these extensions are to be regarded chiefly as complications only. The diminished diameter of the trachea,—the fixedness of its constituent parts, and consequent undilatability,—the adventitious membrane,—the extension of the inflammation upward to the larynx, involving all its structures and tissues,—the spasmodically contracted and nearly closed glottis, necessarily and most unequivocally interfere with the ingress and egress of air, and produce the condition which imperiously demands the operation. It should also be remembered that this occurs in the early stage of the disease, and therefore indicates not only the propriety and necessity of the operation, but its early performance, when it can answer, and is most certain to answer, the indications requiring it, than it is after those accidents have occurred which are so sure to follow, and which render the result more doubtful. Sometimes, a little later in the disease, the lower part of the false membrane within the trachea, loosened and detached, doubled and folded upward, obstructs the passage of air and destroys the patient, unless saved by an operation.

When the inflammation travels downward below the bifurcation of the trachea, and much beyond into the bronchi, the false membrane is occasionally found entire, oftener in
fragments; but more generally the morbid product is not membrane, but an albuminous exudation, mingled with mucus or pus, and more or less fluid, which is seldom discharged, like other sputa, through the rima glottidis. This false membrane, mucus, or muco-purulent matter, in the trachea or bronchi, must be regarded as an extraneous substance, which prevents the ingress and egress of air, or hinders its acting upon the lungs, or the lungs upon it; and, consequently, interfering essentially with respiration. These matters can, for reasons which will presently appear, very rarely pass through the glottis, and without their discharge the patient will die; through an artificial opening, however, they will more readily and certainly find an exit.

Having considered the structural and physical changes which take place in the parts affected, and also in the products of the disease, and their relations to the propriety of the operation, we shall now proceed to examine certain modifications of function, which have a similar relation to, and bearing upon that question,—premising that they are based on two principles, essential to the economy of the system, viz:—The relation which obtains between a hollow viscus and its outlet; and the conservative tendency of the sensibility, appropriate and peculiar to every organ and every tissue in the body. In respect to the first, the relation between the viscus and its outlet, it is proper to remark that the bronchial system is to be regarded as a hollow viscus, and the glottis as its outlet, and both subject to the same laws of feeling and action as are other analogous organs and their outlets. For example, if the bladder be irritated, pain is felt at the glans penis; if the stomach be disturbed, uneasy sensations are experienced in the fauces; if the gall-bladder be affected, great distress is felt at its termination in the duodenum; if the bronchi be aggrieved, a peculiar sensation as of an extraneous body is perceived at the back part of the larynx or glottis, for the removal of which coughing is instituted.*

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*Subject to an irritable glottis, and often experiencing this sensation, I became
The physical cause of this sensation need not come in contact with the spot where the sensation is experienced. An extraneous body, or an inflammation anywhere in the bronchial system, particularly within the trachea, which lessens the capacity of those tubes, induces simultaneously the sensation and the closure, complete or partial, of the glottis, that an increased impetus may be given to the volume of air expelled by coughing. This closure of the glottis may prevent the escape of the foreign body, and likewise the admission of air, while an artificial opening surrounded by no muscles allows both.

The principle on which the phenomena above mentioned depend is the consent of action or sympathy of feeling which exists between the organ and its outlet. If motion be the function concerned, the outlet relaxes when the organ contracts moderately, but holds tight when it (the organ) acts violently. If sensation be the function especially concerned, curious to learn its cause and precise location, and accordingly addressed myself to the investigation. Reflecting that the application of an extraneous substance to the rima glottidis is the most simple, palpable, and certain physical cause of coughing, the object of which is to drive away the offending substance by forcibly impelling against it a volume of air; that the contact of this body must induce a change in the condition and action of the capillaries of the part touched, and that the perception of this change constitutes the sensation which advertised the necessity for a current of air to force that body away; that, as coughing frequently occurred in the absence of this, its true physical cause, whose presence was not therefore at all necessary to the production of the sensation or cough; that both were caused by whatever affected the passage of air through the bronchi (whether external pressure or internal irritation) by lessening their diameter, and, of course, retarding the passage of air through them; and recollecting a case in which an indomitable cough was excited by a tumor which distorted or deflected the trachea,—it was inferred that pressure on the trachea, if sufficiently strong to affect its calibre, would, as well as irritation of any other kind, induce the sensation and the cough. Reasoning from analogy, the inference was apparent, that, in a state of health or freedom from other causes of irritation, this expedient might be resorted to as a means of settling this question, and it was so employed with entire success; for it enabled the experimenter in his own person to excite, whenever he pleased, the sensation and the cough, and by repeated trials to locate the former in the posterior part of the larynx, and infer that it was owing to the action of the small muscles situated in the vicinity of the arytenoid cartilages.
and the action of the organ vehement, pain will be felt at the termination of its outlet; but, however violent the action of the bronchial system, there is neither pain nor inordinate resistance, when an artificial opening has been substituted for the glottis, which is another reason indicating the propriety of the operation.

The second principle to which we have alluded is, that the sensibility of an outlet, like that of every organ, tissue, and structure, has a special reference to the conservation of the part over whose welfare it is destined to watch, and therefore it takes cognizance of, and alarm at, the presence of such agents as are likely to injure its structure or disturb its normal action. For instance, if an extraneous body, the cause most apt to injure the glottis, come in contact with it, whether from without or within, nature, not knowing whether it will or will not pass, or what harm it may do, instinctively closes the rima to prevent its entrance. This closure of the glottis is effected by the contraction of the muscles about that aperture, which contraction and consequent closure, on the approach or contact of an extraneous body within the trachea, prevents its escape.

Now, if this extraneous body, as in a case of croup, be a portion of the false membrane, mucus, or muco-purulent matter, abnormal in quantity or quality, the consequence will be the same; the rima will close, and the matter cannot pass, consequently the patient will die, unless an opening is made, through which, unaffected by muscular action or the conservative principle, these matters may be discharged.

This spasmodic contraction of the muscles about the glottis, like all other inordinate muscular contraction, may be and generally is followed by a spontaneous relaxation proportionate to the previous contraction; hence the remissions which so frequently occur in cases of croup, and also in those from the lodgment of extraneous bodies in the air-passages. These remissions, flattering to friends, and sometimes to the medical attendant, are, nevertheless, deceptive; for although the glottidean muscles have relaxed, and the
rima becomes patulous, the instant the extraneous matters or body come in contact with this fissure, it closes and prevents their passage; but the artificial opening, subject to no such contingencies, allows them an exit.

To recapitulate: the contracted condition of the tracheal tube and further diminution of its cavity by the adventitious membrane, the partial, sometimes complete closure of the glottis by actual invasion of the disease, by spasm or the entanglement of detached membrane, preventing in a greater or less degree, the ingress and egress of air to and from the lungs, constitute the first contingency which invokes the aid of surgery; the transuded fibrine and the secreted mucus, or muco-purulent matter, which act as extraneous substances in the bronchial tubes, the second; the repose or remission of action of the organs involved, the third; the easy application of remedies to the seat of the disease, the fourth; these, with the modifications of function, proceeding from the relation which obtains between a viscus and its outlet, and also from the conservative principle with which every organ and part are endowed, comprise the several causes of danger presented by croup, and which require the operation of tracheotomy. For the passage of air, the discharge of extraneous matter, the repose of the organs and the application of suitable remedies, a sufficient opening is required, because that made by nature, the glottis, is not adequate. If the passage from the bladder, the uterus, or the rectum be materially obstructed, the surgeon, in order to save life, or to afford temporary or permanent relief, does not hesitate to make an opening, which may serve as a substitute for the natural outlet; and if the bronchial system be one of the hollow viscera, with an outlet subject to the same laws of action and feeling, does not analogy and common sense dictate, and experience and science sanction the dictum, that under similar circumstances a similar mode of treatment should be adopted and pursued? Is not, then, an operation which makes an opening into the larynx or trachea adapted to the nature and necessity of the case, and
therefore an appropriate remedy in this disease? The foregoing considerations and reasons seem to us to solve the first problem, and justify an affirmative answer.

Having contemplated the objects of the operation in the abstract, and traced out the contingencies and accidents which have a bearing upon its propriety and adaptation to the accomplishment of those objects, we proceed to consider the second problem, viz., the pathological condition and state of the patient, which, on general principles, warrant or forbid its performance in each individual case.

Although we have spoken of tracheotomy as a remedy in croup, yet we are well aware that it is to be regarded more as a preventive of death than as a curative of disease, and with this view, we believe, the surgeon generally proceeds to its performance. To understand, then, fully the principles which warrant or forbid its performance in particular cases, involves a knowledge of the manner of dying it is designed to prevent; which, we opine, is death by apnœa.

Now, death by apnœa is death by privation of breath; or, as one author has it, "death by privation of air inhaled or expelled in respiration," and is produced in croup, as in all other cases, by the non-admission of a sufficient quantity of respirable air for the ventilation of the blood; and, e converse, by the retention of that which is no longer fit for respiration, and consequently poisonous to the system.

From what has been stated, it will appear that both these contingencies, which, in fact, amount to the same thing, may arise in this disease from mechanical obstruction. When induced by this cause, inspiration first and principally suffers, while expiration is less materially affected; hence, the evils from mechanical obstruction obtain primarily, i.e., in the first or early stages of the disease, and those from vitiated air, which poison the system, prevail in the subsequent or later periods, and may be regarded as the direct consequence of the former. To prevent both, and particularly the latter, we recommend a timely opening into the larynx or trachea; and it is difficult
to conceive why it should not succeed in a majority of cases.

Although these contingencies appear really and truly to warrant the operation, yet there seems to be something so repulsive in the very idea of attacking the throat of an infant, or child, knife in hand, that parents, friends, and bystanders all shudder at the very proposition; and the surgeon himself, though inured to scenes of blood, recoils from the deed. The operation is therefore delayed, perhaps not performed at all, or only when all other means have failed, and will itself most likely prove unsuccessful, not from any fault which attaches to it, but from having been put in requisition as a "dernier ressort," and at a time when a hope of success could not be reasonably entertained. Even if performed under these circumstances, a consolation is to be derived from the fact, that if it has not saved, it has not shortened life; and I will add that, in every instance within my own observation or knowledge, it has considerably mitigated the sufferings of the little patient; so much so, that no one has regretted its performance. And furthermore, that sometimes it seemed to prolong life, and strengthen the hope that it would be ultimately successful; a hope which has been too often sadly disappointed. If, in these cases, the operation had been earlier performed, a different result might have been obtained; for, besides the rest, and consequent mitigation of the symptoms, time would have been given for the use of remedies, by which the disease might have been cured.

From this digression, let us return to the consideration of the phenomena which not only attend death by apnoea, but augur its approach, and show forth the conditions and pathological changes which have an important bearing upon this part of the subject. These are a turgescence of the veins of the head and neck, change of color in the face, particularly the lips; also in the hands and nails; the faltering pulse, the failing action of the heart, and laborious breathing. Beyond these phenomena, indicative of impeded cir-
culation in the lungs, the surgeon should, however, look for those physical and pathological changes which more particularly authorize or peremptorily forbid the operation; changes dependent on the movement of the blood, whose circulation is essential to the continuance of life. Now the fact has been fully established by modern pathologists, that, in death by apnoea, the stagnation of the blood commences in the capillaries of the lungs; that there its circulation ceases, and there death begins.

In each particular case of croup in which this operation is meditated, we should therefore strictly inquire into the state and condition of those organs which tend to interrupt the circulation of the blood, taking care to keep in mind the fact that the function, proper and peculiar to them, is subservient to that of circulation. Has, then, the disease caused hepatisation of the lungs, or an infiltration of serum into the interstitial cells, or extended into the bronchial vessels so far as to interfere with respiration, and of course with the capillary circulation? Are those minute bronchial tubes, and the air-cells to which they lead, loaded with matters which act as extraneous bodies, and which prevent the due aeration of the blood, or retard its movements? Lastly, is there still remaining strength sufficient for their expulsion and continuance of the circulation, provided an adequate opening was made? If the nervous and vital energies, on which circulation and respiration depend, be irretrievably gone,—if the state of the lungs disqualify them for respiration,—tracheotomy is certainly forbidden: but so long as the motions of the heart are carried on with vigor, and the respiratory movements also are accompanied with the manifestations of strength, they furnish evidence that sufficient recuperative power remains to warrant the performance of the operation; but when the heart begins to flag, the pulse to falter, and the respiratory movements become less vigorous, there is reason to apprehend a diminution of the powers of life, which will render the success of the operation doubtful; and if, coincident with these, are convulsions, diminution or loss of con
sciousness and other phenomena, which we have particularized in a former part of this paper, the case is apparently, perhaps, not quite hopeless. It is, however, possible that, even under such circumstances, the operation, although a "dernier ressort," a "forlorn hope," may save the patient; and when friends, after a full and candid explanation, desire it, the surgeon may not, in hardly any case, withhold it.

I am fully aware that the foregoing views seem to clash with those entertained by celebrated practitioners of medicine and surgery in this and other countries, and also with those promulgated by some of our most esteemed writers; but it is not our purpose to wager battle with them on the old battle-ground, or "try conclusions" with them on their own principles; but, in a measure, to make a new issue, viz., the propriety of the operation, performed in good season.

Some of the opinions advanced by authors, we propose briefly to examine in reference to this point, particularly those of Dr. Watson, which, it is believed, have had quite as much, perhaps more influence, in swaying the judgment of medical men in this country against the performance of tracheotomy in croup, than those of any other writer.

The following is his language: "When signs of approaching death have come on—lividity of the lips, coldness of the skin and a tendency to stupor, the question will obtrude itself whether there may not still be a chance of saving the patient by performing tracheotomy." "The existence of this preternatural membrane and its extension so far down that air would not be admitted into the lungs even when the incision into the windpipe was made at the lowest possible point." "Another consideration forbidding much hope from this expedient at any part of the disease, is, that the ramifications of the bronchi and the ultimate air-cells get filled with serous, mucous or puriform matter, or even sometimes with a membranous exudation, whereby suffocation is effected in the lungs themselves." "The membrane in the trachea," he continues, "being tubular, does not entirely exclude the air from those organs; but it does not admit it in sufficient quantity, are all
but insurmountable objections to the operation." These "objections" may all be answered, in the main, by simply stating that the operation, as contemplated by this distinguished writer, comes in too late for any hopeful result; for he says: "When signs of approaching death have come on—lividity of the lips, coldness of the skin, and a tendency to stupor—the question will obtrude itself, whether there may not still be a chance of saving the patient by performing tracheotomy." Now our doctrine is that the operation should have been performed long before "signs of approaching death" had caused "the question to obtrude itself," and long before the system had become poisoned and its recuperative powers lost or very much impaired.

But perhaps it will be deemed more respectful and candid to consider these "objections" scriptum; and, 1. "The existence of the preternatural membrane, its extension," &c. The formation and extension of this membrane and the attendant circumstances do, in our opinion, call for the operation, for the purpose of detaching and removing it as an extraneous substance, which could not, for obvious reasons, have been accomplished through the rima glottidis, and also for the admission of more air, and for the direct application of suitable remedies, as the solution of the nitrate of silver, which certainly has a powerful influence in preventing or detaching these exudations.

2. "The ramifications of the bronchi and the ultimate air-cells get filled with serous, mucous, or puriform matter," &c. This objection, we think, has been already answered.

3. "The membrane in the trachea, being tubular, does not entirely exclude the air, but does not admit it in sufficient quantity." This condition we admit, but beg leave to suggest that air passes into the trachea through the rima glottidis only, which is more or less affected by spasm, or involved in the disease itself; therefore, the quantity admitted is insufficient to sustain life. If, under such circumstances, an artificial opening be made, which is not subject to any of the contingencies mentioned, more air will certainly be admitted
and find its way into the trachea and bronchi through the two openings than through the glottis only, which is narrowed by the causes alluded to. Is not the chance of life, then, doubled by the operation? To all of Dr. Watson's objections, we repeat, that the early performance of the operation is the answer. It is, in fine, to be regarded as anticipating or obviating them, or the conditions on which they depend. In candor to Dr. Watson, we ought to add, that in his view there are "just two predicaments in which there is a chance that tracheotomy may be useful. That they are perhaps rare, yet they have been noticed by several observers. The one is where the preternatural membrane extends but a very little way down the trachea, and is chiefly confined to the larynx; and the other is where there is no preternatural membrane at all, or only a slight coating in some part of the trachea, the impediment to the breathing having arisen mainly from a thickening of the mucous membrane." "Unfortunately, we cannot tell, before death," whether these "predicaments" exist or not.

The author of the article on croup, in the Library of Practical Medicine, tells us that—"it is not necessary to discuss the question of the propriety of resorting to tracheotomy in croup, as it has been decidedly negatived by Dr. Cheyne, Mr. Porter, and other best authorities." A very summary way this of disposing of such an important topic, especially in an elementary and standard work, and at a time when the spirit of investigation is reexamining everything. "There does not seem," says Dr. Copland, "to be a chance of success from this operation (tracheotomy), in any case wherein the treatment developed above has failed"; and Dr. Elliotson says that "bronchotomy can only be a temporary measure." These opinions must pass for what they are worth.

Having considered at length the various matters which relate to the expediency and propriety of performing an operation for the relief of persons affected with croup, and the circumstances under which it should be performed, the next subject of legitimate inquiry, challenging our attention,
would seem to be—what kind of operative procedure is best adapted to the exigencies of the case?

In accordance with the usages of surgery, the foregoing remarks have been chiefly confined to tracheotomy, but they are, nevertheless, equally applicable to laryngotomy, which we deem the preferable operation, although not so regarded by the profession. To us it has always seemed that the superiority of the latter over the former has been strangely overlooked.

The reasons, why we have always preferred laryngotomy are—1. Because making an opening into the larynx through the crico-thyroid space is easily and safely done; and, in an emergency, by almost any intelligent practitioner. 2. Because, with certain modifications, it is fully competent to answer every purpose.

Should this simple opening not meet all the exigencies of the case, it may be made to occupy the whole crico-thyroidean space (which, according to Velpeau, is about five-twelfths of an inch in the transverse, and a little less in the longitudinal direction, but, according to our admeasurement, considerably larger), or be still further enlarged, with perfect safety, so as to extend laterally three-eighths of an inch from the median line on each side; the thyroid cartilage also may be slit up nearly half an inch, and the corners clipped off; without injury to the cordae vocales or any other part of importance.*

* For the removal of extraneous matters, in young subjects, besides freely opening the crico-thyroid space, I have in several instances slit the thyroid cartilage a little way upward, and also divided the cricoid cartilage and two or three of the uppermost rings of the trachea downward, with complete success. In some of the cases, the isthmus of the thyroid gland must have been freelyrenched on, and I doubt not entirely divided, with no alarming hemorrhage, the vessels in this part being, in young children, so small, that little or no danger of hemorrhage is to be apprehended, especially if the incision be made in the median line. Indeed, there is in such subjects less risk of dangerous bleeding from wounding this part than is generally supposed. If, however, the blood should flow rather profusely, it is soon checked by raising the patient to a sitting posture; and if the opening into the larynx or trachea has been injudiciously made before the bleeding has ceased, he should be bent forward; for gravitation, operating with this position, tends to check the flow of blood, and prevent its being drawn into the trachea.
From the accompanying diagrams and anatomical specimens, it will be clear that an opening, made by enlarging the crico-thyroid space laterally, and upward, partly through the thyroid cartilage, and cutting off the angles as recommended, will be as large or larger than the rima glottidis, and therefore give passage to as much air as in health,* or exit to an extraneous body as large as would, under ordinary circumstances, make its way through the glottis.

We are aware that the sides of the rima glottidis are formed of elastic ligaments (the cordae vocales), and that a foreign body, larger than the apparent size of the glottis, may be, and sometimes is, actually forced through it into the trachea, and that a still larger opening than the one just described may be necessary for its removal; to accomplish which, or any other purpose, the cricoid cartilage itself may be divided in front, and three-sixteenths, or indeed a quarter of an inch, on each side, clipped off and removed. An aperture as large or larger than the calibre of the windpipe is thus made, which will certainly afford ingress to any required quantity of air, and egress to any foreign body which can have found its way into that tube; and in cases of croup facilitate the removal of the adventitious membrane, or the application of remedies to the seat of disease within the organ.

What more, it may be asked, is required of any operation? Is tracheotomy more competent to answer the purposes in view? But some are probably thinking that our operation will not meet the exigencies of a case in which it may be necessary to insert a tube whose presence in the larynx will not be tolerated. We propose briefly to show how this inconvenience is occasioned, and how it may be obviated.

First, Why is a tube introduced into the larynx through the crico-thyroid space not tolerated?

Because, when thus inserted, its upper and back part (the

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* We have examined the diagrams and anatomical specimens alluded to in the above sentence, and find them fully verifying the statement which it contains.—Eds.
angle or curved portion) is so elevated as to impinge against the point at the posterior part of the glottis, to which we have alluded, as the seat of the sensation excited by the presence of an extraneous body,* which sensation occasions coughing and other expulsatory efforts for the removal of the offending cause, whether it be diseased action or really an extraneous body. Now, if a portion of the cricoid cartilage in front, and, if need be, a portion of the uppermost ring of the trachea (the anterior face of which is much broader than the posterior), be removed, the tube, when inserted, will fall below the aforementioned spot, and be borne quite as well as if it had been lodged in the trachea. But why insert a tube at all, and for what purpose? The object, undoubtedly, is to secure or keep open a passage, through which respiration can be carried on, which, we believe, is accomplished by our operation without the tube.

The cricoid cartilage, as its name imports, is a complete ring, with a signet or seal at its posterior part, which renders that much the thickest and strongest portion of the circle; thicker and stronger behind than in front, and imbued with an elasticity which resists the inward tendency of the lateral parts, and keeps their divided extremities asunder, thus preventing the closure of the opening made by the surgeon, and rendering it sufficiently free for all temporary purposes—superseding the necessity for the tube.

But how stands tracheotomy in relation to this particular? The deficiency in the rings at the posterior part of the trachea, occupying one-third of its circumference, is filled with elastic membrane, and a layer of muscular fibres, which run transversely from side to side across this deficiency; these, connecting and acting on all the rings, with the elastic fibrous tissue which commingles with the constituents of this cylinder, give its sides a tendency to approach each other, which is resisted by the integrity of the rings; but when these are divided in front and this integrity destroyed, as in tracheoto-

* See note on page 18.
my, the parts imbued with elasticity bring the cut surfaces together and close the opening, unless prevented by the insertion of a tube or some other mechanical contrivance. Concerning the operation we propose (for legitimate surgery bases every operation on the anatomical structure of the part—the field of its execution), ask the anatomist, and he will tell you, in addition to the reasons urged in its favor, that there is no depth of soft parts to be cut through; no danger of wounding either anomalous arteries, or arteries in their place;* no danger of bleeding from wounding the thyroid body, for it need not be touched; no danger of blood getting into the larynx or trachea, for little need be shed (besides the operation should be performed in such season that, in case of hemorrhage, the surgeon may wait a little until it ceases before he opens into the larynx, without periling the life of his patient); but he will tell you that all these difficulties and dangers are incurred when tracheotomy is attempted. Anatomy has indeed settled this question; but surgery has gone on performing an operation against which so much may be urged, and in favor of which so very little can be said.

When an operation is proposed in croup, the debilitated state of the patient may be such as to require the utmost caution in regard to hemorrhage. In laryngotomy there need be but little loss of blood, a consideration of vast importance in cases of exhaustion. In tracheotomy a considerable quantity is almost necessarily lost,—a quantity which of itself alone may, and I doubt not has, often turned the scale against an enfeebled patient,—a quantity which no physician would run the risk of taking, even in the gentlest manner; and should the surgeon who performs tracheotomy, and not only subjects

* The anatomist may indeed tell you that there is a small artery, the inferior laryngeal, which crosses the crico-thyroidean space near the lower border of the thyroid cartilage, which can generally be pushed out of the way of the knife, or seized with the forceps and torn asunder, and the lacerated extremities turned aside laterally, which, in ninety-nine cases in the hundred, will stop the flow of blood.
his patient to the loss of blood, but inflicts upon him the
terrible violence of a severe operation, stand reproachless? Can the patient be expected to survive the loss of blood and
the infliction too, when either may destroy him? This, I fear, explains the reason why so few have survived, and why
so many medical men doubt the utility of surgical inter-
ference. Probably the delay to the last extremity should
come in for a part of the odium.

In croup, there is an adventitious membrane, forming a
tube within the trachea, which of itself is sufficient to destroy
life; but this is not enough: tracheotomy is performed, and
another tube, much worse every way than the one formed by
the disease, is introduced; a tube which prevents the appli-
cation of remedies to the inside of the windpipe, and also
the removal of the false membrane, or other matters, except
such as can flow through it; a tube, the blocking up of
which has caused, and may again cause, asphyxia and death.
But if the operation we propose (laryngotomy) be subsitut-
ed, the insertion of a tube we believe to be seldom necessary;
for when a portion of the cricoid cartilage is removed, as re-
ommended, the elasticity of the remainder keeps the aper-
ture from closing, as long as the exigencies of the case may
require. This operation, neither dangerous nor difficult to
perform, may be executed in an emergency by almost any
medical man, and with almost any cutting instrument.—
Whereas, tracheotomy, both dangerous and difficult to per-
form, requires a bold, dextrous and skilful surgeon, and a frightful
array of instruments ("a straight or convex bistoury, a blunt-
pointed bistoury; several canulas armed with threads, and
everything which may be required to attach them; very del-
icate ring and polypus forceps; several simple ligatures, and
some needles; erignes, or sounds curved in the form of hooks,
and various articles of dressing") for its execution; and is,
moreover, attended with a delay perilous (and, as I have wit-
nessed in one case, fatal) to the patient, as well as inconvenient
to the operator.

Our operation affords free ingress and egress of air, and
an easy exit to matters pernicious to life; gives rest, ease,
and comparative quietude to important organs; renders the application of remedies to the seat of the disease practicable; gives time for them and others to operate, and perhaps effect a cure. It does all these quite as well, and we think better, than tracheotomy, and is, therefore, in our opinion at least, the preferable operation.

Besides the removal of the morbid exudation, which is seldom, if ever, the sole cause of suffocation, the leading argument in favor of tracheotomy is the presence of the false membrane in the trachea which is thought to be the principal cause of mischief; hence the necessity of an opening into that organ, which might be partly below the obstruction, while an opening into the larynx would be above it, and consequently useless; but our view of the matter is, that the glottis, affected with spasm, or involved in the disease, or both, interferes with respiration more dangerously than the membrane. We, therefore, all things considered, have come to the foregoing conclusion.

P. S.—We have performed the operation above described (modified to meet individual cases) a considerable number of times (perhaps some fifteen or twenty), and have always found it to answer perfectly well, whether the object was to facilitate respiration, or the removal of extraneous bodies; and have never had recourse to the tube or any other mechanical contrivance for keeping the opening free, with the exception of a strip of adhesive plaster, applied close to each side of the wound, drawn backward and crossed on the nape of the neck, to retract the integuments when they obstructed the passage of air or other matters.

In order to prevent, as much as possible, the inflammation which, from the admission of cold air into the bronchi, so commonly follows these operations, it is a rule with me to direct the temperature of the patient's room to be kept steadily up to 80° Fah. The hint for this was suggested to me many years ago by an unprofessional man, and I have acted upon it with much satisfaction in the treatment of other affections of the lungs of an inflammatory or irritable nature.
The numerous methods proposed for the cure of reducible inguinal hernia, and recommended by modern surgeons, show most clearly how little any one method has answered the purpose. There are a large number of experienced surgeons, who regard every operation for the cure of reducible hernia as unjustifiable and hopeless, or who at least undervalue it. The reason seems to be, that they demand almost an impossibility from such an operation; and since this cannot be achieved, they undervalue the utility which the operation undoubtedly has. Let us now inquire what the operation after Wutzer’s method can accomplish, and we can then decide whether, with proper indications, those who suffer from this ever dangerous affection can be benefited by this new operation.

The method of Wutzer is the application of an instrument (a cut of which is here shown), with which he designs to close the inguinal canal, by invaginating a portion of the scrotum by exercising an equal mechanical pressure upon the entire inner surface of the inguinal canal, which may be at any time increased or diminished, as the individual case requires. He would produce the necessary adhesive inflammation for retaining the invaginated portion of the scrotum, and effect adhesion of the hernial sac, without running the risk of causing an inflammation of the peritoneum, thus endangering the life of the patient.

It is necessary to possess such instruments of various sizes, particularly the cylinders, in order that they may correspond to the different diameters of the inguinal canal of each individual case. The cylinders should not be too small, as it is of great importance that the inguinal canal should be properly filled out by them, so that an equal degree of pressure shall be exerted in every direction on the internal
surface of the hernial sac; they should not be, on the other hand, too large, because the cylinders are to be introduced up the internal inguinal ring. Wutzer calls his instrument the invaginatorium herniale. (Fig. 1.)

The operative procedure.—After the inguinal parts have been shaved, and the rectum and bladder have been evacuated, the patient is placed in the same position as in that for lithotomy. Then the instrument should be prepared for operating, by taking the plate apart from the cylinder (Fig. 1, a and d), and drawing the needle (Fig. 1 c) outwards, so that its point remains concealed in the anterior opening of the cylinder (a).

The surgeon stands between the legs of the patient, and first reduces the intestine which fills the hernial sack. When this is accomplished, he places the point of the index-finger of his left hand upon the scrotum beneath the external abdominal ring, with its palm side directed upwards and outwards. He then pushes the elastic parts of the scrotum, which he has taken hold of, into the inguinal canal, so that the point of this invaginated cone extends a little beyond the internal abdominal ring. Then he bends his index-finger, which is thus far introduced into the inguinal canal, in such a manner that a small free space may exist between its palm surface and the upper surface of the canal, into which space he brings the point of the cylinder. By degrees the cylinder is slowly pushed in the oblique direction of the inguinal canal upwards and outwards, and at the same time the finger is drawn gradually backwards, so that the cylinder may occupy the place of the finger. This manoeuvre is not without difficulty.

The invaginated cone returns easily with the finger, and the instrument is insufficient to carry back the cone to the desired position. Should the invaginated cone protrude the least backwards, it will then be necessary to renew entirely the before-stated manoeuvre, and, to prevent a like occurrence, the cylinder, being reintroduced, must be more closely pressed against the finger. There are other difficulties in
this procedure, viz., when the internal abdominal ring is small, preventing the cylinder with the finger from passing its entrance; in large and old hernias, it is still more difficult, because the cylinder may be carried into the loose cellular tissue between the superficial fascia and the aponeurosis of the external oblique muscle. This mistake cannot often be discriminated, and none but a surgeon who has a perfect knowledge of the surgical anatomy of the parts, and who is a careful operator, will easily overcome these difficulties.

As soon as it has been ascertained that the cylinder properly fills up the inguinal canal, the needle (c) is then pushed through the integuments; no bleeding will follow, as the point of the needle is three-edged. The plate (d) is now joined, by allowing the needle to escape through its anterior opening (n). The staff (Fig. 2 k) through the posterior (l), and the posterior screw (e) in the forked hinge (g). By means of the screw (f) of the staff, the plate is moderately pressed down against the skin, fixing its position by means of the posterior screw in the forked hinge. The operation is now concluded by screwing off the handle (b) of the needle, and by covering the point of the needle with a small piece of cork. Under the scrotum a small pillow should be placed for its support.

The patient should be confined to bed in an easy horizontal position, with flexed knees, and a pillow under them. The after treatment should be directed cautiously; on the one hand, no impediments should be allowed to hinder a sufficient degree of inflammation; and on the other, the inflammation should be arrested when proper.

A few days previous to the operation, it will be proper to direct an antiphlogistic diet, and after the operation to cause an increase of the natural evacuation from the bowels. An antiphlogistic treatment will not be necessary if the patient is quiet, and has no disposition to the inflammatory diathesis. The screw which presses the plate against the integuments of the inguinal canal can every two days be tightened, al-
though prudence requires the plate to be lifted every time, in order to ascertain the degree of the existing inflammation. If the inflammation should be found to be more intense than was intended, either the pressure must be taken off or the instrument removed. Generally, it is not necessary to use the instrument longer than six days, which time is sufficient to produce the required adhesion between the invaginated parts and the hernial sac. If the instrument remains too long, instead of the required adhesion a disastrous suppuration and gangrene near the needle may be produced. In irritable individuals, six days may be too short, and in torpid it may be too long a period.

When the instrument is to be taken away, the plate must be first removed; the handle should be screwed to the needle, and then drawn out. The left hand has to fix the invaginated parts, the right hand must cautiously remove the cylinder. The small cavity remaining from the invagination must be filled with soft dry lint, which should be held there by means of adhesive plaster. The suppurating punctured wound, on the place where the needle was, must be treated upon general principles; the patient must remain in bed not only until the wound has cicatrized, but at least eight days longer, in order that the new adhesions may be greatly strengthened. In the inguinal canal a hard plug will be felt, which will be absorbed, and, after a lapse of some time, can scarcely be perceived. The radical cure is permanently established when the adhesions have taken place in the circumference of the entire inguinal canal. The hernial sac cannot leave the place into which it has been pushed by the invagination, as the needle has perforated it at two opposite points, and produced an inflammation between the serous surfaces sufficiently strong to secure at least, at those two points, firm adhesions. Wutzer* considers it very important that his needle attack in this way the hernial sac, and thinks

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it very remarkable that Gerdy* (who also operates by invaginating the scrotum, for the cure of a reducible hernia, and who perforates also by means of a needle the invaginated scrotum at the highest place to which he has pushed it) should state that his needle never touches the hernial sac. Wutzer says that it is contrary to the anatomy of the parts, and thinks that if it were really so, Gerdy deprived himself of the most important means to secure the success of the operation. Wutzer recommends it as prudent, in order to strengthen the permanent nature of the cure, to direct the patient, as soon as the cicatrization is completed, to wear a slightly pressing truss during three months. This will prevent the invaginated parts, while new adhesions are yet fresh and tender, from coming down to their original place. During the same time, it will be advisable that the patient should not engage in any heavy work.

The following case, the description of which is taken from the Organon für gesammte Heilkunde, vol. i. sec. 1, was operated upon by Wutzer after his method, and was cured. It may serve as an example:

Nicolaus Wolff, thirty-four years of age, a farmer by occupation, had contracted an inguinal hernia on the right side three years before by lifting a heavy load. On the 4th day of October, 1838, he was admitted to the Surgical Hospital at Bonn, suffering from secondary syphilis, of which he was relieved after having undergone a strict medical treatment. After the lapse of a considerable time, that his health might be completely restored, it was resolved to try the above-described operative procedure for the cure of his inguinal hernia. The man very willingly submitted to the chances of the operation, as he had already for some time been unable to do any such work as his occupation peremptorily required. The cause of this was, that the inguinal canal and the abdominal ring of the affected side were so much extended and

* Schmidt, Jahrbücher, Vol. xiii. 375.
enlarged, that the best fitted truss could not retain the contents of the hernia. For, after any severe exertion, a part of the bowels invariably appeared before the pad.

On the 8th of November, 1838, Wutzer, after having reduced the contents of the hernia, introduced his instrument in the way above described, pushed the needle through, and screwed moderately the covering plate against the cylinder. This procedure was quickly performed; the pain at the perforation of the needle was but momentary and slight.

The patient slept well during the following night, his pulse remaining quiet. On the 10th of November, there was slight pain, occasioned by touching the parts which were pressed by the covering-plate. The covering-plate was now a little more tightened. During the following days not the least symptoms of fever appeared, no pain in the bowels, and consequently no indication for bleeding or any antiphlogistic treatment. On the 15th of November there could be felt a hard inflammatory swelling of the soft parts around the cylinder; at the same time, suppuration had taken place where the needle had remained, and it appeared to be the right time to remove the instrument. After this had been done, the invaginated parts presented themselves entirely fixed, remaining as a firm plug in the inguinal canal. Where the needle had perforated the skin, the same was for a small space black and mortified, so that an opening was created, which allowed two probes, of which one was introduced at this opening, the other into the canal of the invaginated part of the scrotum, where the cylinder had been before, to meet each other. All the water injected into the external opening of the canal and invaginated parts flowed out at that opening, as there was now a perfect and free communication between these parts.

The patient continued to keep his bed until the 18th of November, when the cicatrisation of the little wound was so far advanced as to allow him to sit up. In a short time, when the wound was completely healed, a slightly pressing truss was applied to the parts, and on the 29th of December
the patient was discharged from the hospital perfectly cured, the most accurate examination showing no sign that a hernia had ever existed.

The first description of this procedure was presented by Wutzer in the *Organon für die gesammte Heilkunde*, vol. i., series 1.* He narrates there five cases, of which three were perfectly cured, the other two resulted in no benefit. He added to those an exact history of all operations performed for the cure of reducible inguinal hernia, which is highly interesting. After having followed this, his own method, now more than fifteen years, Wutzer says, in the *Deutsche Klinik*, edited by Goschen, 1849, vol. i., page 32, that he has every reason to be satisfied with the proportion of those he cured to those he discharged unrelieved, particularly when he compares the results of his method with those of all others. This assurance of Wutzer, which comes not from a beginner in surgery, but from a man who already enjoyed the highest reputation as a surgeon, is certainly to be relied on. I wish to add, that he, as a professional man, has very few equals; that he ranks foremost among the most distinguished of our profession, and that an assurance from such an authority is not to be regarded as a figure of speech.

Wutzer collected his first experience during the war with Napoleon, on the same battle-fields that made Larrey’s name immortal; and if France can boast of Larrey, Germany can boast of Wutzer. After Wutzer had recommended his method, Seutin, in Brussels, was one of the first who tested it in practice. He operated on eight patients, four of which were cured, as he informed Wutzer, in May, 1840, by letter. Rothmund, in Munich, treated over forty cases, and makes known the astonishing success that he experienced in *Haser’s Archiv*, vol. ix., series 2.

During the time that I held the appointment of Assistant Physician of the Emigrant Hospital at Ward’s Island, I had

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* Edited by Prof. Naumann, Kihan, and Wutzer, Bonn.
occasion to try Wutzer’s method four times; two of these cases were perfectly cured, one was relieved so that a truss was able to retain the bowels, one was not cured. Wutzer, himself, has every year, for the last fifteen years, treated many cases in presence of numerous spectators. His operations were in the greatest number of cases successful, in some unsuccessful; but never was the life of a patient endangered by his operation.

Contrary to these experiences, there is Lotteau, in Ghent, who endeavored to improve Wutzer’s method, but with so little success, that his patients were more afflicted afterwards than before the operation. Lutens, in Antwerp, operated on a syphilitic patient twice in ten days, and after the unfortunate patient had died of peritonitis, he condemned the operation, believing that his unjustifiable haste to operate had no influence on the result of his case. In America, after I had treated four cases with the success above stated, a gentleman of this city undertook it once in my presence. In consequence of the rough manner in which he introduced the cylinder, he ruptured by force the entire inguinal canal. His operation was of course followed by no success.

Wutzer, in recommending his method, never wished to convey the impression that it would answer for all cases; he knows too well that there are many cases of reducible hernia which are not suitable for any operation. It is just here that the surgeon needs sound judgment to decide whether an operation is to be undertaken with a promise of success or not. It is no evidence against a method of operating, that it was undertaken where it was evident that no operation could be successful.

Should any one ask of Wutzer’s operation what it is impossible to achieve,—should he ask that a perfect cure should be realized where no inguinal canal is in existence, as when the internal and external ring have joined to one large opening, or where age or a cachectic diathesis makes a person unfit for any operation,—he will be disappointed.

After all, it can be unmistakably said, that, under all cir-
cumstances, where a rational surgeon would allow any operative procedure for the cure of reducible hernia, Wutzer's operation affords, more than any other in existence, a surety of success; the greatest importance resting in the fact, that, by governing the instrument rightly, the surgeon has it in his power to increase or diminish the intensity of the intended adhesive inflammation, which no other method in the same manner affords. Wutzer wishes his method tried without prejudice. The purpose of this article is to make this operation known in my adopted country, for the benefit of those who are in need of the radical cure of reducible hernia. Although there are many who boast of the ease with which
the hernia may be retained by certain forms of truss, still
the frequency of the operations for strangulation, occurring
in spite of the instrument used for keeping the gut within
the cavity of the abdomen, teaches us the inefficiency of the
most valued truss in many cases; and exhibits the propriety
of attempting to remedy the liability to this ever dangerous
occurrence by the most sure and effectual operation known.

To sum up what may be said with strict truth of this plan
of my former preceptor, it is only to be added: 1. With the
right indication for operating, Wutzer's method effects a
number of cures, greater than any other plan hitherto pur-
sued, and that, too, without endangering the life of the pa-
tient. 2. In those cases where the condition of the parts
makes a perfect cure impossible, this plan will give such re-
lief as will render a truss effectual in retaining the bowels.

With these remarks, the plan is submitted, with the ear-
nest hope that the profession in America will give this opera-
tion a fair trial, which has won the approbation of nearly all
the best surgeons of Europe.

EXPLANATION OF THE FIGURES.

Fig. 1 represents the complete instrument, called Invaginatórium
Herniale. a—Cylinder, with its anterior end becoming smaller. b
—Handle of the needle. c—Curved point of the needle, passing out
of the anterior opening of the cylinder, and through the anterior
opening of the plate, which covers the cylinder. d—The covering-
plate itself. e—The screw which fastens the posterior end
of the plate to the forked pedestal. f—The screw which presses down
the covering plate against the cylinder. g—The forked pedestal, the
slit of which receives the posterior end of the plate; a hinge unites a
metal covering of the posterior end of the cylinder. The metallic parts
of the instrument are to be made of a non-oxygenizing metal, with the
exception of the needle, which should be of steel.

Fig. 2. The instrument taken apart. a—The cylinder, made of
box-wood or ivory; upon the upper surface of the anterior end is a small
round opening, in which terminates a metallic canal, running through
the middle of the cylinder, and made for the reception of the needle.
b—Handle of the needle. c—Point of the needle. d—The plate,
made of the same material as the cylinder. e—The screw which fas-
tens the plate to the pedestal. f—The screw which presses the plate
against the cylinder. g—The forked pedestal for the reception of the
screw. h—The posterior end of the needle, with a metallic screw taken
from the corresponding end of the handle ($b$). $i$—The metallic covering of the posterior end of the cylinder for fastening the pedestal $g$ and the staff ($k$). $k$—The metallic staff for the reception in the opening ($l$) of the plate. $l$—The posterior or oval opening of the plate. $m$—The anterior oval opening of the plate for the reception of the needle. $n$—The upper surface of the plate, a little convex.

Fig. 3. The needle of steel, with its wooden handle. $a$—The posterior end of the needle, screwed into the handle. $b$—Handle. $c$—Curved three-edged point of the needle.

Fig. 4. The representation of the proportionate breadth between the cylinder and plate. $a$—The posterior end of the cylinder. $b$—The anterior end of the same, somewhat smaller. $c$—The left lateral border of the plate. $d$—The anterior end of the plate, with a small part of its anterior opening.

All of the figures are one-half the original size.

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Art. IV.—A Case of Extensive Caries of the Vertebra; Death; Autopsy. By Drs. Louis Bauer and Barthelmess, Brooklyn, N. Y.

The history of the following case is of such an extraordinary nature that its communication to the medical public is at least justifiable, if not a matter of duty:

Edward T——, from Toledo, State of Ohio, when about five years of age, suffered for a considerable period an attack of intermittent fever. He was ultimately cured; but there remained a considerable enlargement of the spleen, and a marked poverty of the blood. A year later he fell on his back; the fall, however, did not cause any apparent injury of the spine; he moved and played about for three weeks without complaining, and enjoyed his usual delicate health. At this time he assumed a peculiar gait, and complained of pains in his back. The alarmed parents placed the little patient immediately under proper medical care, and all proper means were employed to prevent the progress of an inflammation, which was unmistakably established. Besides rest, a horizontal position, and antiphlogistic treatment, an issue on either side of the affected spine was established, but without any beneficial result whatever. On the contrary, the affected spine became deformed posteriorly,
consecutive abscesses were formed on the back itself, near the place of the affected vertebrae, in the left groin, immediately below Poupart's ligament, and on the internal and posterior surface of the thigh, which kept up a discharge, until his death on the 16th of November last.

About two years previously, the right hip-joint became affected, and the head of the femur projected rather more posteriorly and superiorly than normal, as compared with the position of the acetabulum. The parents having consulted a number of noted surgeons, and having ascertained from all of them that the case of their beloved child was both incurable and hopeless, devoted all their time to him in order to render him as comfortable as possible. They travelled many thousand miles, with the patient seated on a low chair having arm-crutches, to give him the benefit of change of air and impressions, which contributed materially to his comfort and mental enjoyment. The intellectual power of the lad became developed rather above his age, and his power of observation was especially increased. His intellect remained undisturbed to his death. In the spring of this year, the parents took the patient to the hot springs in Arkansas upon their own responsibility; but neither the use of various medicines, nor the hot springs, had any effect in staying the progress of the disease. Cod-liver oil was the only drug which acted beneficially by increasing his weight.

In the latter part of October, the patient was presented for examination at the Orthopædic Institution, and the advice of the two medical attendants of that Institution desired. The case-book of this establishment contains the following description of his status morbi praesens: General emaciation, considerable loss of flesh, intense paleness on account of anaemia, large posterior curvature of the spine, commencing with the third thoracic vertebra, terminating with the third lumbar; the projection in its highest point showing a distance of about five inches from the perpendicular of the body; the ribs being elevated, particularly the lower ones, which are somewhat turned on their respective longitudinal
axes; the thorax, nevertheless, approaching the pelvis. This accounts for the shortness of the trunk. The movements of the chest are limited by the partially fixed position of the ribs; the abdomen is much distended, and appears more full on the left side; scores of veins are perceptible in the skin; the pelvis has a normal position, and the *rima natum* forms with its transversal axis a right angle; the right hip, however, especially the large trochanter and the head of the femur, occupy a place rather higher and more backward than the acetabulum, and fluctuation within the projecting part is clearly made out. The right leg was thrown up and kept in a bent position at both the hip and knee-joint, besides being adducted. The diagnosis, as regards the actual state of the right hip-joint, was not clearly established, on account of the intense painfulness of the joint and surrounding parts. Chloroform, under the existing circumstances, was out of the question. At the most prominent part of the back, there were two cicatrices from the setons, and two slightly discharging ulcers. In the left groin there was a very large ulcer, of an oblong form, with sinuous margins and granulated walls. The extent, direction, and base could not be ascertained, for reasons already stated. On the right leg there were some other ulcers of a similar appearance, at and below the small trochanter. All these ulcers still continued to discharge a thin yellowish matter, being a watery fluid, mixed with true pus and casein-like substance. The spine was by no means tender. The respiration, as would be supposed, was somewhat difficult, but no morbid respiratory sound was perceptible, nor was there any dullness except at the lower part of the left lung, which, as we shall soon see, was caused by the enlargement of the spleen. The sounds of the heart were weak, but natural; no apparent disturbance of the circulation; no lividity of the cheeks, lips, or nails; no pulsations of the veins; no cough or rattling noise. The abdomen, as already stated, was greatly distended, principally with gas, appetite feeble but natural, egestion regular and of normal appearance. The urine was not ex-
examined, which is to be regretted, as the post-mortem examination showed a fatty degeneration of the kidneys, most likely having produced albuminuria; sleep was rather restless, feverish, and disturbed by colliquative and copious perspirations; the pulse was accelerated, being 125–130, small and weak.

The following is our opinion of the patho-genetic development of the disease: The intermittent fever we consider as the starting-point, which left within the spleen a considerable enlargement, with disorganization, which, however, ante mortem, is rather hypothetical. Disease of the spleen never fails to produce a most dangerous influence upon the chemical constituents and the organization of the blood, consisting principally in a superabundance of granulated blood-corpuscles, producing that state which is known under the term of anemia, or, as Philipp Von Walther figuratively calls it, white-blood. In connection with this state of the blood, tuberculous deposits are of frequent occurrence. The writers presume that tuberculous depositions, within the cancellated texture of the affected vertebral bodies, had been subsequently effected; the fall, sustained, gave rise to a softening of those tuberculous masses, inflammation and suppuration set in, which account for all other symptoms. The sores are considered the external outlets of the fistulous ducts, which lead from the affected bones to the surface. Under these circumstances, we agreed entirely with our medical brethren, previously consulted as to the incurability and hopelessness of the case in question. There are scores of instances on record, where caries of the spine has recovered with true ankylosis, and therefore the prognosis cannot be given invariably as a bad one, provided the carious destruction is limited, and the constitution tolerably good. Our case, however, was the most unfavorable form to be met with; the destruction was unquestionably extensive, and the system entirely exhausted. The parents, however, desired his reception into the Orthopaedic Institution, hoping that something might be done for their child, and accordingly the
patient was received into the establishment on the 23d of October. The following treatment was agreed upon: The best animal food, wine, and beer in abundance was given him, besides cod-liver oil and iron, alternately with quinine, rest and good air. We intended to administer every other day a bath with potassae, and the injection of the bath water into the sinuses, for the purpose of cleansing them; finally, we designed to apply a wire cuirass on the posterior half of his trunk, to keep his spine in an immovable and firm, and his body in a horizontal, position. As the cuirass was to correspond with the different projections of his body, it would have been the most comfortable bed for the patient. But the early decease of the patient frustrated all our plans, and reduced our treatment to the mere dietetic and medical part. The patient, having been only a fortnight in the Institution, was attacked by a most violent fever, swelling of the legs, and consecutive erysipelas, which commenced on his back, and gradually extended over the inferior extremities. Edema and sugillations came on, to which the enervated body of the patient yielded on the 16th of November.

Twelve hours after death, the corpse was already greatly decomposed, so that the post-mortem examination was fully justifiable at this time. The lungs were healthy; the right ventricle of the heart was large, its walls flabby and uncommonly thin, the cavity filled with decomposed venous blood; the left ventricle was of the usual size, filled with a fibrous coagulation, which extended into the aorta. Stomach and intestines healthy, but much distended with gas. The mesenteric glands intumesced and solidified, but not much enlarged; the liver generally healthy and of usual size,—the parenchyma, however, showed small fatty points in abundance; pancreas indurated; spleen very much enlarged, and weighing forty ounces, which shows an increase of five times compared with the spleen of an adult. Kidneys in the commencement of fatty degeneration (second stage of morbus Brightii). The most surprising degeneration, however, to be found, concerned the skeleton. To commence
with the spine, which of course was laid bare and longitudinally divided in front: it showed tuberculous deposits, and, respectively, cavities of various size up to a small bean, in the bodies of the thoracic vertebrae, from the fourth to the eleventh; the lower ones had outlets, which opened in the principal abscess formed by the fragment of the eleventh thoracic vertebra, a fragment of the second lumbar vertebra, and the superior surface of the body of the third lumbar vertebra. The greatest part of the eleventh thoracic and second lumbar vertebra, and the first lumbar vertebra, had entirely disappeared. Although the various abscesses were located near the dura mater of the medulla spinalis, neither this membrane nor the spinal cord had been in any way affected, but, on the contrary, proved to be in their full integrity. As a matter of course, the cancellated texture of all the vertebral bodies below the fourth thoracic vertebra was engorged with a bloody liquid, and softened. So the intervertebral cartilages were partially destroyed (entirely from the tenth thoracic to the third lumbar vertebra), and partly softened and infiltrated with a gelatinous substance; moreover, they were distended in front, and compressed, and lower in the posterior part, which accounts for the anterior counter-curvature above and below the posterior one. The adjoining cellular tissue, ligaments, and muscles on the lateral surface of the spine, were infiltrated with inflammatory exudations, firm and of a cartilaginous consistence. From the principal osseous ulceration of the spine, two sinuses descended to the groin; the left sinus was so wide that the finger could easily be introduced into it; it followed the direction of the psoas muscle, and opened immediately below Poupart’s ligament on the surface of the skin. The right one followed the psoas muscle to the point where it meets the iliaco-internus muscle, then passed over the horizontal ramus of the os pubis, descended outwardly, and entered the right hip-joint, from whence the exit of the matter was effected by other sinuses opening in the thigh; both sinuses were lined and filled with the cheese-like substance.
The left hip-joint was found to be in full integrity, but filled with a bloody serous liquid, which made its escape when the joint was opened. The right hip-joint, however, presented a most peculiar appearance. The acetabulum was enlarged backwardly and superiorly, without its edge being in any way carious or destroyed. The enlargement of the acetabulum had been produced by an inflammatory process on the surface of the gluteus minimus and the synovial membrane, and the capsular ligament had been distended, so as to cover the new articular surface. The head of the femur, which occupied the new place partially, was engorged with the bloody liquid, and so soft, that it took easily the impression of the finger; the ligamentum teres and articular cartilages were entirely gone. The capsular ligament was thickened, and adhered firmly to the surrounding parts. Below the small trochanter, the femur was totally severed by caries from the head; the medullar cavity of the bone was enlarged, and filled with a bloody, but somewhat consistent secretion; the cortical substance was fragile, and exceedingly thin.

The history of the case, and the state of the parts found on post-mortem examination, is in many respects exceedingly interesting, both for surgical science and practice.

1. The case teaches us how much nature may endure, before life becomes extinct, and that she never yields until she has exhausted the materials and resources at her command.

2. That there may be most extensive destruction of the head of the femur, and even, as in this case, entire separation from the thigh-bone, without actual and perfect dislocation, although there was no resistance to the occurrence of that accident. This case, therefore, corroborates the views held on this subject by Professor March, of Albany, Dr. Ross, of Altona, and others, besides our own. The status morbi could have been easily ascertained by the use of chloroform; but we deemed ourselves not justified in employing it. Instantaneous death might have followed, and thus increased
the number of fatal experiments with chloroform. We were therefore limited to a superficial examination, quite insufficient to render diagnosis certain in cases like this.

3. A most extensive destruction within the hip-joint may take place without any alteration in the position of the pelvis, provided the lumbar vertebrae are immovably fixed, and do not yield to muscular retraction.

There remains, however, a doubt as to whether the commencement of tuberculous deposit was established before or after the external injury, and it is left to further investigation whether our opinions are correct or not. We, however, believe, that the tuberculous deposits were primarily formed before the injury actually took place; but we admit, at the same time, that we cannot disprove the reverse opinion, namely, that tuberculous deposits have been determined by the injury.

We design in future communications, the materials for which have been accumulating for some time past, to continue our observations upon this interesting and most important branch of practical surgery. If truthfulness and scientific exertion can insure the esteem and support of the medical profession, we confidently trust to merit them.

Art. V.—On the Radical Treatment of Hydrocele by the Local Application of the Lunar Caustic to the Internal Surface of the Tunica Vaginalis. By W. Parker, M. D., Professor of Surgery in the College of Physicians and Surgeons, New-York.

A great variety of methods have been proposed to effect the radical cure of hydrocele, such as, incision to lay open the sac, excision of a portion of the sac, caustics externally applied, tents passed through the sac, injections of various stimulating liquids, &c. The design in the practice of each of these operations is either to excite such a degree of inflammation as shall cause adhesion of the opposed serous surfaces of the tunica vaginalis and thus obliterate the sac, or so
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change the character of these surfaces as to diminish the secretion to its normal quantity.

The operation by injection of a stimulating fluid was one of the earliest proposed, and is now more generally practised than any other, not so much for the case with which it is performed as the certainty of its effecting a cure. For a long time, wine and water composed the mixture employed, and Sir James Earle, who introduced them, stated that he scarcely ever failed in obtaining a radical cure. But this confidence in injections does not accord with the experience of other surgeons, and Sir Astley Cooper, who used a solution of sulphate of zinc, remarks that it is quite contrary to his own, though he preferred it to any other method then followed. More recently, however, the tincture of iodine has come into use, and having proved more safe and efficient than the liquids previously employed, it has nearly superseded all others. In eleven hundred and forty-eight cases it is stated to have failed but three times; and in ten cases, where both wine and the sulphate of zinc had been used unsuccessfully, it failed but once. Injections, however, of all kinds require tact in their employment, and time in their preparation and administration. When unskilfully used, they are often attended with serious consequences. I have not myself been in the habit of resorting to them for the cure of hydrocele in many years, preferring the simple evacuation of the water with scarifications of the internal surface of the sac, especially in children, or the introduction of a tent. More recently, however, I have resorted to the local application of the solid nitrate of silver to the internal surface of the tunica vaginalis in the manner described below, and have every reason to be satisfied with this method of treating hydrocele. It is at once easily and safely performed, and, as far as my experience goes, has been attended with entire success. It does not seem to induce so great a degree of inflammatory excitement as most other methods. The following may, therefore, be stated as its advantages over other operations: 1. The ease and safety with which it may be performed. 2. The less liability to
severe inflammation. 3. The certainty of success. The following cases illustrate the mode of operating, and the results of treatment:

Case 1.—Mr. J., aged about 60, an Irishman, waiter by occupation, unmarried, had always enjoyed good health until April last, when he discovered an enlargement of the left scrotum. It had never previously been the seat of any difficulty. The tumor increased so rapidly, that within three weeks it had become a great annoyance, and prevented him, simply from its size, from continuing at his business. At this time I first saw him, and such had been the rapidity of the growth of the tumor, that it had been mistaken for hernia, and he was wearing a truss. On examination, however, its true character, that of hydrocele, was made out without difficulty; a trocar and canula were accordingly introduced, and a large quantity of water withdrawn, and the patient dismissed. In about three weeks he again applied for relief, and I proceeded to operate for his radical cure in the following manner: After drawing off the fluid contents of the tumor in the ordinary way, I introduced through the canula a common probe, the end of which was coated, for half an inch or more, with nitrate of silver. This extremity, thus charged with the caustic, was carried lightly over the serous surface of the tunica vaginalis, in various directions, and then removed. The patient complained of some pain during this part of the operation. He was directed to keep quiet for the pain and swelling consequent on the application of the caustic, and apply cooling lotions, should the inflammation be at all severe. He returned home, but as he suffered but little pain, and the swelling was slight, and as his services could not well be spared, he continued about his business without any interruption. The pain lasted three or four days, when it ceased altogether, leaving the scrotum of its natural size. In this condition it has since remained, with no symptoms of a return of the hydrocele, the cure having been complete.

Case 2.—Mr. ——, aged about 50, a farmer from Long
Island, has always enjoyed good health, and been able to perform the active and laborious duties of the farm. For nearly two years he has suffered from a slowly-enlarging hydrocele, the origin of which is attributed by the laborers on the farm to the water which they use; for, singularly enough, several of them began to suffer from the same disease at the same time with this patient. The water is stated, by an intelligent person acquainted with the facts, to have a strongly diuretic effect upon those who use it, but no analysis has yet been made of it, which would lead to an explanation of this peculiarity which the water seems to possess. In this case, the tumor had been twice tapped during the last year, and about a pint of fluid was removed at each time. The first operation was performed about six months, and the last nearly three months, previously to the present operation. The tumor rapidly regained its former size after each operation, as no means were employed to effect a radical cure. After withdrawing the water, I proceeded to operate in a manner precisely as above described. The application of the caustic produced severe pain, much more so than in the former case. The patient was placed in bed, and an antiphlogistic regimen prescribed. The pain continued without any diminution of its severity for fourteen hours, when it began to subside. The inflammation excited by the operation was considerable, with swelling of the scrotum and some febrile excitement; he was confined to his bed three or four days, until the inflammation had subsided, when he returned to his farm. The swelling of the scrotum continued about a month, when, on the application of a spirit lotion, it returned to its natural size, and a permanent cure was effected.

Case 3.—Mr. B., of Penn., aged 55, of very intemperate habits and enfeebled constitution, applied for treatment of an old hydrocele. The operation was performed as in the preceding cases. Considerable pain was experienced at the time of the operation, and the subsequent inflammation and swelling was greater than in either of the former cases, doubtless owing somewhat to his unfavorable condition of
system. It progressed favorably, however, and he was soon able to leave for home. I have recently learned that the operation was successful, there being no return of his difficulty.

Case 4.—Mr. J. F., bookseller, aged 26, very intemperate, first noticed an enlargement of the scrotum seven months previously to the operation. The caustic was applied, as in the former cases, on the 6th of last August. The pain was considerable, and the inflammation as severe as in the last: it subsided rapidly in the course of four or five days, and he returned to his business. There has been no return of the disease.

Art. VI.—On the Necessity of Revaccination. By G. Benedict, M. D., Physician to the Northwestern Dispensary, N. Y.

The complete failure of vaccination in some instances to protect the system against smallpox, and its partial failure in other cases, has led to various theories and practices. Some have in a measure doubted its efficiency, others have rejected it as worthless, while others still have endeavored to discover the reason of such failures, in order if possible to obviate them.

Action has wonderfully corresponded with sentiment. Vaccination has been carelessly performed, and suffered to run its course unregarded, or it has been entirely neglected; or, on the other hand, has been performed with due care and watched with interest.

As yet the fact stands as it ever has done. Vaccination sometimes fails, sometimes it seems to exert a complete protecting influence against a most loathsome and very fatal disease. Hence the question, as to the cause of this, is in truth a very important one. It will hardly do to put it aside, by considering the case analogous to that in which specific remedies for various disorders are employed with more or less general success, and yet with now and then a failure. For we have no so-called specific for any one disease, which is
not also used with more or less benefit in other diseases, so that, in different states of the constitution, it is productive of good results. We have yet to learn that the vaccine infection affords the least protection against any other than the variolous disease. It is said by some to exert a protecting influence against measles, by rendering the attack less severe; but our own observation contradicts the assertion. The mode too of introducing this protecting agent into the system, is different from that of other remedies for existing or expected disease. It is with a view to save the patient from the peril and disfigurement of smallpox that it is employed, and for this alone; and this object we believe it capable of effecting. If we attempt to account for its apparent failure in some instances, on the ground that there is a greater susceptibility to variola in some individuals than in others, we are met by the fact, that many thousands of those who would undoubtedly have suffered from, and succumbed to, the disease, have been saved; and this too when the operation of vaccination has been so carelessly performed. If those only who are least liable to the variolous affection are to be benefited, the great value of the discovery is taken from it. I can conceive no better evidence of the great susceptibility to a disease, and the value of any remedy for it, than I find in the generally admitted fact, that, where once many died, the employment of such remedy has diminished and almost extinguished mortality from such cause. Nor need we, as it seems to me, adopt the opinion, that the changes effected in the system at puberty destroy the hitherto protective power of vaccination. A change it certainly is, from childhood to adolescence; but that the organization of the solids or fluids composing the body undergoes any such modification as to render an active agent inert, or vice versa, is at best hypothetical. It looks too much like the old whim that vaccination should be repeated once in seven years, because in that period its power had all "run out" of the system. The reason is as good in one case as in the other. Comparatively few adults, who were vaccinated in infancy or
childhood, are susceptible of successful vaccination. How does this happen if there is such a change at puberty?

Some stress has been laid upon the number and appearance of the cicatrices, as enabling us to judge of the efficacy or inefficacy of vaccination. Doubtless they indicate more or less the efficiency of the pustules, but they alone are not to be relied on. Nor should we judge from the local intensity of the pustule, that it is sufficient or otherwise; for in different individuals and in different states of the constitution, there is great variety in this respect.

We are not permitted to look into the human organism so intelligently as to understand how and by what means all its changes are effected. The action of remedies on the secretions, e.g., in various conditions of the system, though the results are often visible and marked enough, is by no means capable of being fully comprehended. And when we come to the question before us,—how the active existence of one poison is rendered forever impossible by the previous existence of another and different poison,—we hesitate for an answer. The results of experience, however, justify the belief that it is so, and we rest upon this belief as a fixed fact.

A peculiarity in my own person, perhaps not remarkably uncommon in others, has led me to attentive thought and careful observation on this subject. I remember to have been vaccinated in childhood several times, before the presence of the virus manifested itself by the formation of a pustule. It did at length happen, and the cicatrix still remains. While at college, a few cases of variola and varioloid appearing among the students, I was again vaccinated, under the impression, that, as seven and even fourteen years had elapsed, I might now be subject to smallpox if exposed. Here again I received the infection, and had a pustule larger, and, so far as memory serves me in regard to the first, more intense than that. About four weeks from the time of revaccination, and after my arm had entirely recovered from its effect, I again vaccinated myself with lymph taken from the arm of a fellow-student. Again, and so soon after the second
vaccination, I had a large pustule, which went through a regular course, the scab adhering until about the twelfth day. Now here, after the revaccination, I would have been considered as safe as the vaccine disease could render me, and doubtless, had I suffered from variola, my case would have been set down as one of those in which vaccination had availed nothing. And yet was there any reason why I should not have suffered the full force of the disease, had I been exposed? Since that time I have repeatedly inserted the virus in different situations, with no other effect than the slight irritation which is known to follow the scratch of the lancet charged with the poison in those thoroughly vaccinated. My own experience has been partly confirmed by observation. I have revaccinated many children, and quite a number of them those in whom I have watched the progress of the first pustule. I have seen the revaccination unequivocally successful in only eight cases, and in no instance have I been satisfied that true vaccinia was present the third time. Revaccination of adults has been successful in about the same proportion as in children.

My observations have not been sufficiently extensive to establish any new fact, but I make them known that others may observe also, and see if they do not confirm the following proposition:

That vaccination, properly performed, and repeated until the susceptibility to the vaccine disease is exhausted from the system, affords entire immunity from the variolous disease.

It may seem that, by including so much, my proposition is worthless, as it would extinguish not only the genuine disease, but its modification, varioloid. But we are to bear in mind that one, two, or three successive pustules may still leave the system unprotected, at least in part. Vaccination should be repeated until nothing like a pustule can be obtained. Let each one observe for himself, until evidence accumulates which shall sustain or overthrow this position; and let no one say that vaccination is not a protection for those in whom the susceptibility to variola is unusually strong,
until he first ascertainment whether there is not still left some susceptibility to vaccinia.

ART. VII.—Notes of a Case of Entromalacia. By Thomas Addis Emmet, M. D., Visiting Physician to the State Emigrant Hospital, Ward's Island.

An infant, ten months of age, of a young and healthy German woman, was admitted to the hospital, March 3d, 1853, with pertussis, which ran its course without complication, and the child had so far convalesced during the past month as to have rapidly regained apparently its lost flesh and strength.

July 10th.—Dr. Irwin, the resident physician in charge, drew my attention to the child as being unusually fretful, and not having nursed well for several days previous. During the night a slight diarrhoea had set in, evacuations green in color and acid in character. I found the heat of skin greater than natural, gums red and swollen, with a constant dribbling of saliva; directed them to be scarified, and not to check the discharge from the bowels without it became necessary.

July 11th.—The resident physician, on cutting the gums, found the teeth not sufficiently advanced to be the cause of irritation. During my absence, the diarrhoea becoming too profuse, it was ordered about three grains of the nitrate of soda every two hours, with a warm bath and fomentations to the bowels, to relieve the increasing tympanitis. By these means the discharges became partially checked, while vomiting had supervened, similar in character with the discharges from the bowels. Found the pulse feeble and irregular, respiration hurried somewhat and jerking in character, temperature of the body increased, that of the extremities diminished, features more pinched and sardonic in expression, abdomen distended with flatus, pain evinced on pressure over the right iliac fossa, while the child attempted to protect itself with its hands; legs drawn up and flexed on the trunk, with
the knees turned inwards, urine sufficient in quantity and had been passed freely. Directed mustard drafts to be applied to the epigastrium, one-half grain hydrarg. ch. mitis, every two hours, until three or four doses had been administered, watching its effects, together with tinct. opii camph. to assist the nitrate of soda and overcome the insomnia, which throughout had been most distressing.

July 12th.—Emaciating rapidly, with the characteristic appearance of one dying of tabes, features sunken, dark areola around the eyes, cornea flattened and clouded from infiltration between its coats, heat of body less than yesterday, extremities cold and clammy, knees still flexed, abdomen not so much distended, but little pain or uneasiness evinced on pressure, while the child remains quiet, if not disturbed from its chosen position. The discharges from the bowels had been checked, but the vomiting continued from time to time. By artificial means, the natural temperature of the body had been partially restored, stimulants were used as freely as the circumstances of the case would admit; no effect produced by the anodyne. Remedies were now discontinued, as the patient was rapidly sinking; died during the forenoon, about seventy or seventy-five hours from the apparent commencement of the attack.

Post-mortem examination twelve hours after death.—The weather being remarkably cool for the season, no decomposition had set in. On opening the abdomen, the intestines were found blanched, and exhibited a peculiar waxen appearance. Found no evidence of peritonitis, strangulation, intussusception, or perforation of the intestines; but in attempting to remove the lower portion of the ilium, near the cæcum, rupture took place readily in several places, and the contents passed into the cavity of the abdomen. While washing the portions removed, they rapidly disorganized into a gelatinous pulp. On holding sections of the small intestines towards the light, it was found that the mucous and muscular coats had disappeared in patches, varying in size from a millet seed to that of a three-cent piece, leaving the serous one still in its
integrity. This state of things existed nearly throughout the ilium, with an enlargement of the solitary glands, having the appearance of miliary tubercles. The patches in the ascending colon (although somewhat larger) were confined exclusively to its lower third. The vessels between the omentum were empty, and could with difficulty be traced, while there existed an unusual enlargement of the mesenteric glands, hard and red in color. The other organs were healthy; brain not examined.

This disease, although described by writers as non-inflamatory in character, and owing to faulty nutrition, is rarely ever met with among the large number of emigrant children admitted to the hospital. This is the first case I have seen, among several thousands treated during my time of service in the institution as a resident and visiting physician.

Art. VIII.—Case of Persistent Vomiting, arising from Intestinal Calculus; followed by Death. By — Dudley, M. D., of Brooklyn, L. I.

Tuesday, Sept. 13th, 7 A. M.—Was called to visit Captain P. W——, whom I found vomiting and complaining of severe pain in the region of the stomach. I learned this state of things had existed through the night, at short intervals. The contents of the stomach ejected were bilious matter, mixed with undigested fruit, which he had eaten the evening previous. The skin, moist and cool; tongue, slightly furred; pulse, 84, soft and full; respiration, thoracic and easy; passed urine freely; had a movement from bowels the morning previous; no tenderness on pressure over the abdomen. In order to relieve the more urgent symptoms, I prescribed pills composed of $\frac{1}{2}$ gr. op. and 3 grs. calomel, to be repeated every two or three hours until relieved; also a mustard poultice over the region of the stomach. At 1 P. M. found the vomiting unabated and the pain increased since my visit in the morning, and at one time had become so severe, that,
having sent for me and not finding me at home, he called on Dr. Enos, who ordered same treatment, also administered an opiate injection. This treatment was continued during the remainder of the day and night following, increasing the opium to 1 gr. each dose. Ice, mint tea, toast-water, given at short intervals, to allay the thirst and vomiting. 9 o’clock p. m., visit.—No material change since last visit.

Wednesday, 7 a.m.—Learned from his friend, who sat up with him, that he had but little sleep; the vomiting continuing at intervals of half an hour to an hour, preceded by copious eructations of gas. I ordered him 10 grs. rhubarb in pills, alternated with a teaspoonful of Henry’s magnesia, to be repeated every two hours, until an operation was produced, assisted by injections of soapsuds and castor oil. On visiting my patient at noon, found he had taken the medicine for three doses, but rejected them soon after; the longest time retained was half an hour. The vomiting not relieved. Ordered a blister to the pit of the stomach, which he refused to have applied, and became fretful and impatient. At 6 p.m., found that he had slept a little, but symptoms had not improved. 9 p.m.—Consultation with Drs. Pratt and Enos, when we agreed to put him under the decided effects of opiates; viz., 20 drops Magendie’s solut. morph. in camphor, mixture, every two hours, alternated with injections of tinct. opi. 3 gr. in warm water, until sleep was produced. Twelve at night, left him under the effects of the anodyne.

Thursday, 7 a.m.—Soon after I left last night, he became restless, slept little, vomiting returned, but pain much mitigated; treatment same; ordered arrow-root, with brandy, in small quantities, but these he soon ejected. 10 a.m.—Consultation; after examining our patient, concluded on applying a blister to the stomach, and giving pills, of 10 grs. calomel and 1 gr. opi., every two hours, for three doses; also, injections of soapsuds in large and repeated quantities. 3 p.m.—More quiet, had little rest, vomiting not so frequent, continued same treatment. At 6 p.m., dressed blister and repeated injections. 10 p.m.—Vomiting increased, appear-
ance and smell presented, for the first time, a stercoratious character, which aroused our suspicion of obstruction existing somewhere. All his other symptoms bore a negative testimony to either concealed hernia or intussusception; the pulse continuing about 80 to 84, full and soft; skin, moist and warm, mind clear. I stayed with him all night, and succeeded in getting him under the influence of the opiates.

**Friday, 10 a.m.**—No great change in his general symptoms; said he felt more refreshed from the sleep the night before. Gave Seidlitz powder, which, although he did not retain long, said was particularly grateful to him. Same treatment, with some slight alteration in the opium, to be continued; and to increase the anodyne injections to three drachms, and dress the blister with morphine ointment. 2 p.m.—Had vomited during the day large quantities of fluid which he had taken, mixed with stercoratious matter; ordered soda draughts at intervals, brandy and water, gum-water alternated. Refused all other kind of nourishment. 6 p.m.—Agreed to give a draught composed of hydrocyanic acid, 1 drop; Magend. solut., morphia, fifteen drops; simple syrup, half an ounce; to be repeated every third hour till sleep was produced. 11 p.m.—Same treatment; as sleep was produced, the draught was omitted.

**Saturday, 7 a.m.**—The latter part of the night rather restless, vomiting returned, no pain or tenderness on pressure, injection administered of soapsuds and castor oil, no faecal discharge. 10 a.m.—Symptoms much the same as yesterday; injections continued (through the long tube) every two hours, but without any satisfactory result. Drinks and nourishment the same. 6 p.m.—Consultation. Anodyne treatment, both by draughts and injection, repeated until sleep was produced; omitted hydrocyanic acid. 10 p.m.—Had some sleep; vomiting not so frequent; character the same. Anodyne draughts repeated. Sour drinks only desired.

**Sunday, 7 a.m.**—Passed a rather quiet night, until near morning, when he became restless, and the vomiting soon
returned, particularly on taking the slightest nourishment. No other perceptible change. 10 a.m.—Agreed to continue the anodyne treatment, and support him with such nourishment as he could retain. 2 p.m.—Slept a little during the day. Complains of no pain, pulse 84, soft and full, respiration normal, skin moist and warm, mind clear, expressed himself more comfortable, mind free, and looks healthy. 7 p.m.—No alteration since our last visit in the condition of his bowels. We gave croton oil in doses of two drops, assisted by copious injections every alternate two hours, for three doses; he vomited the first almost immediately, and the other in an hour and a half. Introduced O'Berne's tube, 20 inches, into the bowels, and passed up injections through it; but no faecal matter returned. 12, Midnight.—No palliation of his symptoms; and the vomiting continuing at intervals of twenty to thirty minutes, convinced us that obstruction existed somewhere in the small intestines, from the character of the matter ejected, &c.; but the cause could not, by any evidence manifested, be either pointed out or satisfactorily explained; concluded, with the concurrence of his friend, to call in Dr. Williard Parker in consultation with us.

Monday, 10 a.m.—Consultation. After a careful examination and review of the case, we supposed the obstruction arose from spasmodic contraction of the muscular coat of the intestine, accompanied by a gouty diathesis. Agreed to continue the anodyne treatment with vini colchici. 2 p.m.—Symptoms and treatment same. 9 p.m.—Administered a large injection through O'Berne's tube, which returned no faecal matter or smell; ordered anodyne injection given as before, and morphia draught repeated.

Tuesday, 10 a.m.—Consultation. Same treatment advised, no perceptible change in his symptoms. Dr. Fish, his family physician, having arrived from Savannah, joined our consultation this time; treatment explained and concurred in by him. 2 p.m.—Symptoms and treatment same. 9 p.m.—Gave a large injection, followed by an anodyne, the anodyne draught to be repeated at intervals of three hours, until sleep is produced.
Wednesday, 10 A. M.—Consultation. There being no abatement in his symptoms, we agreed to repeat the croton oil in same doses as before in draughts; but observing no good effect after two doses, it was omitted. 2 P. M.—Gave a large injection of arrow-root, which remained some time, part only coming away; nourishment in small quantities continued. 10 P. M.—Gave a large stimulating injection with castor-oil, salt, and turpentine, repeated twice; and afterward gave an anodyne injection.

Thursday, 10 A. M.—Passed a restless night, and appeared much worse in all respects; pulse much smaller and more frequent, skin cold, mind wandering. Gave brandy and water frequently, applied mustard, warm applications to feet. At 4 P. M. he expired.

Friday, 12 M.—Autopsy twenty hours after death. (Abdominal viscera only examined.) External appearance: slight tympanitis. State of the blood general. Internal, found all the organs rightly located; the peritoneum was completely injected, and fibrinous effusion in its cavity; the intestinal folds were agglutinated in many parts by recent adhesions. I removed the bowels from the cavity for more convenient examination, and commenced from above. At the lower part of the superior third of the jejunum, found a large perforation from ulceration, and several smaller ulcers along the middle third; in the lower portion of this part of the intestine found a large concretion, composed, from its appearance, of magnesia and charcoal firmly impacted. Here, no doubt, existed the obstruction and the cause of death. Dr. Fish, his physician, informed me he had been in the habit of using these articles freely and frequently for many years. Size, length, two inches; diameter, one and a quarter inch. Weight —

Analysis of urine.—Sp. Gr. 1.022; reaction acid. Color and odor normal.

Microscopic examination gave no indication of organic or functional disease.
ART. IX.—On Functional and Sympathetic Affections of the Heart. (Read before the Society of Statistical Medicine.) By John W. Corson, M. D., late Physician to Brooklyn City Hospital. Physician to the N. Y. Dispensary.

It has latterly become a fearful thing, after certain taps on the chest, and listening through a mysterious tube, to pronounce in the patient's hearing, "Disease of the Heart." For reasons that will appear, we venture in preface a frank confession of delusions and difficulties. We can make almost any man's heart palpitate by simply saying it has something wrong. It is taken as a hint to make a will, or a soft professional whisper, "Thou shalt surely die!"

We can imagine how terrible must be the agony of suspense to the victim of real organic heart disease;—how he inwardly feels that some spring or valve about that treacherous heart is spoiled; and that, sooner or later, like a broken timepiece, it must stop;—how the spectre of death hovers with his lance, like the sword of Damocles over his head, or knocks loudly at his heart, at the desk, the pulpit, the bar, or the bedside;—sears the smile from his face at his own festive board;—or folds him in its arms as the demon of nightmare, and begets the horrible dream that the loved ones who so hopefully bade him adieu at night will find him a lifeless corpse in the morning. And all this cruel alarm may be equally caused by the sham imitation of trifling nervous or functional palpitation. The heart is often a perfect medical puzzle. It sympathizes, at times, so closely with its neighbors, the stomach, liver and lungs, as to perplex a careful physician as to which is most at fault. It has special telegraphic wires to the brain, and through the great sympathetic to the intestinal canal, the kidneys and organs of generation, and it shares in every disorder of these. It has mysterious knockings from reflex nervous influences, the wire-pullers of which are at distant points. Like a wind-harp, it trembles with every thrilling emotion, and is untuned alike by the strain of anger, fear, joy, or sorrow. It is over-excited or paralyzed by every malady which changes its own proper stimulant, the blood. And thus, from slight causes, it may torture its owner with the constant fear of physical and death.

The counterfeits, indeed, are as plenty as the real coin. Perhaps no man ever saw more of heart disease than the late Dr. Hope, and we have the deliberate testimony, in his work, that one half of the private cases were merely functional. We may sincerely endorse this statement, and add that these average the most mental suffering.
The public generally cannot distinguish between the mock imitation and the real. They know only of the fatal kind that startles the neighbors, and fills the newspapers with paragraphs of the sudden decease of jolly Falstaffs and blooming matrons, and the verdicts of coroners' juries of "death from disease of the heart." And, in these days, when sophomores and boarding-school misses take so to textbooks of physiology, and "Medicine made easy" dwindles to a pocket edition—when the "sovereign people" flock, for mere amusement, to travelling lecturers with grim manikins, and learn just anatomy enough to frighten themselves for a shilling—it is hazardous, at the bedside, to mention the word "heart," or kindly try to explain, or mystify, in "words of learned length and thundering sound." While this kind of knowledge, when thorough, may be exceedingly useful to all sensible people, it is commonly just superficial enough to be imaginary death to the morbid and nervous. In physic, both to "him who gives, and him who takes," infinitesimal learning is positively a "dangerous thing." There is scarcely a gloomy dyspeptic who has not his health-book full of alarming woodcuts of brains, stomachs, lungs and hearts, and who does not wonder how he lives from day to day, with such a delicate gear. Like a certain hypochondriac, who once read a medical book, and fancied he had the symptoms of every disease in rotation, from apoplexy to itch, he has most vivid imaginings, and no organ suffers more than the heart. And this is not strange. Studying a subject will often make us morbid. Medical students, and dyspeptic physicians themselves, are frequent subjects of this heart-delusion, and quite as honestly frighten and victimize others. We have personally known thriving but sedentary mechanics, enterprising merchants, and master-spirits in the learned professions, incapacitated for years, and finally cured, and enabled to laugh at their sincere medical persecutors, by open-air exercise, a vacation, or a foreign tour. Worse than this, we have seen, within the last fifteen years, pale, hysterical females, for the involuntary compliment their unruly hearts have paid the ear of a learned and handsome physician, wrongly and un gallantly sentenced to digitalis and lacerating cups. These are no trifling mistakes. The treatment of functional heart disease, as we know, is generally the very opposite of that of organic. The patient needs active exercise perhaps, and we enjoin paralyzing quiet; he should forget his ailments in hopeful assurance, and we terrify; he wants generous beef and mutton, and we tantalize with low diet and vegetables; he requires bracing tonics, and we depress him with sedatives, and fancy we copy Hope and Bouillaud, in taking his impoverished blood.
Not that we undervalue the attainments of our noble profession. Hippocrates himself, in the first of his immortal aphorisms, has magnanimously confessed that "experience is fallacious and judgment difficult." If men's minds and bodies were all cast by the Creator in the same mould—if all were educated alike, and if human wisdom were perfect, then might we expect medical opinions to be uniform and infallible. Our only astonishment is, that the regular members of the great medical church universal, are, in the main, so correct and unanimous in their faith and practice. But, as Andral and Addison* have told us, perfection in the difficult science of physical diagnosis of chest disease is not so easy. The enthusiastic student, fresh from the beautiful theories of books, and with all its hard names ready on his tongue, is doomed to bitter disappointment, if he imagine that, without long and severe training, his uneducated senses can at the bedside accurately weigh and measure a living heart as it flutters in the bosom, or truly estimate its false alarms, its throbings, and heavings, and its moanings, faint perchance as those of the sea-shell, that

"Remembers its august abodes
And murmurs as the ocean murmured there."

When we remember that, except a few obscure hints in Hippocrates and the older writers, this whole science has risen within the memory of a long-lived generation;—that Laennec himself fell into the blunder of attributing the second sound of the heart to the contraction of the auricles;—that after the sacrifice of so many donkeys and dogs to watch their bare and quivering hearts, the highest authorities are not quite agreed as to the causes of the first sound;—that Skoda, in his masterly work, gives no less than eight different theories, with their authors, to account for the impulse of the heart alone;—surely, it is not strange that disciples should be sometimes mistaken.

Confession, good people tell us, is the first step towards reformation. For ourselves, and our friends, we have tried faithfully to perform this ungracious duty. Mortification indeed, from mistaking our own as well as the cases of valued friends and patients, more than ten years since, first led to the series of observations embodied in this paper. We would fain atone for our early faults by the discovery of more light. Detained by the crowding thoughts long buried, we have lingered thus upon the threshold of the subject, to establish the following propositions:

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1st. That functional derangements of the heart often simulate fatal organic disease so closely as entirely to deceive, and cause great and needless suffering.

2nd. That, in cases of cardiae disease, it is therefore always best to defer giving an unfavorable opinion, till we have made repeated examinations after exercise and quiet, and until after the test of treatment.

3rd. That this subject is of great importance; is still somewhat obscure, and therefore demands further investigation.

To present a better picture, we shall mingle much that is old and familiar to all with the few things of our own that may be new, in a brief review of the whole subject. Our limits will oblige us to condense as much as possible, and to give but a mere abstract of the cases we may quote from others, or record of our own.

**Definition.** By functional affections of the heart, we mean its numerous derangements from nervous disturbance, alterations in the blood, or sympathy with neighboring organs, which give no certain signs of organic change, in its walls, cavities, or valves, while living, or after death.

**Symptoms.** As before intimated, many of the symptoms of organic heart disease have their close functional imitation. There may be violent palpitation, unnatural impulse, bellows murmur, intermittent pulse, praecordial pain, or fainting, with difficult breathing, or even swelling of the feet, and yet not the slightest organic lesion, or really dangerous disease of the heart exist; nothing but some sympathetic irritation or mere functional disorder, entirely curable. Let us dwell a moment on each of these.

**Palpitation may be said to be the sensation of unusual or painful action of the heart.** Though occurring also in organic, it is so prominent a feature of functional cardiac disturbance, that the whole subject has been grouped by some under the head of "Nervous Palpitation." In health we are scarcely conscious of the heart's movements.

The hard bounding of congestion of the heart, the smart throbbing of its irritation, or the fluttering and faltering of its debility, are all disagreeable to the patient, and are all grouped under this common term. In irritation of the heart, connected with dyspepsia, as Abercrombie has well described, the heart sometimes rolls and tumbles like an animal in a tight place, frightening the patient with the wildest antics. Alone, it is commonly a symptom of little danger, and attacks many with slight provocation; generally, it occurs in temporary paroxysms; occasionally, the fits are frequent and severe, disturbing sleep,
and leading the nervous patient to gloomy thoughts, like that of Longfellow’s, of hearts that—

"Still, like muffled drums, are beating
Funeral marches to the grave."

**Impulse.** In health, and in the upright position, as we all know, with every pulsation, the point of the heart strikes against a circular spot, dull on percussion, a couple of inches broad, opposite the cartilage of the fifth left rib, reaching to the sixth, two inches below and one inch to the sternal side of the left nipple, and technically called the **precordial region.** The extent, force, and manner of this **impulse,** as it is termed, are important points. The impulse in functional congestion, or irritation of the heart, sometimes jars the whole front of the chest, possibly beyond the left nipple, and below the sixth rib, so as to imitate organic enlargement; but then there is the absence of that infallible test, **extended dullness on percussion.** When the heart is loaded and stimulated by rich blood from sedentary, high living, or violent gymnastic exercise, the **impulse** is **strong and bounding;** in the palpitation of hysterical women or delicate nervous men, it is **smart and knocking;** and in the exhausted and enervated, it becomes **soft or hurried tapping.**

**Intermittent pulse.** The pulse, as Celsius long ago observed, is sometimes a "thing most fallacious." A matter apparently so important as complete intermission, often means little or nothing. From idiosyncrasy it is habitual in some in perfect health. It is very frequent in cardiac irritation from derangement of the stomach. Dr. Billing speaks of it as common with old persons, whose hearts are "lazy" and require generous treatment. It commonly comes on in paroxysms, and may occur from the third to the tenth or twentieth beat of the pulse, or quite irregularly. Laennec has divided it into true or false, as it reaches the radical pulse, or affects the heart alone. While intermission is frequently found in structural lesions, we must admit the aphorism of Skoda, that "the greatest irregularity in its rhythm does not warrant us in assuming the existence of organic disease of the heart!"*

**Bellows murmur.** The valvular murmur of functional derangement is a soft, blowing or whiffing sound, like a light jet of air from a dry syringe; rarely loud, and **never harsh** like organic murmurs;

* Abhandlung über Perkusson und Auskultation.
confined, as a rule, to the aortic valves, and the first sound; limited usually to a small space opposite the cartilage of the second right rib; occurring in paroxysms with excitement, and ceasing with rest; sometimes with whizzing in the carotids; and almost invariably accompanied by that fitful hum in the jugular veins, like the noise of a top, or distant spinning-wheel, which the French have named the Bruit de Diable. The bellows murmur is confined almost entirely to pale anemic subjects, with a quick pulse,* suffering from hemorrhage or chlorosis, and having the blood reduced, according to Andral, till it contains much less than the healthy standard of red globules. Lacenne believed it sometimes occurred temporarily under excitement in nervous healthy persons. Magendie found that dogs bled largely, acquired a quick, irritable pulse, and a distinct bellows murmur.

Præcordial Pain. Except in the rare cases of angina pectoris which are not organic, and are attended with intense pain, that of ordinary functional affection is rather uneasiness, sense of weight, or external soreness, probably rheumatic or neuralgic; or, in dyspeptic cases it arises from the heart pulsating so near the sensitive stomach; and is then referred to the epigastrum.

Syncope. Fainting has been aptly termed by Bouillaud "momentary paralysis" of the heart.† It varies greatly; sometimes it occurs with merely sudden paleness, dimness of sight, soft thready pulse and sinking, with remaining consciousness, and the patient soon rallies; or he may lie the image of death, pale, cold at the extremities, pulseless at the wrist, apparently breathless, and with only the faintest first sound of the heart for hours or days. The recovery is accompanied by gasping, and sensations generally disagreeable, though in some rare instances they are said to be pleasant. Slight fainting is with nervous persons a very common symptom, and unattended with danger. It is especially characteristic of that form of functional derangement we shall term debility of the heart. Prolonged syncope in any cardiac affection is naturally alarming from its close imitation of death, and from the fact that organic disease often terminates in this way, never to rally. Persons also have doubtless been buried alive in this condition.

Dyspnæa. Difficult breathing, though a common symptom of organic difficulties of the heart, occurs in functional disease, principally in those forms of plethoric congestion we shall presently mention, from temporary imperfect arterialization of accumulated blood, or it takes

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* Hughes.
† Maladies du Cœur.
place in the opposite state of anemia, in which, from pure debility, slight exertion will sometimes induce fainting and shortness of breath.

**Edema.** Dropsical swelling of the feet and legs occasionally excites unnecessary apprehensions in pale chlorotic patients laboring under functional palpitation, with soft bellows murmur. But there are never those dropsical effusions of the chest or abdomen so common in organic disease. It is simply a little passive œdema from weakness, which soon disappears under tonic treatment.

**Diagnosis.** Functional cardiac affections are so apt to be mistaken for organic, that it seems well to enlarge on this point. Age and constitution, according to Dr. Calthrop Williams, throw some light on the subject. As a very general rule, liable to numerous exceptions, functional disturbance is found in sedentary young men, delicate or sanguine, and in chlorotic or hysterical females, from fifteen to twenty-five; while organic commonly occurs later in life, and in the robust as well as the feeble. The heart affections of childhood are almost invariably organic, and from rheumatism.

Functional symptoms are far the most variable, disappearing at times entirely, in sleep or quiet, or re-appearing capriciously in paroxysms during bodily rest, from mental excitement or flatulence, while organic impulse and murmurs are more constant, and easily roused by exertion. Walking rapidly a few times round the room, or up stairs, is a very useful test. It will often have no effect on functional symptoms, but it is sure to embarrass the circulation and breathing in organic disease.

Functional affections are commonly much benefited, or cured by treatment; either improve or remain *stationary a long time,* while organic are too often only palliated by treatment, and tend gradually to grow worse.

In the slight œdema from chlorosis, we have the general appearance of the pale, waxy face, blanched lips, dark areola of the eye, and swelling confined to the feet and legs; while in the effusion of organic change, the face is bloated, dusky or purplish, the lips bluish, and the dropsy extends to the abdomen or thorax. The unremitting wear of organic disease often produces, as Corvisart has observed, a peculiar anxious contracted expression of countenance.

The *precordial region* in functional affections is uniformly natural; while in organic enlargement, on close inspection, there can generally be detected more or less bulging.

The *purring tremor,* (*fremissement cataire*), a sensation to the hand

*Vallcix.*
like the purring of a cat, is felt only in organic disease, commonly of the mitral valve. According to Skoda, in mitral disease, too, the second sound of the heart is always accented and prolonged.

A wavy, jerking, collapsing pulse, unlike any other, is found in free regurgitation, or what the Germans term "insufficiency" of the aortic valves.

The sounds of the heart, in functional affections, are unchanged, or a trifle clearer; in organic hypertrophy, the first sound is duller, and in dilatation it is sharper, and like the second sound.*

To contrast them better, we have arranged a few of the more important tests in opposite columns in the following table, suggested in part by the contents of similar ones in the great work of Canstatt,† and the excellent paper by Dr. Hughes, on Anæmic Murmurs and their Diagnosis in Guy's Hospital Reports.

<table>
<thead>
<tr>
<th>In Functional Heart Affections:</th>
<th>In Organic Heart Disease:</th>
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<tr>
<td>Præcordial dullness on percus-</td>
<td>Præcordial dullness in enlarge-</td>
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<tr>
<td>sion is not permanently extended,</td>
<td>ment is permanently extended,</td>
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<tr>
<td>nor the apex displaced.</td>
<td>and the apex crowded to the left.</td>
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<tr>
<td>The impulse in plethorà is</td>
<td>The impulse in hypertrophy is</td>
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<tr>
<td>strong bounding; in irritation,</td>
<td>strong, broad heaving; in dilata-</td>
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<tr>
<td>smart knocking; in both, widely</td>
<td>tion, weak, wide flapping; in</td>
</tr>
<tr>
<td>jarring; in debility, small, soft</td>
<td>both together, strong, large bulg-</td>
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<tr>
<td>tapping, sometimes hurried.</td>
<td>ing; in all with extended dullness.</td>
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<tr>
<td>The whole movement of the heart</td>
<td>The whole movement of the heart</td>
</tr>
<tr>
<td>is more elastic, light, or easy.</td>
<td>is more dead, clumsy, or labored.</td>
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Functional murmurs are soft blowing, aortic and systolic; are from anæmia, and usually with the venous hum in the neck.

Functional is more paroxysmal. Active exercise is often well borne, and benefits.

The causes are mainly dyspepsia, anæmia, plethorà, nervou sor generative disease.

Organic murmurs are harsher, louder, often grating, aortic or mitral, systolic or diastolic, or both, and very rarely with anæmia or venous hum.

Organic is more uniform. Active exercise always aggran- vates.

The most common causes are, first, rheumatism; and next, Bright's disease.

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* Hope.
† Pathologie und Therapie.
Prognosis. The result, in functional cardiac difficulties, is almost always favorable. We can call to mind some instances of females with exhausting discharges, or prostrated by grief or despair, in whom functional debility of the heart has been finally succeeded by stretching of its walls and incurable dilatation.

Some have thus literally died of a broken heart. On this account, in cases of anæmia, or great weakness, it is desirable to lose no time in strengthening the debilitated organ.

Causes. A large majority of the cases of functional disturbance of the heart are connected directly or remotely with affections of the digestive or generative organs. Having to notice the principal causes individually in our future classification and description, we here give, with perhaps a little repetition and latitude, the following simple enumeration.

Sanguineous:—Plethora, revulsion from cold, pregnancy, pulmonary congestion, hemorrhoids; irritation or exhaustion from hemorrhage, chlorosis, excessive lactation, &c.

Muscular:—Rowing, gymnastics, running, dancing, or violent singing.

Nervous:— Neuralgia, spinal irritation, hysteria.

Mental:—Exciting, anger, or joy; depressing, fear, sorrow, despair; exhausting, excessive study.

Digestive:—Disordered stomach or liver, tape-worm, gout, diarrhoea.

Generative:—Uterine disease, menorrhagia, amenorrhea, dysmenorrhoea, leucorrhoea, excessive indulgence, masturbation, frequent nocturnal emissions, or spermatorrhoea.

Poisonous or irritative:—Tobacco, coffee, green tea, lead, marsh-miasma.

Pathology. One of three morbid conditions seems usually to predominate in functional cardiac derangement:

Congestion, Irritation or Debility. Irritation in other parts of the system often precedes congestion, as it does inflammation; but the heart is an hydraulic machine, and its congestions, especially of this kind, commonly depend upon causes independent of the organ; are at first sudden and mostly mechanical. Let the heart be overloaded for a time with rich, stimulating blood, and congestion may give rise to irritation; and when, at last, its nervous energy is exhausted, this again may terminate in the third stage, or debility. Or, again, two of these may be blended. For practical purposes, we think it will simplify our views to have a constant reference to one of these conditions, and
we have therefore made them the basis of what we trust is a simple and natural arrangement of the whole subject.

**Classification.** In introducing new terms, and what may be deemed innovations, we may be indulged perhaps in a word of explanation. Our object has been to display best what seemed most important. To do this, much depends on the arrangement. We learn far more of the family relations and practical uses of plants, for instance, from what is termed the "natural system," than the more showy one of Linnaeus. So in the treatment of disease, the "natural order" is often first to regard effects; and, secondly, their causes. Suppose, for example, twenty persons fall sick from exposure to intense cold, and five get rheumatism, and five peritonitis, and five pleurisy, and the last five are frostbitten, would any sane man treat all alike, because all arose from the same cause? We would treat its pathological effects. So, in different constitutions, mental excitement, as we shall see, may cause either cardiac congestion, irritation, or debility; or other agents may produce these same conditions; and all we propose to do, is to make these last primary, and their causes secondary.

Some may object, again, to our including affections mainly located in other organs; and, though their most troublesome manifestations are through the heart, may regard these as mere symptoms. Such would banish "dropsy" from every text-book, for this is commonly a mere "symptom" of disease of the kidney, heart, or peritoneum. We prefer to look at diseases and symptoms in every possible combination and light. Classification is only a convenient framework to display the picture, to be shifted or amended as occasion may require.

**CLASSIFICATION.**

<table>
<thead>
<tr>
<th>I. Congestion of the heart.</th>
<th>II. Irritation of the heart.</th>
<th>III. Debility of the heart.</th>
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<tr>
<td>Plethoric,</td>
<td>Nervous,</td>
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<td>Over-active,</td>
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<td>Reulsive,</td>
<td>Emotional,</td>
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<td>Emotional,</td>
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<td>Anæmic,</td>
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<td>Spermatorrhœal.</td>
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</table>
I. Congestion of the Heart. This is characterized by a strong, bounding impulse, unnaturally jarring the chest, without the extended dullness of organic enlargement, and frequently without corresponding force in the pulse at the wrist, with precordial oppression or pain, and irregular palpitation.

Cardiac Congestion from Plethora. This form usually occurs in adults of full sedentary habits, or sanguine growing youths. Dr. Latham has given a graphic description of it under the name of "Mock Hypertrophy." "I am well aware," says Dr. L., "that there is a mock hypertrophy of the heart, bearing so close a resemblance to the true, that I should find no fault with you for being taken in by the counterfeit. There may be violent impulse of the heart felt not only in the precordial region, but in every part of the chest upon which you lay your hand. Here may be pain in the heart, and pain and throbbing in the head; and all these may be never absent, and often aggravated, from time to time, by accidental circumstances; and they may continue, from first to last, for several months, or for several years, and produce in the meanwhile an incapacity for all useful exertion, both mental and bodily. All these may be, and yet there be no hypertrophy.

"When the impulse of the heart is excessive, and, at the same time, the sounds are obtuse, muffled, and indistinct, and the precordial region presents a larger space than natural, which is dull to percussion, then the signs of hypertrophy are complete. But when the impulse of the heart is in excess, and, at the same time, its sounds are as loud and clear as ever, or louder and clearer still, and the whole precordial region is quite resonant to percussion, save the small space naturally dull, then the signs of hypertrophy are incomplete."

Contrary to some others, Dr. L. believes the cure of real organic hypertrophy hopeless; while he has "treated successfully" the mock imitation described, "in a hundred instances."

This form is occasionally found among clerks and merchants of full habits, or sanguine youths from the country, who surfeit themselves with rich food, and take little exercise; thus overloading the stomach and stimulating the heart with rich blood, they sometimes complain of flatulence, indigestion, and pain in the head, as well as alarming palpitation.

Cardiac Congestion—Plethora—Recovery. A clerk, strong, athletic, married, and sedentary, consulted me a few months since for uneasiness, irregular palpitation, and strong, bounding, jarring impulse of a heart otherwise natural, attended with occasional indigestion and
constipation, and constant fullness and pain in the head, with a bright congested eye. He was ordered a free purgative of compound extract colocynth with blue mass, to eat meat but sparingly but once a day, to rise early, and use cold sponging with hard frictions, and, avoiding the heat, to walk several miles daily. These measures having only afforded temporary relief, on a return of symptoms nearly apoplectic, they were further aided by a full bleeding from the arm, and a powerful hydragogue cathartic; and by the most careful attention to spare diet and free exercise, in a few weeks he quite recovered.

Congestion of the heart from over-exertion. As we know, from their interlacing with the bloodvessels, the muscles in strong exertion must greatly increase the force of the circulation. Some ingenious explanations of this are given by Dr. Wardrop, the best writer we have seen on the subject of cardiac congestion, under the head of what he terms the musculo-cardiac function. Simply running a few yards, or any strong effort, in health, will, as we know, bring on palpitation. And in the affection in question, from the frequency or violence of the exertion, this overaction of the heart becomes habitual. The symptoms are much the same as in plethora. Sanguine growing youths, fond of gymnastics, and especially rowing, are the most frequent subjects.

Dr. Addison, in his lectures at Guy's, is in the habit of cautioning the students against the rowing matches on the Thames. A fine lad of seventeen, excessively fond of rowing, was brought to me while stopping with a friend on the shores of a lake, with suspected organic disease, having a violent, knocking impulse. He was duly freed from the imputation, and directed to be less ambitious in boating and climbing the neighboring mountains. Indeed, youths generally outgrow this development, if left alone. Occasionally, it ceases suddenly. Dr. Latham mentions a young officer whose heart ceased to be unruly at the battle of Navarino. Almost any kind of severe exercise may be the first exciting cause. A servant-maid, from carrying coals up stairs, a chorus singer in St. Paul's, and a French danseuse, were severally more or less disabled for a length of time by severe palpitation, from violent efforts in their different vocations.

Case.—A jeweller, aged twenty, short, stout, ruddy, and temperate, having practiced gymnastics, and particularly climbing, and suspending himself by the arms, consulted me a few months since for strong, jarring impulse, distressing fits of palpitation, and constant headache. He was ordered a free alterative purgative, to be followed by twenty drops of equal parts of the tincture of digitalis and hyoscyamus in water, three times a day, with the local application of croton oil, followed by bella-
Corson on Functional Heart Affections. [Jan.

Donna; to eat sparingly of meat at dinner alone, to avoid violent exercise, and to walk much, moderately. He soon recovered.

A corpulent, healthy engraver, having run violently to overtake a coach, brought on severe palpitation of the heart, exhaustion, and difficult breathing, which remained for several days, and "were not relieved, until after blood-letting, leeches, and antimonials had been employed."*

Congestion of the heart from revulsion.—Any local agency which disturbs the equilibrium, and causes special determination of blood, may be termed revulsive. A moment's reflection on the number and size of the superficial veins, and the quantity of the blood they naturally contain, will show us the importance of the circulation on the surface of the body. Thus we aid this and relieve internal organs by sinapisms, pediluvia and diaphoretics.

Cold, by an opposite action, drives the blood from the surface, and overloads the internal organs. In a large hospital of this city, it is stated they can tell a very cold day in winter by the extra number of cases of apoplexy. On the principle of relieving this internal congestion, Dr. MacIntosh bled during the chill of ague. So, too, we forbid sudden cold baths to patients liable to apoplexy or disease of the heart. They have sometimes produced immediate death, or troublesome palpitation.

A gouty gentleman, after sea-bathing, had pain, palpitation, and violent impulse of the heart, with small pulse, for months, which were at last completely relieved by antimonials.

Cold substances taken into the stomach may derange the circulation. A case is quoted of a strong, healthy young man, heated with mowing, who drank freely of cold water, and was suddenly prostrated, with difficult breathing, loss of vision, and cold extremities, while, for the next three days, notwithstanding the attempt to relieve congestion by small bleedings, warm baths, and saline purgatives, there were over-action, and intermission of the heart, with an oppressed pulse, ranging from 14 to 50 beats per minute.—He slowly improved for the next four days, and at the end of the week the natural circulation was restored.†

Hot food, rapidly swallowed, has produced like effects. A young man, after eating a very hot potatoo, became insensible, finally rallied,

and for nine years after suffered from pain, palpitation and *forcible impulse of the heart, with a weak pulse*, frequent epistaxis, and cold extremities. He was at length greatly relieved by several moderate leechings over the heart, with small doses of the tartrate of antimony, followed by preparations of iron.*

Revulsion may be occasioned by *mechanical pressure*. Thus, the French conscripts are said to produce a very good imitation of disease of the heart, by tying a ligature tightly round the neck or arms. Mr. Hyslop found, that by grasping firmly the two arms, he greatly assisted the recovery of a lady from fainting; and, on making the experiment of ligatures upon his own arms, he could increase the pulsations of the heart ten beats in a minute.

*Pregnancy*, by pressure on the abdominal vessels, as well as by plethora, sometimes occasions distressing palpitation. A young married lady, in the fifth month of her first pregnancy, was attacked with a violent beating of the heart, and an aortic thrill, supposed to be aneurismatic. After great suffering and dropsical symptoms, unrelieved by bleeding, digitalis and other remedies, she recovered completely after natural labor.†

*Suppression* of habitual discharges, such as hemorrhoids or the menstrual flow, will sometimes by revulsion produce palpitation and congestion of the heart. A stout, ruddy country girl, with suppressed menses, who had "tumultuous palpitation," with the impulse so strong as to "raise the head," was restored to health by general bleeding, followed by purgatives, low diet, and cupping over the loins.‡

*Pulmonary congestion* may react upon the heart. The lungs, as we know, act partly like an immense sponge, filling the thorax, both in receiving and returning the blood. *Inspiration*, by expansion, draws in *venous blood*, while *expiration* by pressure expels *arterial*. Thus the mechanical effect of artificial respiration is to unload the heart of the stillborn infant; and, in this way, Sir B. Brodie roused the congested hearts of animals paralyzed by poison. John Hunter, it is said, once saved his own life, in nearly fatal syncope, from organic disease, by continual violent expiratory efforts. Some interesting facts on this subject may be found in the excellent works of Dr. Wardrop and Dr. Calthrop Williams. Congestion of the lungs has a tendency to overload the heart, and so palpitation and violent impulse are often accompanied by cough and difficult breathing.

* Wardrop. † Dr. Robert Lee. ‡ Dr. Calthrop Williams.
A lady, aged 28, kept awake, and sitting up in bed several nights, with a severe cough, could hear as well as feel the violent palpitation and impulse of the heart, especially on the slightest exertion. By small leechings to the chest, repeated every four days, and a dose of James' powder every night, all the symptoms were subdued.*

Emotional congestion of the heart. Every one has felt his own heart beat violently from mental emotion. Corvisart believed that affections of the heart in his time greatly increased during the reign of terror, and the exciting periods of the French Revolution. The term "broken-hearted," is unfortunately not merely figurative. From the paleness of the face, in terror or despair, we know that the blood has retreated somewhere. Shakspeare, the great naturalist of poets, tells us where:

"Oft have I seen a timely parted ghost
Of ashy semblance, meagre, pale, and bloodless,—
Being all descended to the laboring heart."

There is, however, more than mere revulsion. The heart receives besides a nervous stimulus or shock. This kind of congestion forms, then, a separate item, and an appropriate link to the next group of functional heart affections, or those depending on irritation.

A mother, still broken-hearted at the sudden loss of her child, a year previous, complained of difficult breathing, and a violent impulse of the heart with a small pulse. By means of alternate leechings to the chest and feet, with antimonials and sedatives, she at length completely recovered.*

II. Irritation of the Heart. Cardiac irritation is characterized by a smart knocking impulse, less forcible and jarring than that of congestion, but above that of health; more variable with excitement, and corresponding more uniformly with the radial pulse.

It arises principally from nervous derangement, impoverished blood, or morbid sympathy, with disorders of the digestive or generative systems.

Nervous Irritation of the Heart.—Some persons, from birth, have a nervous system unduly developed, and, in infancy are specially liable to convulsions; in childhood, to chorea; and in adult life, to hysteria or nervous palpitation of the heart. Some interesting observations on

* Dr. Wardrop.
this subject will be found in a paper by M. Gintrac, on *Surexcitation Nerveuse.*

*The Irritable Heart.*—Sometimes this exaltation of nervous sensibility is confined to a single organ, in the form of those curious obstinate affections described by Sir A. Cooper, Dr. Gooch, and others, under the name, "Irritable Breast," "Uterus, Testis," &c.

In the following example no neighboring sources of irritation could be detected. The morbid nervous excitability was exceedingly intractable, and confined to the heart alone, producing painful palpitation and a smart *rapping impulse*, and we venture from analogy to apply the above term.

*Irritable Heart.*—Incurable.—A female hat-presser, aged 35, unmarried, tall, muscular, otherwise apparently healthy, though suffering from occasional want and poverty, in a damp basement,—consulted me in 1848 for "nervous palpitation" of ten years' duration, and for which she bore the marks of counter-irritation, while under ineffectual treatment some years previous in Edinburgh. The heart was natural in size and sounds, with a little precordial tenderness to the finger, *painful palpitation*, more or less constant, increased by excitement, and accompanied by a *smart knocking impulse*. Under the use of preparations of iron, Fowler's solution, in combination, or otherwise, with vegetable tonics, digitalis, hyoscyamus, conium, valerian, with mild counter-irritation, followed by the external application of bella donna, she continued for two years with slight palliation at times, but no permanent improvement, till at last she grew discouraged and discontinued treatment. A year or so after, she died somewhat suddenly of pneumonia, without affording the desirable opportunity of a post-mortem.

*Spinal Irritation.*—We sincerely endorse the opinion of Professor Romberg, of Berlin, in his great work on nervous diseases, that this matter has been vastly over-estimated. Most nervous or hysterical patients, and especially those subject to palpitation, have a little sensitiveness, on pressing over the spine of some of the dorsal vertebrae between the shoulders, which some have thus magnified with an alarming name. It is ordinarily, we think, simply a slight test of an irritable nervous system. When much affected by atmospheric changes, as Dr. Wood, of Philadelphia, has observed, it may sometimes be rheumatic. For a more serious view of the matter, we refer to the works of Teale and others. In some instances, where perhaps, from scrofu-

* Mem. de l'Academie Royale.
lous irritation or some injury, the spinal tenderness has been more
deep-seated and constant, palpitation and other unpleasant symptoms
have certainly been relieved by leeching, cupping, or irritation near the
spine. Dr. Swett, in his excellent work, mentions a case of functional
disturbance of the heart, cured by an issue near a tender vertebra,
followed by tonics.

Irritating Nervines or Narcotics in common use, as articles of
luxury, have the effect, in certain habits, of deranging the action of the
heart; such are green tea and strong coffee. A case is mentioned of a
gentleman, who could, at any time, by taking a cup of coffee, produce
palpitation and bleeding from the nose. By far the most noxious
luxury to the dyspeptic, or nervous, is tobacco. The essential oil is
said to poison by paralyzing the heart. A Mexican minister, some
years since, summoned Dr. Alexander H. Stevens, of this city, to
Washington, for supposed organic disease of the heart. A cure was
performed by emptying his excellency’s snuff box. We shall illustrate
further in a moment.

Neuralgia of the Heart.—Such has been the term given by some to
the very rare cases of angina pectoris, which the researches of modern
pathology do not show to be connected with ossification or other form
of organic change.*

Irritation of the Heart, Angina Pectoris, from the use of Tobacco.
—A highly intelligent friend, aged sixty-five, stout, ruddy, early mar-
rried, temperate, managing actively his large business, after premising
that he commenced chewing tobacco at seventeen, swallowing the juice,
as is sometimes customary, “to prevent injuring his lungs from con-
stant spitting;”—and that years after he suffered from a knawing,
capricious appetite, nausea, vomiting of meals, emaciation, nervousness,
and palpitation of the heart, dictated to me quietly at his desk,
recently, the following story:

“Seven years thus miserably passed, when, one day after dinner, I
was suddenly seized with intense pain in the chest, gasping for breath,
and a sensation as if a crowbar were pressed tightly from the right
breast to the left, till it came and twisted in a knot round the heart,
which now stopped deathly still for a minute, and then leaped like a
dozen frogs. After two hours of death-like suffering, the attack ceased,
and I found that ever after my heart missed every fourth beat. My
physician said that I had organic disease of the heart—must die sud-
denly—and need only take a little brandy for the painful paroxysms,

* See Dr. Walshe.
and I soon found it the only thing that gave them any relief. For
the next twenty-seven years I continued to suffer milder attacks like
the above, lasting from one to several minutes, sometimes as often as
two or three times a day or night; and to be sickly-looking, thin, and
pale as a ghost. Simply from revolting at the idea of being a slave
to one vile habit alone, and without dreaming of the suffering it had
cost me, after thirty-three years' use, I one day threw away tobacco
forever. Words cannot describe my suffering and desire for a time.
I was reminded of the Indian, who, next to all the rum in the world,
wanted all the tobacco. But my firm will conquered. In a month my
paroxysms nearly ceased, and soon after left entirely. I was directly
a new man, and grew stout and hale, as you see. With the exception
of a little asthmatic breathing, in close rooms and the like, for nearly
twenty years since I have enjoyed excellent health."

On making, by his kind permission, a cursory examination, I found
the heart seemingly healthy in size and structure, only irregular,
intermitting still at every fourth pulsation.

*Hysterical Irritation of the Heart.—* It is well known that hysteria
often imitates, successfully, dangerous inflammations and other ills,
and among the rest, disease of the heart.

*Hysterical Palpitation—Leucorrhea—Recovery.—* A widow lady,
aged twenty-five, sanguine, nervous, sedentary, and very literary, after
a series of hysterical paroxysms from sudden shock, requested my
attention in 1850 to "disease of the heart," under which, she stated,
medical and other friends thought her laboring for months previous.
The least excitement would give rise to distressing palpitation, accom-
panied by a *smart knocking impulse.* There was some *leucorrhea*,
with pain in the loins.

Under the use of various preparations of iron, with bitter tonics and
sedatives; belladonna to the præcordial region; a mixture of the tinc-
ctures of valerian and hyoscyamus for the fits of palpitation; with
morning vaginal injections, of eight grains each, of extract of conium
and tannic acid, in a tumbler of water, followed by evening injections
with cold water, and regular long walks in the cool part of the day, in
a few weeks she was quite restored to health.

*Mental Irritation of the Heart.—* This is exemplified in the ten-
dency of all nations, figuratively or otherwise, to speak of the heart as
the seat of the passions. Laughing, joy or anger accelerates, while
grief or fear retards the circulation. The long, deep inspirations of
yawning, sighing, and sobbing are instinctive, and mechanically relieve
a congested or "heavy" heart. Doubtless from the mental shock af-
fecting the heart, the winner of a rich prize in a lottery, a feeble Emperor of Morocco in gaining a desperate victory, and a fond Russian mother in the restoration of her captive son, all died of the joyful news. John Hunter expired of disease of the heart in a fit of anger. The wife of a farmer, long harrassed with the fear of incendiaries; a nurse, from continued anxious watching; and a lady, tortured for a week with danger of shipwreck; each suffered afterwards from protracted disorder of the heart! A patient of the writer, disconsolate at the loss of her broken-hearted daughter, whose case will be mentioned, died of dilatation of the heart a few months afterwards.

Exhausting Mental Application is the frequent cause of irritation and palpitation of the heart. A friend, distinguished as a divine and author, aged about 42, moderately full, after several years' severe application, in which he habitually studied till three or four o'clock in the morning, was at last greatly incapacitated for a long period by irritable palpitation of the heart. He was most relieved by a succession of blisters, the size of a twenty-five cent piece, over the heart, and rest, with tonics, and at length nearly restored by a tour in Europe, mental relaxation and more generous diet. Any great mental effort, however, still exhausts his stock of nervous energy, and brings on irritability of the heart.

A celebrated Methodist clergyman, of middle age,—as a Western medical friend recently informed me, having,—by protracted and severe studies, brought on irregularity of the heart, was sentenced to suspension, and patient waiting for sudden death from organic disease, by the most celebrated medical professors of a Western school. In his retirement, he was surprised by the opinion of a shrewd country physician, that it was merely functional, and that he might with proper treatment gradually resume active labor; and finding, by a little experience, the last opinion correct, in a few months after he accepted the highest office in his church. He has since labored several years as Bishop.

It would seem as if the study of certain diseases sometimes favored their real or imaginary development. Laennec died of pthisis, and Corvisart of disease of the heart. When the celebrated Professor Frank was preparing his lectures on disease of the heart at Pavia, his own heart became so disturbed that he was obliged to rest for a time.* Rumor says that no less than five of the Professors in one of the medical colleges of this city have unjustly suspected their hearts.

* Romberg.
Medical students exhausted by a winter session are apt to be special subjects of real or fancied irregularity of the heart. We have frequently to assure our young studious friends that their hearts are certainly in the right place, and gravely prescribe a vacation. Bouillaud slyly alludes to this as a distinct species, under the name of "Maladie du Cœur des Etudiants."

We remember an early friend who, with the writer and two or three other students, gravely flourished the stethoscope over each other as a sort of society of mutual observation. We fancy we see still the doleful expression of his pale, handsome face, at the spring of the gushing cups over his intermitting rebellious heart. He soon after grew stout and forgot his heart in a successful country practice. A young friend, attending our Lectures on Diseases of the Chest last winter, felt an unusual knocking of his heart after ascending the long college stairs, and required several examinations to satisfy him. An early fellow-student (who happened to come to light again after illness and a hard session), in mounting to one of the "sky apartments" of a Parisian hotel, used frequently in alarm to call the writer to examine his palpitating irritable heart, and recovered under the somewhat selfish prescription of a partially pedestrian tour with his adviser to the south.

Anemic Irritation of the Heart. The reaction from sudden hemorrhage or excessive venesection, so well described by Marshall Hall, is sometimes characterized by palpitation, distress, a smart knocking impulse of the heart and bellows murmur, with a quick jerking and occasionally intermittent pulse, thrill of the arteries, nervous panting and sense of wildness and pain in the head.

In the case of a middle-aged sanguine, nervous lady, under our care in 1849, who had been very largely bled in severe puerperal peritonitis, this mingling of heart and head symptoms suddenly assumed a very perplexing character; and with serious misgivings, as to whether the lancet was not farther required, she was fortunately partially narcotized with opiates, and the palpitation and distress at the heart soon ceased.

A boarding mistress is mentioned by Morgani, who, for "palpitation of the heart," was bled, with temporary relief, followed by great aggravation. The "breast seemed at every stroke to be lifted up," and the venesections were repeated, till by degrees she was, as the event proved, literally bled to death; for, on the post-mortem examination, not the slightest change in the heart or viscera could be detected. "Everything was entire, sound and natural."

In Chlorosis, especially in the more excitable of its delicate sub-
jects, or in the earlier stages, with the blanched skin and dark areola of the eye, we have sometimes the irregular action, smart knocking impulse and bellows murmur of an irritable heart. Palpitation, indeed, was enumerated as one of the symptoms of "the green sickness" by Sydenham.

**Moderate Chlorosis—Palpitation—Tedious Recovery.**—A lady, aged 25; moderately full, but pale as a statue, with blanched lips, dark areola of the eye, very sedentary, in deep domestic affliction, with scanty menstruation, consulted me in 1849, in much alarm, for distressing palpitation, and a smart knocking impulse of the heart, diminished by rest, and increased by excitement, with an intermittent neuralgic pain along the right of the sternum, and without bellows murmur. After the persevering use of various preparations of iron, with vegetable bitters, mild sedatives, and the local application of belladonna, with regular walking and generous diet for several months, she slowly recovered her health.

**Dyspeptic Irritation of the Heart.**—This exceedingly common form doubtless depends on what is termed sympathy, and this latter again is certainly somewhat mysterious. Something is explained by Marshall Hall's theory of reflex, nervous communication, as well as by considering the connection of the great sympathetic system of nerves. The facts are quite evident. An inflamed kidney, a pregnant uterus, or a concussed brain, will produce a sick stomach, and none of these can suffer but the heart and its pulse respond.

**Dyspeptic Irritation of the Heart—Recovery.**—A gardener, aged 50, muscular, unemployed, and melancholy, was admitted under our care at the New-York Dispensary, in August last, with loss of appetite, flatulence, bitter taste, tongue clean and red at the tip, tenderness of the epi gastrium, constipation, high-colored urine, pulse 65 and soft, with palpitation and a smart knocking impulse of a heart otherwise natural. He was ordered a mild alterative purgative, to be followed by five drops of the tincture of nux vomica, in water, three times a day; to avoid indigestible food, coffee and tobacco; to sponge with cold water in the morning, and follow with friction; to walk five miles daily; and in less than a month he was discharged cured.

**Congestion or Torpor of the Liver** is frequently intimately associated with dyspeptic irritation of the heart. Dr. Hope gives a very interesting case of a lady aged forty, stout, with intermission, palpitation and oppression of a heart otherwise natural, and with constipation, succeeded by bilious stools and enlarged liver. Spare diet, and "active mercurial purgatives, employed almost without intermission
for two months, brought off an incredible quantity of dark green and deep orange bile." Suspension of these aggravated the symptoms. In three months she enjoyed "perfect health."

**Hepatic Torpor—Indigestion—Severe Palpitation—Improvement.**

—A merchant, aged 55, spare, having suffered from dyspepsia, and the fear of organic heart disease for many years, consulted me in 1850, for superficial pain, palpitation and a smart knocking impulse of the heart, otherwise normal, with loss of appetite, flatulence, despondency, constipation, clayey stools, bilious urine, shooting shoulder pains, jaundiced dry skin, with occasional turns of night mare, and terrible headache. With an occasional mild mercurial purgative,—five grains each of the iodide of potassium, with the extract of taraxacum, in solution, three times a day,—followed by iron, with mild sedatives; small doses of the tincture of nux vomica; the use of equal parts of soap liniment and tincture of belladonna over the heart; careful diet, brown bread, and especially recreation in the country, and gardening,—in a few months he materially improved.

**Tape-worm** has sometimes produced dyspepsia with serious disturbance of the heart. Dr. Calthrop Williams mentions the case of a lady, aged twenty-two, with voracious appetite, fixed pain in the left hypochondrium, restless nights, febrile attacks, syncope, alarming cerebral symptoms, with violent palpitation, especially before eating—who, by turpentine and other purgatives (producing the voidance of a tape-worm), and a subsequent tonic course, was perfectly cured.

**Gout** is, among our active population, comparatively a rare disease, and among the very few cases we have known, we have not happened to meet any decided instances of functional disturbance of the heart. In older and more luxurious states of society, the case is different. Three of the examples of dyspeptic palpitation mentioned by Abercombie were evidently gouty. One gentleman, aged forty-eight, after suffering greatly from indigestion, and daily paroxysms of distressing palpitation, was at last cured as by a charm, by so small a quantity as twenty drops of the wine of colchicum, in divided doses, daily for a month.

**Uterine Irritation of the Heart.**—Such a phrase may possibly seem at first inconsistent, and excite a smile; but if that smile make the morbid sympathy between the uterus and the heart remembered, our purpose in coining the term is accomplished. Dr. Williams uses the short, expressive phrase "uterine palpitation." Every variety of menstrual irregularity, as well as structural disease of the uterus itself,
may occasion functional disorder of the heart. Want of space must limit our examples.

_Uterine Disease—Palpitation—Recovery._—A lady, aged 26, having four months previously suffered much in an instrumental first labor, called my attention, in 1850, to palpitation, uneasiness, and a smart, knocking impulse of a heart otherwise healthy, accompanied by dragging pains about the loins. On examination with the speculum, the vagina was slightly smeared with leucorrhea discharge, and the os uteri was prolapsed, swollen, tender, and excoriated. Under the use of occasional applications, with a camel’s-hair brush, of a solution of the nitrate of silver of 90 grains to the ounce; vaginal injections of a solution of extract of conium and tannin, alternated with cold water; twenty drops of a mixture of equal parts of the muriated tincture of iron and the tincture of hyoscyamus three times a day in a wineglass of sweetened water, porter and beefsteak, she gradually recovered her health.

_Dysmenorrhœa—Nervous Palpitation—Recovery._—A lady, aged 24, slender, stooped, stramous, having the remains of former spinal irritation, and having just weaned her firstborn, consulted me in 1843 for smart nervous palpitation and difficult, painful menstruation, declared to be “like labor.” By full doses of Dover’s powder and camphor in pills for the monthly paroxysms, followed in the intervals by the daily administration of the tincture of guiac, after the plan of Dr. Dewees; and subsequently, the still more successful use of a solution of the iodide of iron, in combination with the tincture of hyoscyamus; she regained her usual rather feeble health, and soon after became pregnant.

_Irritation of the Heart from Spermatorrhœa_ in the male is sometimes present. We remember two cases of this kind. One was a young man, kindly referred by a medical friend to one of our Chest Cliniques, in which there was a smart, knocking impulse of the heart; but he unfortunately escaped us both, and did not return. Most commonly, however, it produces _cardiac debility._

III. _Debility of the Heart._—This is characterized by a _soft, tapping impulse, sometimes hurried_; and a _tendency to fainting._ It is produced by any agency which, by general depression of the nervous system, changes in the blood, by depraved nutrition, weakening discharges, or the morbid sympathy with other organs, exhausts the nervous energy of the heart. We were strongly inclined at first, therefore, to adopt the term _enervation of the heart_, instead of the more familiar one we have chosen.
Cardiac Debility from Nervous Disorder.—Romberg has classed nervous diseases with a loss of power under the general term Anaesthesia. On this principle, certain poisons, as marsh miasma, lead, and tobacco, may be termed slow anaesthetics.

Enervation of the Heart from Marsh Miasma—Anxiety—Improvement.—A bricklayer, aged 28, tall, slender, bilious-looking, having previously suffered from ague in a miasmatic district, consulted us in 1844 for palpitation, with feeble tapping impulse of the heart, else normal, accompanied by a tendency to faint, even with the slight exertion of raising a brick; with rather feeble pulse and moderate appetite; spleen and liver natural in size; some spinal sensitiveness between the shoulders; and much mental suffering, from constant harassing of committees from an incredulous beneficiary society. He was ordered preparations of iron, with quinine, aloes, and bitters; mild counter-irritation and belladonna; cold sponging and friction; with diligent walking and total abstinence from cigars; and in a few weeks materially improved, but, against my friendly protest, was soon cut off by his society, and sent to his friends in the country.

Debility of the Heart from Lead-poisoning—Recovery.—A laborer, aged 34, muscular, having worked in a white-lead manufactory a few weeks, was admitted under our care in the New-York Dispensary, early in October last, for palpitation, difficult breathing, uneasiness and faintness on exertion, with soft tapping impulse of the heart, otherwise normal, with the violet lead streak of the gums, trembling weakness and numbness of the limbs, pulse 74, weak; loss of appetite, nausea, tenderness of the epigastrium, and constipation. He never had rheumatism; used no tobacco; indulged in no excess. Partially on the plan of M. Melsens in lead disease, he was ordered ten grains of the iodide of potassium in solution, with a few drops of the tincture of nux vomica three times a day; and subsequently these were aided by a blister, the size of a cent over the heart, dressed with belladonna ointment, with the effect of gradually relieving all the symptoms, and he left convalescent at the end of a month.

Weak Heart from Tobacco.—A cork-cutter aged 21 was recently admitted under our care in the N. Y. Dispensary, with faintness on exertion, palpitation and soft tapping impulse of the heart, from the excessive use of tobacco, who was cured by abstinence, walking, and the use of small doses of tincture of nux vomica, and latterly of the acetated solution of strychnia.

Hysterical Debility of the Heart.—Those instances of nervous females in which there is catalepsy, or fainting for hours, with a scarcely
perceptible action of the heart, are really cases of simply hysterical debility of the heart.

We suspect too that the favorite subjects for so-named "mesmeric experiments" have a weakness in that quarter.

*Emotional Debility of the Heart.*—It is scarcely necessary to add to our remarks upon the influence of depressing passions. The following cases explain themselves:

*Weakness of the Heart—Domestic Grief—Much Improvement.*—A poor woman, aged 32, slender, mother of two children, fretting from want, and the long absence of her husband, was admitted under my care in January last, at the New-York Dispensary, for "fainting turns," *palpitation, feeble, velvety impulse* of the heart, else regular, with slight dyspeptic symptoms. Under the use of mild counter-irritation over the heart, with a mixture of croton oil and sulphuric ether; and twenty drops, three times a day in a wineglass of sweetened water, of a mixture of one ounce each of the tincture of hyoscyamus with the muriated tincture of iron to a drachm of the tincture of nux vomica; with moderate walking, in a few weeks she greatly improved.

*Cardiac Debility—Grief—Amenorrhoæ—Phthisis.*—A young lady, aged 19, English, fair, delicate, frequently sighing, having been forcibly separated from her lover by parental authority, on emigrating, consulted me in 1845 for *faintness on slight exertion, palpitation and fluttering, velvety impulse of the heart,* otherwise natural, accompanied by suppression of menstruation. Silent and sad,

"She never told her love,
But let concealment, like a worm i' the bud,
Feed on her damask cheek."

Suspecting something from her manner, I learned her story from a sister, with the addition, that her friends were often obliged to watch her as she wandered on the beach, broken-hearted, to gaze on the sea. Chalybeates and the usual restoratives were tried in vain. A few months after, with a suspicious cough, came the signs of tubercular softening; and, in the wreck of beauty we sometimes see, with the alabaster forehead, the pearly eye, and hectic flush of the cheek, she gently wasted away with consumption.

*Anaemic Debility of the Heart.*—After reaction from loss of blood by hemorrhage, or depraved nutrition, there naturally follows exhaustion.

*Weak Heart—Chlorosis—Bellows Murmur.—Bruit de Diable. Recovery.*—A lady, aged 25, married, slight, pale, sedentary, consulted
me in July, 1852, for palpitation, uneasiness, faintness on exertion, soft, variable, aortic bellows murmur, with the first sound, and weak tapping impulse of a heart, else natural; with venous hum in the jugulars, and irregular scanty menstruation. After the use of preparations of iron, with mild sedatives, exercise, and generous diet for a few weeks, she was sent a month into the country, and returned quite well.

Dyspeptic Debility of the Heart.—A majority of the purely dyspeptic examples of cardiac functional disturbance come under the head of “irritation.” It is only in the worn-out cases that we have debility of the heart.

Debility of the Heart—Frequent Fainting—Dyspepsia—Improvement.—A merchant, aged 32, medium, pale, sedentary, married, eight years dyspeptic, consulted me in 1851 for palpitation, occasional turns of irregular intermission of the heart, with soft tapping impulse, sometimes hurried, and frequent fainting, accompanied by capricious appetite, “belching,” flatulence, uneasiness, and sensation of splashing of liquids in the stomach—for which he had received great variety of treatment on both sides of the Atlantic. An oyster supper, a social evening, any special indulgence, or an exciting day’s work expended the nervous energy of his heart, and aggravated all his symptoms. The faintness, or “pitching turns” as he termed them, greatly alarmed him, and were generally mere momentary loss of power, and staggering along the street or about his business. Occasionally they laid him powerless and pale on the sofa for five or ten minutes. Sometimes they were absent for days, and then repeated for several times a day. The intermission generally at every fifth beat was sometimes absent, and was abolished at any time by walking a few times rapidly round the room. He was ordered Hoffman’s anodyne, or, in extremity, brandy and water for his fainting turns; and in the intervals, in varied succession, preparations of iron by hyoscyamus or conium, the tris nitrate of bismuth, with the tr. of columbo, &c.; tincture of nux vomica and hop; cold sponging; abstinence from his favorite cigars, late suppers, and exciting company. After various vicissitudes he is now better than for years previous, but his heart still occasionally “fails him.”

Uterine and Spermatorrhædal Cardiac Debility.—Among the most common of all causes of an excessively weak heart are doubtless exhausting discharges from the generative organs.

Exhausted Heart—Menorrhagia—Improvement.—A lady, aged 36, slender, very pale, with blanched lips, having previously miscarried,
consulted me in 1849 for faintness on slight exertion, palpitation, feeble tapping impulse, of an otherwise natural heart, connected with excessive and protracted menstrual discharges. These were checked by pills of acetate of lead, with powdered ergot and extract of hyoscyamus; after which, under tonic treatment, she left the city materially improved.

**Weak Heart—Spermatorrhæa—Bellows Murmur—Recovery.**—A clerk, aged 22, slight, pale, with dark areola, having learned the practice of masturbation four years previous, was admitted under my care in the N. Y. Dispensary in April last, with faintness on exertion, soft, aortic bellows murmur; palpitation, faint tapping impulse of the heart, hurried by exercise, with feeble appetite, trembling of the limbs, and nocturnal emissions from every night to once a-week. He was ordered to sleep on a hard bed, rise early, use cold sponging, and walk regularly some distance, avoid mixed company and lascivious books; to give up all solitary practices; to irritate the loins with croton oil, and take a mixture of two drachms each of the muriated tincture of iron and the tincture of hyoscyamus, with an ounce and a half of the tincture of columbo—a teaspoonful in a wineglassful of sweetened water three times a day; and in a few weeks he left quite improved. In the heat of summer an attack of severe diarrhœa brought on temporary relapse, with the bellows murmur, from which, by the use of powders of five grains each of tris-nitrate of bismuth and gum acacia, with a grain of opium every four hours it was checked. With subsequent tonics, he soon quite recovered.

**Treatment.**—We have given this so fully in the cases related, that within our present narrow limits, we venture only a few brief comments. In an organ so susceptible as the heart to mental impressions, we have always, so far as a delicate regard to truth and candor would allow, avoided admitting to the patient in functional disturbance, for his own good, that the heart was at fault, mentioning the organ as little as possible, using cheerfully the phrases "nervousness," "sensitiveness," "palpitation," and of inquiring constantly about the stomach, or some other offending organ. Indeed many of the patients mentioned very soon forgot their weakest point.

Partly for this reason, it will be seen, with sedentary and nervous citizens we have very constantly prescribed that powerful, cheap tonic for the million—walking. To insure faithful obedience, and give an idea of its importance, we have usually ordered it in measured doses of a certain number of miles daily. After the first fortnight, nothing cheers a desponding, nervous or dyspeptic patient so much. He soon
feels, by the increased ease and comfort with which he executes his allotted task that he is really stronger. And then it relieves congestion by gradually distributing the blood to the chilly foot and hands; it gives tone to the stomach, and sometimes a voracious appetite; it is nature's laxative; it restores, by its grateful glow, the functions of the skin; it increases muscular energy; and it calms the irritable nervous system by its agreeable invigoration and the quiet sleep it begets at night; and lastly, by its gentle stimulus, it actually strengthens a weak heart. Providence has mercifully made our most necessary blessings easily accessible. Man was originally a field animal. Walking was the primitive exercise of our first parents in the bowers of Eden, and it is still healthier, in the main, than any other. We had occasion recently to make it a condition of attendance on a rich, fine lady, that she should, for a time, abandon her carriage for nature's locomotion, and in a few weeks we were gratefully obeyed.

Of great importance to the functions of the stomach, liver, nervous system, and, through them, to the disordered heart, is attention to that extensive surface, the skin. By telling delicate patients, if necessary, to retain the garments on the upper limbs, while the lower extremities are cleansed and vice versa; or, in cold damp weather, by adding a little alcohol or cheap spirit; and especially by free frictions, with a coarse towel or flannels, the most sensitive may sponge the body, on rising in the morning, with cold water at the coldest season of the year.

Of the medicinal means employed, we have only space to notice a class whose direct tonic influence upon the heart, and nervous system, we believe to be greater than any other. We refer to preparations of nux vomica, and its alkaloid, strychnia. Especially in dyspeptic complications and in excessive "debility of the heart," they are invaluable. For safety and convenience, we prefer either the strong tincture of the vomica nut or an equal quantity of the more uniform solution of the ordinary strychnia of the shops, the strength of a grain to the ounce, rendered soluble by the addition of one part of acetic acid to three of water—either preparation to be given in doses of five drops three times a day, in water, increasing cautiously, if necessary, to fifteen drops,—resting, if the tingling and twitching of "strychnism" occur, and commencing in smaller doses when they subside.

In explanation of their therapeutic effects, we may mention the beautiful recent experiment of Dr. Marshall Hall, in rousing the nervous system of the frog, stunned by division of the spinal marrow, by means of a solution of the acetate of strychnia, and the still more conclusive test of Prof. E. Weber, mentioned by Romberg, of producing
by the application of strichnia to the severed palpitating heart of the frog, tonic contraction.

In conclusion, we tender our grateful acknowledgments to the members of the Society of Statistical Medicine, for their kind encouragement, in completing this sketch, necessarily brief and imperfect, but conceived, it is hoped, in their spirit, based only upon facts—open to candid correction, and penned in the sincere desire to regard only the teachings of nature in the interpretation of medical truth.

ART. X.—On the Effects of Poisons and Medicines upon the nursing Child when taken by the Nurse. (Translated from the Journal für Kinderkrankheiten.)

At the session of the Society of Practical Medicine, Paris, in Feb., M. Courserant related a case in which he had prescribed an infusion of belladonna leaves as a local application in the purulent ophthalmia of an infant. The mother, thinking that it was intended for internal use, chose to take it herself, that her child might obtain the effects through the milk. Mr. C. found her prostrated and delirious, pulse thready, tongue dry, and skin cold; coffee, spirits, and ammonia were given with good effects. Instead of the child, a small dog was applied to the breast, and in two minutes it was attacked with cramps. On the fourth day the child began to nurse again with no bad effects. P. Dubois thought it doubtful if poisons taken by the nurse could impregnate her milk. He had often gived opium in large doses to nurses, but their infants were not affected. In the case of a woman attacked by cholera and nursing an infant six months old, he gave opiate injections to slight narcotism, but without harm to the nursing child. He had also applied extract of belladonna to the os uteri of a female in labor, and produced delirium, during which the delivery took place, but the child was not affected. Still, he should delay putting the child to the breast under such circumstances as long as possible. M. Guersant stated that he had treated a child suffering from a persistent diarrhœa, and consequent loss of flesh; it was finally given to a wet nurse, and a young dog applied to the mother’s breast, which was immediately seized with a diarrhœa and soon after died. This proves that the milk can assume a poisonous character, either by an internal alteration or by external influence.

* We hope to supply these defects, and to add more illustrations, and a statistical analysis of cases, soon, in a small volume.
PART SECOND.
CRITICAL ANALYSIS.


A Treatise on Operative Ophthalmic Surgery. By H. Haynes Walton, Surgeon to the Central London Ophthalmic Hospital, etc., etc. First American from the first London edition. Illustrated by one hundred and sixty-nine engravings on wood. Edited by S. Littell, M. D., Surgeon to Willis Hospital for the Eye and Limb, etc. 8vo, pp. 599. Philadelphia: Lindsay & Blakiston, 1853.

Aural and ophthalmic surgery are, by common consent, associated in the same department of practice. The analogy existing between the eye and ear, as organs of special sense, both in their anatomical arrangement and physiological action, is preserved also in their pathological state. This resemblance is however too slight to be of much practical advantage, and we group under the same head these two works upon special surgery, for convenience of notice, and not for the purpose of comparison of opinion. The announcement of a new work on the diseases of the ear will arrest the attention of every practitioner. No class of diseases has puzzled him more, for of none has he had so little accurate knowledge, and such meagre and unsatisfactory sources of information. The work best suited to the wants of the laborious physician, and the safest guide, as a manual of practice, has been the treatise of Kramer, published in 1838. But, since that date, such have been the advances made in the study of aural pathology—not less through the labors of this enlightened author than the observ-
ations and investigations of Lineke, Frank and Schmalz in Germany; Deleau and Itard, in France; and a large number of English writers, of whom Mr. Toynbee deserves especial mention, for his careful dissections—that Dr. Kramer has in a more recent work discarded his earlier opinions as no longer tenable.

Evidently, therefore, a new work on aural surgery, based upon more recent and reliable pathological views, and consequently more correct in its therapeutical details, was in demand. The treatise of Mr. Wilde supplies this deficiency. Taking advantage of the investigations of preceding authors, and adding his own careful observations, and laborious analysis of a large number of clinical cases, he has given to this department its legitimate rank in surgical science and art.

The treatise before us contains the result of ten years' experience in the treatment of the diseases of the ear, in an extensive practice, and the management of a large public institution in Dublin. The number of cases which came under observation at this hospital, during the last eight years and a half, was 2385, and of these 200 are very carefully tabulated. During this period the author has published several articles on the diseases of the ear, in the Dublin Quarterly Journal, and the Medical Times, which attracted considerable attention, and one of which was translated into the German language. The present work was issued simultaneously in this country, Great Britain and Germany. The edition in this country was issued under the editorial supervision of Dr. Addinell Hewson, a former pupil of the author. With these explanatory remarks, we shall proceed to the analysis of the more interesting and practical portions of the work in hand.

The first chapter of fifty pages contains the history and bibliography of Aural Surgery, and the subject is treated with an evident fondness for criticism. The student would do well to read also in this connection Dr. Kramer's Critical Literary Review, introductory to his work on the diseases of the ear, which contains an excellent analysis of the early writers.

Preliminary to the study of the special forms of disease, Mr. Wilde devotes two chapters to the Means of Diagnosis, Statistics and Nosology of Ear Diseases. The directions given under the former head are of such practical consequence that we shall detail them at length, but as briefly as possible.

The first and grand point in the treatment of diseases of the ear, is accuracy of diagnosis; and in order to this it is indispensably necessary to understand the best method of conducting an examination. The following is, in substance, the author's directions:
We are first to observe carefully the condition of the concha, external meatus, mastoid process, infrazygomatic region, and the space immediately below the lobe of the ear; then the auricle, in its various folds, its color, its temperature particularly, its thickness, as learned by feeling its hem or helix between the fingers, and the angle which it forms posteriorly with the cranium; also the position, size, shape, and color of the external meatus, as seen without altering the relaxation of the parts. To examine the outer third of the auditory canal, the upper rim of the helix should be grasped between the finger and thumb of one hand, and drawn upwards, backwards, and outwards, while the thumb of the other hand, placed in front of the tragus, draws it and the integuments forward upon the zygoma. The finger should then be pressed deeply and firmly upon the movable root of the tragus, and backwards between it and the articulation of the jaw; and upon the patient's opening and shutting the mouth, we are to notice the amount of pain which it produces. The middle and fore-finger should also be inserted deeply behind the ramus of the jaw towards the styloid process, and notice taken of the sensations experienced.

The mastoid process claims especial attention when inflammatory action is suspected. Firm pressure is to be made upon it with two fingers; and the same careful examination should extend to the posterior and lateral portion of the head, to the insertion of the sterno-mastoid muscle, as well as its upper third. A small gland, situated over the middle of the mastoid process, frequently becomes enlarged, and is the seat of severe neuralgic pain in aural inflammations. Percussion of the mastoid process occasionally affords some information.

We are next to examine the auditory canal, and external surface of the membrana tympani; and to effect this the patient should be placed opposite strong and direct sunlight, so as to allow the sun's rays to fall directly into a tubular speculum. Any wax, or other mechanical impediment which may be present, should be removed; if they are the chief cause of the deafness by completely obstructing the passage, they should be removed with a syringe and plain water; but if there is also present other, and especially inflammatory affections of the meatus or tympanal membrane, a pair of fine forceps should be used, as the injection will, by increasing the vascularity, mislead as to the actual amount of disease. For this purpose a pair of forceps having an angle in the shaft are to be preferred.

For the examination of the external auditory passages and membrana tympani, Mr. Wilde prefers the tubular speculum to all other instruments hitherto invented. These instruments consist of conical sil-
ver tubes of different calibres, each tube being an inch and a half long, five-eighths of an inch wide at the greater aperture, and varying from two to four lines in the clear at the smaller extremity. They should be made as light as possible, highly polished, both inside and out, with a stout rim or burr round the larger aperture, and the smaller aperture well rounded off, so as not to irritate the ear in entering. He has tried them of various shapes and sizes, their sides running at different angles, and also with the interior blackened, so as to prevent reflection of the incident luminous rays, but found none which were equal to those just described. As different sizes are occasionally required, he has a set of three, formed so as to fit into one another for convenience of carrying. In using the speculum, sunlight is to be preferred to any artificial contrivance for the use of lamplight. While the auricle is drawn upwards and backwards with one hand, the proper-sized tube is inserted with the other, and pushed in as far as possible without giving pain; the head of the patient and the tube are then moved slightly, so as to permit a full stream of light to fall upon the tympanal membrane. By moving from side to side the larger aperture held between the fingers, the parts about the membrana tympani may be examined; and, by withdrawing it slightly, the whole canal may be carefully and accurately examined.

We should note in this examination the form, curvature, color, polish, vascularity of the entire auditory canal. If wax, muco-purulent discharge, or cerumen obstruct the view, it must be removed by a small spatula or a probe wrapped around with cotton. The points to be noticed in regard to the membrana tympani, are its color, transparency, tenuity, vascularity, arrangement of its vessels in every part,—its tension, flexibility, polish, curvature, and its position as regards the interior of the cavity, of which it forms the outward boundary,—the direction and projection of the handle of the malleus, and the character of the membrane, both above and below the attachment of this bone. The patient should also be directed to inflate the Eustachian tube, by expiring strongly while the mouth and nose are closed. While the air is forced into the drum we should note whether the membrane vibrates, or its tensity is altered, the degree of vascularity produced, as well as the position and course of the vessels, and finally the existence of a perforation of the membrane which may now become apparent. The tube should now be removed, and the ear applied to the external auditory passage, to estimate the character of the sound produced in the middle ear by this inflation, whether it be the normal rush of air, or a prolonged squealing or gurgling sound, made by contraction of the
Eustachian tube from dryness, or an accumulation of mucus in it or the cavity of the tympanum. If the patient is unable to inflate the tympanum, and there is reason to suspect that the Eustachian tube is obstructed, or that there is an accumulation of mucus, blood, pus or other matter in the middle ear, and there is no inflammation present, air may be ejected by mechanical means, if the case require it.

Mr. Wilde enters into a minute description of the instruments which he employs in catheterizing the Eustachian tube, and the best method of operation. As this operation, however, is far less often required than has been supposed, we shall not stop to describe the different methods proposed.

Mr. Wilde strongly condemns the practice of indiscriminately probing and syringing the ears, without a proper inspection of the parts. If there exists an inflammatory condition of the auditory canal, or membrana tympani, the symptoms will be decidedly increased by such a proceeding. The degree of deafness is best learned by measuring the hearing distance with an ordinary watch held near the external meatus. It should also be held behind and in front of the auricle, and between the teeth, and in each instance the degree of hearing carefully noted. The throat should be carefully examined, the uvula, tonsils, and the orifice of the Eustachian tube, by the pressure of the finger. The voice also manifests a change in cases of long-continued deafness; the patient expresses himself in a loud tone, speaking as if out of breath, with a whistling sound, and at length the utterance becomes indistinct. Such cases the author considers unfavorable. The last prominent symptom to be interrogated is tinnitus aurium, of which the author remarks:

The value of tinnitus as a diagnostic has been greatly overrated. It is certainly one of the most distressing as well as the most frequent symptoms attendant upon affections of the organs of hearing, but its cause is very obscure and difficult to comprehend, and its removal still more difficult to achieve. I know no symptom concerning which a more cautious prognosis should be given, as it is one common to almost all, and peculiar to none, of the diseases of the ear. Like muscae volitantes in the eye, it may exist as an isolated symptom, or it may be an attendant upon several aural diseases. It is often caused by cerebral disease; therefore, we should carefully inquire whether it is felt in the head or in one or both ears; it is sometimes an accompaniment of derangement of the circulating, digestive, or uterine organs; of congestion of the brain, hemorrhage, hypochondria, hysteria, chlorosis, anaemia, typhus, influenza, or simple catarrh; of closure of the external meatus, obstruction of the Eustachian tube, and impaction of the auditory passage with wax; a foreign body, or even a hair resting on the tympanal membrane, as well as engorgement of the lining mem-
brane, or mucous collections in the tympanal cavity, and also nervous deafness, will all produce it. Furthermore, we may remove the original disease, give a healthy action to the affected organ, and restore its function,—yet will the noise remain. It is always most felt at night when the patient lies down to rest; it is least experienced in the open air, in a crowd, or when travelling in a carriage. It seldom or never coexists with an open tympanal membrane, and, therefore, perforation of the drum has been resorted to, and occasionally with effect, to relieve patients of this distressing malady. In cases of complete acquired deaf-muteism it is not present. So great is the discomfort which it gives, that persons incurably deaf, and who are quite conscious of the impossibility of restoring their hearing, will still apply to be relieved from this haunting and most annoying symptom; and therefore it is, that, in the quack advertisements, we always read of the "promise to cure ringings and noises in the ears." The peculiar characters of the tinnitus, and the noises to which it is likened, are as variable as sound itself. Do these characters depend upon the cause of deafness, or the portions of the organs affected? I have taken some pains to investigate the subject, and I believe not. They are no more dependent upon the causes of the disease, nor the structures engaged, than the peculiar form which ocular spectra and motes floating before the eyes are contingent upon the parts concerned in ophthalmic or cerebral diseases. No one has yet been able to arrange or classify the peculiar description of muscae contingent upon congestion, amaurosis, choroid disease, cataract, or disease of the brain or its membranes, no more than they can satisfactorily account for both muscae and "noises in the ears" in cases of hemorrhage.

The correctness of the estimate, which the author puts upon tinnitus as a symptom, is seen from the investigations of Kramer. (Brit. and For. Med. Rev., vol. 24.) In 2000 cases of aural disease, tinnitus was present in 1267; in accumulations of wax, acute inflammation of the membrana tympani, and nervous deafness, it was present in 3 cases out of 4; it was as often absent as present in catarrhal and phlegmonous inflammation of the auditory passage, otitis interna, and in muculant obstruction of the middle ear; and, finally, in chronic inflammation of the membrana tympani, it was twice as often absent as present. The writer of this Review very justly concludes that tinnitus has not the slightest value pathognomonically, prognostically, or therapeutically.

Mr. Wilde closes this chapter with some remarks upon the proper mode of applying the remedies employed in aural affections. As most of these diseases are inflammatory, depletion, local rather than general, is usually necessary. The best method of abstracting blood is by leeches, and to be most effectual they should be applied immediately around and within the edge of the external meatus. "From four to six leeches may be readily attached round the meatus, and in this situation they will
produce more immediate and permanent relief than three times the
number affixed behind the auricle. The application in front of the
tragus is also very much more effectual than upon the mastoid region.
When, however, the latter locality becomes itself the seat of inflam-
matory action, they should also be applied freely all over it. Where
we have already recently applied leeches in the two first-mentioned
places, and the parts have thereby become swollen and irritated, the
next most advantageous position is beneath the lobe of the auricle, be-
hind the ramus of the jaw. I do not know any painful affection in
which leeches, applied in the manner directed, produce the same amount
of immediate relief as in disease of the ear. They should be had re-
course to again and again, even upon the same day, and applied in
numbers, to relieve paroxysms of pain, as well as to lessen the degree
of redness and vascularity observable in the inflamed parts."

Of counter-irritants the common fly-blister is the most useful in
acute cases, and pustulation by tartar emetic ointment in chronic cases.
They should be applied to the mastoid region, care being taken to pro-
tect the auricle. "When there is much neuralgie pain complained of,
extending from the ear over the side and back of the head, I have found
the compound camphor liniment, with extract of belladonna, one of the
most useful applications; but, in this preparation, care should be taken
to rub the belladonna first with a little water in a mortar, otherwise it
will not mix with the liniment. In children and young persons the
strong tincture of iodine, containing some iodide of potassium, is a very
useful remedy, and probably acts specifically as well as a stimulant; it
should be applied with a camel-hair pencil daily, or every second day,
unless the part begin to vesicate or the cuticle to peel off, when the ap-
lication should be discontinued for a few days. The use of iodine,
however, by the endermic method, is only of value by being long per-
sisted in."

The application of heat and moisture are very grateful, and may be
employed by holding the ear over the vapor of very hot water in the
bottom of a long, narrow vessel, medicated with hyoscyamus, opium,
belladonna, marsh-mallows, camomile, or poppy-heads; or by a warm
linseed-meal poultice, frequently renewed.

The author deprecates the practice of pouring stimulating or seda-
tive liquors into the ear; nor has he any faith in electro-magnetism,
galvanism, or electricity, in relieving deafness.

Mercury is the medicine upon which he places the most reliance,
from its efficacy in controlling inflammation and removing its products.
The same rules which guide in the administration of this remedy in oc-
ular affections, may safely be adopted in diseases of the ear. The fol-
lowing remarks upon the virtues of the bichloride must accord with
the experience of every practising physician:

The third, and perhaps the most efficacious form, in which mercury
may be used, is that of the bichloride, still commonly known in this
country as the oxymuriate, one of the most valuable medicines of the
entire Pharmacopoeia. A treatise might be written on the virtues of
this remedy, and the vast field of disease over which it exercises a
sanative influence. Combined with Peruvian bark—which the chem-
ists say is incompatible, but the product of the decomposition said to
be produced by which, may be the very substance which acts most
beneficially—it is almost a panacea for most of the strumous inflamma-
tions in children and young people; and its power in controlling scrofu-
lous ophthalmia, corneitis, iritis, &c., extends equally to the eure
of kindred affections in the ear. It is the best remedy I know of for
inducing absorption of lymphy deposits in the membrana tympani,
and general thickening and opaety of that structure, as well as very
old cases of chronic inflammation of the membrane of the cavitas tym-
pans. It is, moreover, when properly administered, one of the safest
as well as the surest preparations of mercury: it may be taken for a
great length of time; it seldom interferes with the ordinary occupa-
tions or amusements of the individual; it leaves no ill effects; it rarely
induces ptyalism; and patients improve in health, and absolutely grow
fat while using it.* It may be given alone, either in pills or dissolved
in nitrous ether, proof spirits, or some of the tinctures, such as casea-
rolla, but it is much more soluble in distilled water than is generally
known; it may be combined with the muriated tincture of iron with
good effect, or with some of the preparations of sarsaparilla; but bark
—either the tincture, syrup, or decoction—is of all others the medi-
eine best suited for its administration. Our Dublin preparation of the
syrup is, particularly for children, a good vehicle for it, provided the
mineral is first dissolved in a little distilled water. Oxymuriate of
mercury and bark sometimes disagree, producing, shortly after being
taken, pain in the stomach, tenesmus, griping, and even diarrhoea; in
such cases it will generally be found that it was taken before breakfast
or on an empty stomach; it should therefore be administered an hour or
two after meals. But when it disagrees, even with such precautions,
a separation of the constituents will obviate the unpleasant effects: thus
the mercury may be taken an hour or two before or after the bark.
From the sixteenth to the eighteenth, or even the quarter of a grain,
may be taken three times a day, according to the circumstances of the
case, for weeks and even months together, with, however, short inter-
vals occasionally.

Mr. Wilde devotes the succeeding fifty pages to the Statistics and
Nosology of Ear Diseases. We need not dwell upon the matter of

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* I understand that the bichloride of mercury, in large doses, is used to fatten and improve
the condition of horses in the West Indies.
this chapter farther than to state that the nosological arrangement
which he adopts is according to the anatomical divisions of the organ
of hearing, the anatomy of each being given preliminary to the consid-
eration of the several diseases to which it is subject.

Chapter IV. is devoted to the Diseases of the Auricle, Mastoid Re-
gion, and External Meatus.

Wounds and Injuries of the Auricle.—These accidents are of in-
frequent occurrence, except in countries where mutilation of the exte-
nal ear is a capital punishment, or fighting with small swords is much
practiced. Piercing the lobe is sometimes attended with erysipelatous
inflammation, eruptions, and abnormal growths. The treatment of
these accidents is simple, and need not be dwelt upon.

Tumors of the Auricle.—Morbid growths occurring upon the ex-
ternal ear are not uncommon. They may be situated upon the lobe,
or upon the inner or outer aspect of the helix. Fibrous tumors not
unfrequently form in the lobe, the result of piercing it, an example of
which Mr. Wilde gives, with the operation for its removal. These
tumors are liable to return after excision. Mr. Paget (Surgical Pa-
thology) mentions a case in which both lobules were excised for the
removal of such tumors, but on one side the disease returned in the
cicatrix; this was again removed, and it did not return. Hypertrophy
of this lobe occasionally requires an operation for its removal.

Inflammation of the Auricle.—Simple phlegmon is generally the re-
sult of stings of wasps or bees; boils frequently form upon it, and are
more often seated around or within the meatus. Dr. Bird, a German
physician, has described a form of inflammation peculiar to insane per-
sons, in which the auricle swells, and in some cases the skin breaks.
The treatment consists in hastening suppuration, and the free evacua-
tion of matter when it forms. Erysipelas often attacks the auricle,
arising from mechanical injury, general otitis, or, which is generally
the case, from an extension of the disease from the head or face. Kra-
mer describes a scirrhous degeneration of the auricle, which Mr.
Wilde very properly considers chronic erysipelas, arising from an
acute attack or a cutaneous eruption. Dr. Graves recognized a form
of gouty inflammation of the auricle, which subsides on the occurrence
of the disease in the extremities.

Cutaneous Affections of the Auricle and Meatus.—The most fre-
quent of these are eczema and herpes. These affections may occur in
the young or old; in the former they pursue a more active course, co-
existing with scald-head, while in the old they are generally more
chronic. In either case they are liable to extend into the meatus, and
over the membrana tympani. In old persons branny scales collect in
the tube, but in the young the lining of the canal and tympanal mem-
brane becomes coated over with a creamy discharge. The treatment
of these diseases is thus given by our author:

Cleanliness and attention are indispensable to the eradication of
these affections. In the first instance, continual poulticing with any
emollient substance which keeps up heat and moisture is necessary.
Linseed meal, boiled bread and milk, or well-mashed turnips, will be
found useful applications. Afterwards, when the extreme heat, swell-
ing, vesication, and redness, have subsided, a solution of the liquor
plumbi, in the proportion of a drachm to the ounce, applied with sev-
eral bits of fine lint, so as to completely envelop the auricle, and the
evaporation prevented by covering over the whole with a piece of oiled
silk, rarely fails to lessen the irritation, and reduce the parts to a
healthy condition. The solution of gutta percha in chloroform, lately
introduced by Dr. Graves in the treatment of other skin diseases, I
have found a very admirable remedy in the chronic form of eczema aur-
um. The part should be painted over several times, until a complete
varnish has been laid on, when the greatest relief from the heat and itch-
ing is experienced. The application should be repeated from day
to day, as the material soon begins to peel off, but should never be
applied until the acute attack has subsided. When the auricle is
shining, of a bright red, and swollen, punctures made with the point of
a lancet, particularly in the helix, will give great relief. In the chronic
stage good may be effected by painting the part with a strong solution
of nitrate of silver.

But while we employ these local measures, we must not neglect con-
stitutional means. Strict attention to diet should be enforced; salt
meats, savory dishes and pastry, ought to be avoided, and a sufficient
quantity of fresh vegetables should be consumed at dinner. After
the patient has been well purged, a course of Plummer’s pills may be
prescribed with advantage—at least, five grains daily for an adult;
and, in a little time, some of the preparations of sarsaparilla adminis-
tered in lime-water, will hasten the cure, and assist to eradicate the
disease from the system. This affection is very apt to relapse, and we
should, therefore, continue both our local and constitutional remedies
long after the inflammatory symptoms have subsided. Old ladies
think that they can never have a sufficient amount of warmth about the
head, and it is very difficult to induce them to leave off even one flan-
nel nightcap; but we should at least make the attempt, as the head
and ear ought to be kept as cool as possible. As the swelling and
inflammatory symptoms subside, we should again turn our attention to
the state of the auditory tube. If any discharge exists, the meatus
should be syringed gently with tepid water daily; and both it, the
concha, and the tympanal membrane, washed over every second or third
day with a solution of nitrate of silver of the strength of at least twelve
grains to the ounce. Still more advanced in the progress of the treat-
ment, when the exudation has completely ceased, and the thickened
cuticle has been quite removed, much benefit will be derived from
smearing over the tube and membrana tympani with brown citrine ointment (Ungt. Citrinum Fuscum) every third or fourth day. It should be applied in a melted state with a camel's-hair pencil, and diluted by about one-third of almond oil. This ointment, in which I have great faith in all diseases similar to that now under considera-
tion, should be made with either rape-oil or cod-liver oil, instead of the olive-oil with the lard or butter usually directed in the Pharma-
copoeias; it is then of a much darker color, and never becomes hard or crumbly.

Diseases of the Mastoid and Pre-auricular Region.—Our author specifies six kinds of post-aural tumors, with which the surgeon should be familiar. The first is a small gland lying upon the mastoid process, on a level with the tube of the ear; it may enlarge to the size of an almond, and become so painful as to resemble a neuroma. It generally occurs in young females. The application of iodine and administration of tonics, especially iron, will effect a gradual cure. The second form is a suppurating gland, occurring in scrofulous con-
stitutions, or persons who have suffered from an inflammatory action of the middle ear or external meatus. It is often seen in children during dentition. A point of diagnostic importance is the situation of this gland, which has its principal bulk below the level of the mea-
tus. The treatment is the same as in the former case. The third form resembles a lumbar abscess, and, like it, is generally connected with diseased bone. The author gives the case of a boy laboring under this disease upon both sides; each tumor was of the size of half a hen's egg, fluctuating, painless, and occupying all the bare space behind the auricle. The skin was nearly of its natural color, but traversed by blue veins. The tumors were opened, and discharged a curdy, scrofulous matter; the child's health gave way, and death ensued from "water on the brain." The fourth form is the result of acute inflammation, either from acute periostitis of the mastoid process, or accumulations of matter in connection with the mastoid cells, the result of disease spreading from the middle ear; or, finally, caries from otorrhoea. This form of tumor requires prompt attention, as the diseased action is liable to extend to the inner table of the cranium, to the meninges of the brain, and even the brain itself. The proper treat-
ment consists in laying the tumor freely open down to the bone. The fifth form of tumor is aneurism of the posterior aural artery; and the sixth, malignant fungus.

Foreign Bodies in the Auditory Canal.—Mr. Wilde condemns rude efforts to extract foreign bodies from the ear as more likely to do harm than these bodies themselves. He mentions instances coming
under his own observation, where the patient has suffered no inconvenience whatever, until attempts were made to remove the offending substance, when the ear became excessively tender, and the seat of most excruciating pain. Not unfrequently, in such cases, as Mr. Wilde's examples prove, and as we have ourselves known, the bony canal of the tube has been denuded of its lining membrane, and even mistaken for the foreign body. The following case is in point:

A practitioner brought a child to my house, who, while playing with some pebbles, allowed a small white stone to slip into the external meatus six hours before. She had not complained of pain; but the friends became alarmed, and were most anxious to have the pebble removed, "lest it might get into her brain." He had, he said, used various instruments, but without success, to extract or dislodge the pebble. The child appeared then in great agony, and the countenance was highly characteristic of the distress experienced. There was considerable hemorrhage from the ear, and the external aperture had already begun to swell. Upon examination, I found the meatus extensively lacerated, and could perceive and touch a white, rough surface on its anterior wall; but as I felt sure that it was not the offending body, but the denuded bone, I recommended, strongly against the wish of my friend, a cessation of hostilities, at least until the hemorrhage had ceased. A leech was applied to the margin of the meatus, and afterwards a poultice placed over the ear. Upon visiting the patient next morning I found that suppuration had been established during the night, and on syringing the ear with a little tepid water, the white quartz pebble appeared at the external aperture, and was easily removed with a forceps. Upon further examination, I found that the membrana tympani had been ruptured anteriorly, and that the bone was denuded for a considerable extent by the efforts made to extract the foreign body. The parts, however, eventually resumed their natural appearance.

If syringing the meatus with simple warm water fails to dislodge the substance, resort must necessarily be had to instruments. Mr. Wilde uses a small silver spatula, slightly curved, at its extremity. The canal being brought fairly within the field of the speculum, the operator may, with the spatula, in nearly every instance, dislodge the body. If it has got in a situation where it can not be got at, syringing may so alter its position that it can be removed with the spatula, or seized with forceps.

Diseases of the Cerumenous Glands.—These glands may have an increased, diminished or changed secretion, the two former conditions depending upon the degree of inflammation existing around or within the meatus, and the latter upon a chronic inflammation existing in the glands themselves. The practitioner is often required to treat affections of the ear depending upon collections of wax in the meatus. Mr.
Wilde found 579 cases in 2385 cases of disease of the ear. Kramer gives 213 cases in 2000 cases; and Clarke* 16 cases in a total of 140. In these cases deafness is often a marked symptom, the degree of which depends upon the size of the plug occupying the auditory passage, and its consistence. The patient sometimes hears a slight report in his ear, especially after eating, when the hearing becomes immediately improved. This is owing to the plug of wax becoming disadjusted so as to admit the passage of air to the drum. But the improvement is only temporary, for the wax comes again to fill more or less completely the passage. The treatment of these cases consists in removing the wax, and for this purpose a jet of fluid should be directed against the edge of the plug, with a small syringe. Sometimes it may be removed with fine long-bladed forceps. If we fail at the first sitting, a few drops of warm oil should be introduced, and a bit of cotton moistened with oil placed in the passage to soften the plug. The following case illustrates the author's method of procedure:

L. W., a male aged forty, applied on account of deafness in his left ear of some weeks' standing, but which had recently increased very much. Complains of noise like that of a boiling kettle. Hearing distance, two inches; says it varies from time to time, but that it was always better after eating until lately. Occasionally he experiences a loud noise, as if a report took place in his ear, after which the hearing is improved. His disease is of twelve months' standing. Upon examination, I found the external auditory passage filled to its aperture with hard, brownish, inspissated cerumen. It is so hard, that percussion with a probe conveys the sensation to the fingers as if struck against a body as firm and resisting as stone. Numerous short but firm hairs grew around the external aperture, and some of the more internal ones are probably mixed up with the hardened cerumen, and so assist to keep it immovably fixed in its place. The mere projection of a stream of warm water from a syringe will not easily remove such a thoroughly impacted mass as this. It must be assisted out with the spatula, slightly bent at the end, like the old lever used in midwifery; but the ear should be syringed from time to time as we proceed with our manipulations. When well loosened, I removed it en masse with a pair of fine forceps, and perceived that with it came out a large collection of hairs, which had become entangled within it; and that all its lower portion and its extremity was covered over with a layer of soft, white, thickened cuticle, the natural lining of the surface with which it has been so long in contact, thickened and separated by the pressure exercised upon it by this foreign body. Immediate relief to all the symptoms under which this person labored was experienced by the removal of the foreign substance. The hearing in-

increased to twelve inches, and the noise lessened considerably. Upon inspection through the speculum, the membrana tympani was seen whitish and succulent, and having the parboiled appearance of the piece of cuticle which had been removed from it. Several large red vessels also ramified upon its surface, and coursed along the insertion of the malleus in particular. This condition was, no doubt, caused by the pressure of the accumulated and hardened cerumen; but in a few days the part recovered its natural character.

**Inflammations of the External Auditory Canal.**—One of the most frequent of these affections is abscess in the external meatus. It is the analogue of a stye upon the eyelid; but, being situated in a different structure, is far more painful. Its development is attended with tinnitus, and throbbing, and by evening exacerbations of pain, heat of skin and restlessness. There is not much redness of the part, and the abscess may not exceed the size of a pea; it approaches the surface slowly, pointing internally, and its contents consists of thick yellow pus, and a hard corn of dead cellular tissue. To prevent suppuration the solid nitrate of silver should be applied, but when matter has formed it should be set free with the knife. Warm fomentations, and the steam of hot water, may be employed to relieve pain. Mr. Wilde considers this disease constitutional, depending upon the same cause which produces boils in other parts of the system, and therefore recommends a careful treatment directed to the system, such as the regulation of the digestive organs, and the exhibition of bark with liquor potassæ.

Diffused inflammation of the external meatus generally involves the external layer of the membrana tympani, and ends in otorrhoea. It is a disease of infancy and youth, and appears more often in serous constitutions. It may be idiopathic, traumatic, or specific, as when it occurs in the course of exanthematosus fevers, or from the infection of gonorrhœal matter. The acute attack is characterized by dryness, itching, and heat of the part, a dull, aching pain, which gradually becomes acute, increasing towards night; fever, and even delirium. The lining of the meatus swells, is at first dry, then white and moist, and finally a purulent discharge takes place with relief to all the severe symptoms. The tube is sometimes coated with a layer of plastic lymph. The following case is given by the author as illustrative of the progress of this form of inflammation:

T. S., aged 46, a shopman, complains of deafness in his left ear, of a fortnight's duration, accompanied by a buzzing noise and throbbing. The disease commenced late in the evening, with severe pain, which continued all night, and which, although mitigated, has never entirely ceased since, but is always most distressing at night. Upon the fifth
or sixth day he perceived a "slight moisture" in his ear, but was not conscious of any sudden burst, or a feeling as if something had given way within. The external meatus and auditory tube, as well as the surface of the membrana tympani, are coated over with a tenacious muco-cerumenous discharge, upon the removal of which the entire surface brought into view appears of a florid red, becoming pinkish and spotted with white on the face of the membrana tympani. Flakes of cuticle adhere to the walls of the canal. The spots on the membrana tympani appear to be patches of lymph effused on its surface; they are more of a yellow color than the specks of cuticle on the tube. The membrana tympani is still imperforate. We occasionally find the whole surface of the tympanal membrane covered over with a sheet of lymph like that which lines the trachea in cases of croup. He cannot hear the watch even on touching. On the right side the parts are healthy, and the hearing good. The treatment recommended to the patient has only aggravated his disease,—brandy and oil, laudanum, hot salt, and various stimulating applications, having been poured into the meatus.

This is a case too manifest to be mistaken; and, from the total loss of hearing upon the left side, it is probable that the inflammatory action has extended to all the layers of the membrana tympani, and has also passed into the cavity of the middle ear. Had it commenced in the latter, the pain and attendant fever would have been greater, and, on suppuration taking place, the membrana tympani would probably have been ruptured to allow the exit of the matter, and the case would now be one of internal otorrhœa, with perforation. Cases of this nature are very common during the winter months, or when cold east winds prevail in March and April; and are frequently induced by travelling upon the top of a coach, sitting opposite an open door or a broken window, or being exposed to a draft of cold air in any situation. I am frequently consulted by Roman Catholic clergymen during the season of Lent, for inflammation of the ear acquired while sitting in the confessional-box, often for hours together, in cold exposed places of worship, with the ear applied to a small aperture through which the wind is playing. In the foregoing case, local depletion, continued counter-irritation, and alternative doses of mercury, restored the parts to a healthy condition, and the hearing returned. In some cases of inflammation of the auditory canal the auricle is hot and swollen; but in no instance does it ever assume the oedematous character which the eyelids present in severe ophthalmia.

The treatment of acute inflammation of the external meatus should be strictly antiphlogistic, such as leeches about the meatus, purgatives, and the local application of heat and moisture. Counter-irritation may follow depletion; and astringent lotions are useful only when the disease becomes chronic; mercury is indicated when the tympanal membrane is involved.

Some authors mention gonorrhœa as a cause of inflammation of the meatus; but Mr. Wilde has never seen a case, nor does he believe that
facts establish the occurrence of infantile otorrhoea from gonorrhoeal infection, as asserted by Mr. Harvey of London.

Cutaneous Diseases of the Meatus.—These are generally the herpetic and eczematous eruptions which extend from the auricle to the meatus. In addition to the treatment referred to, the author recommends the application of a ten-grain solution of nitrate of silver; and when the lining becomes more healthy, the use of eitrine ointment.

The remaining subjects treated of in this chapter are Morbid Growths and Alterations in the External Auditory Canal, and Malignant Diseases of the Meatus. These sections we shall be compelled to pass without further remark.

In chapter V. our author enters upon the consideration of the most important, but least understood, class of diseases of the ear, viz.: Diseases of the Membrana Tympani. These affections have not been at all understood until recently. Lincke was the first to describe true myringitis, or inflammation of the drum of the ear. Mr. Wilde divides the different forms of inflammation of the membrana tympani into acute, subacute, syphilitic, strumous, chronic and febrile.

Acute Myringitis.—The diseases of the cornea and membrana tympani are remarkably analogous, especially in regard to the effect upon these structures. Inflammation of the tympanal membrane is generally caused by cold, and is seated primarily in the fibrous layer, but soon involves contiguous structures. Mr. Wilde's statistics give 113 cases of this disease in 2385; Kramer's, 45 in 2000; and Clarke's, 7 in 140.

The following are generally the order of symptoms. A seizure of sudden and intense pain in the ear itself, most generally first appearing at night, and attended with nocturnal exacerbations during the progress of the disease. This pain is of a most excruciating kind, producing at times delirium, and is likened to that of a sharp instrument penetrating through the ear to the brain: it is, especially when the cavity of the tympanum is engorged, increased by coughing, sneezing, blowing the nose, chewing, or swallowing, or by pressing upon the tragus, particularly when the jaw is open. The beating of the carotid is distinctly felt in the ear, and each throb of the artery, especially if the circulation be excited, increases the sufferings; and there is frequently a feeling of fulness and bursting within the organ. With this there is also pain and soreness over the side of the head, in the teeth, in the eye and temple, and in the superior lateral triangle of the neck, with occasionally stiffness and soreness of the upper portion of the mastoid muscle, and often flying rheumatic pains throughout the body, particularly in middle-aged persons, and those who have suffered previously from rheumatic attacks. If neglected, or unrelieved by treatment, the pain extends to the throat and mastoid region, and is in-
increased on pressing the mouth of the Eustachian tube with the finger. The severity of the pain experienced, and the extent of soreness to the touch, is to a certain degree a test of the amount of the inflammation; and the peculiarity of the pain is also a means of judging of the seat of the inflammation; for if it is experienced in swallowing, mastication, or sneezing, &c., we may presume that the inflammation has extended over the middle ear.

Mr. Wilde continues with a very minute relation of the symptoms of inflammation of the membrana tympani, the morbid changes, &c., which will repay a careful study, but which we cannot pursue at any greater length.

The treatment consists in confinement to a warm room, local depletion, the employment of moist heat, aperient medicines, and counter-irritation. If the disease do not yield, recourse must be had at once to mercury; on this latter remedy our author places great reliance. If an ulcer appear on the membrane, it should be touched with nitrate of silver; if the mastoid process become engaged or the parts covering it, and no relief follow the use of these remedies, or fluctuation be felt, an incision should be freely made to the bone. The following case illustrates the points above alluded to:

C. L., a female, aged 21, applied at the hospital at ten o'clock on the morning of the 18th of April, 1846, for an attack of intense pain in her right ear. She states that she has not been "regular" for the last six weeks; that she was attacked four days ago with catarrh, attended with considerable stuffing in her nose, and the other usual symptoms of that affection; that she had walked along the sea-shore the day before, with a cold wind blowing upon her right side. She went to bed tolerably well last night, but awoke at three o'clock this morning with a violent beating pain in her ear, accompanied by a loud noise, which she likens to the "puffing of a steam-engine"; the pain resembles that of a sharp instrument penetrating through her ear into her head, which she describes as most excruciating. She had also some pain and soreness over that side of the head; she felt some difficulty of deglutition, owing to the pain it caused her. Coughing, sneezing, or any motion of the temporo-maxillary articulation, greatly aggravated her sufferings, and gave her a feeling of bursting in the middle ear.

She rose at seven o'clock, felt great sickness of stomach, and had a well-marked rigor whilst dressing. She immediately applied to a neighboring practitioner, who put some "drops" with a piece of cotton into her ear, which only aggravated her symptoms. Her pain still continues, and the noise has increased; there is slight redness and great heat of the auricle. The pain is increased on making pressure over the tragus in front of the meatus; on pressing or percutting the mastoid process, slight pain is also complained of. The pain in her ear, however, is not increased by these means, nor is it referred to the
tympanum. She has no pain beneath the meatus, nor behind the angle of the jaw. The hearing distance, with an ordinary ticking watch, is scarcely three inches in the right ear. On closing the meatus of the left side, the noise is greatly increased. On examination with a speculum, the auditory canal is found highly vascular, dry, devoid of cerumen, and exceedingly tender to the touch. The membrana tympani has lost its polish, and is of a bright, florid, generally-diffused red color, spotted with small patches of a deeper hue, like minute ecchymoses. The projection of the malleus can be recognized, of a darker color than the surrounding parts, with a whitish line in the centre. Below the malleus, and towards the posterior part of the membrane, a well-defined vesicle, about the size of a grain of mustard-seed, and filled with a brownish fluid, can be seen. Upon holding the mouth and nose, and pressing the air into the Eustachian tube, she experiences considerable difficulty in making it pass up upon that side, while it passes with facility into the tympanum of the left. The ear, or a stethoscope, held to the right side during this operation, readily perceives, as soon as the air reaches the tympanum, a squealing and gurgling sound, as if the air passed not only through a narrow passage, but through a fluid-like mucus. This pressure of air into the tympanum greatly aggravates her symptoms.

Upon looking into her mouth, the fauces, uvula, and back of the pharynx are found nearly of their natural color. Upon inserting the forefinger of the right hand into the mouth, and pressing its point upwards, backwards, and outwards, towards the mouth of the Eustachian tube, considerable increase of pain is experienced in the middle ear. The tongue is coated; the pulse regular; but there is heat of skin and considerable anxiety of countenance. The left ear is natural in function and appearance. This patient suffered from rheumatism of the upper extremities some time ago.

Four leeches were applied around the meatus, as far in as possible, and four in the depression in front of the tragus. She was ordered to foment and steam the ear over hot water, placed in the bottom of a long narrow mug, frequently during the day; and a purge was administered.

19th. States that she received immediate relief from the leeching. The countenance is less anxious, and she slept well all night; the noise of a steam-engine is altered to a gurgling sound; the pain and all other symptoms are relieved; the membrana tympani, however, remains nearly the same in color, but the vesicle has become flaccid. She was put on the use of calomel and opium in small doses frequently repeated; a blister was applied over the mastoid-process; the fermentation and warm vapor was ordered to be continued, and a linseed-meal poultice to be applied to the external ear at bedtime.

20th. Continues to improve. Noise changed to that of the ringing of bells; the pain, on pressing the mouth of the Eustachian tube, is much less; the membrana tympani is less vascular; the general symptoms have all improved; the mercury to be continued.

21st. All the symptoms relieved; the mouth is slightly sore; no pain on pressing anywhere around the ear or meatus; all heat and
vascularity of auricle is removed; the membrana tympani has lost its
vascularity, but is slightly more opaque, and whiter than natural; the
vesicle has quite disappeared; three or four large vessels can still be
seen coursing along the handle of the malleus. Upon forcing air
through the Eustachian tube into the tympanum, a slight gurgling
noise can be perceived in the middle ear, and of the peculiar sensation
which it imparts the patient is quite conscious. During this operation,
and while the membrana is within the field of the speculum, a slight
blush of redness, of a pinkish hue, is observed to be produced in the
membrane. The hearing distance has increased to four inches. A
copious red deposit was observed in the urine. She has been slightly
purged by the mercury; ordered to lessen its dose to one pill night
and morning.

23d. Continues to improve in hearing; noise as before; she has
had no return of pain in the ear: the pain and soreness in the head gone;
no flying pains or other rheumatic affection; the mouth is very sore;
ordered to omit the pills, and take the sixteenth of a grain of oxymuriate of mercury with decoction and tincture of bark three times a
day; generous diet.

25th. Continues to improve rapidly; membrana tympani is more
transparent than upon last examination. Hearing distance is increased
to twelve inches; slight pain is still felt on pressure over the lower
portion of the mastoid process, and opposite the point of the styloid
process, in which latter place it is still increased on coughing.
Ordered to continue the oxymuriate and bark, and to apply another
 blister.

All her symptoms have now disappeared, with the exception of a
slight buzzing occasionally; the hearing is perfectly restored.

Four months later I had an opportunity of examining this young woman again; her hearing had been quite restored; but she said that
she occasionally suffered from a slight "ticking noise." The mem-
brane of the drum upon the affected side presented a slight mottled
appearance, particularly towards its lower edge, but without an opacity
of any account; her hearing distance is two feet less upon the right
side than the left.

March, 1851. She had a slight attack of pain in the right ear, ac-
companied by some deafness and redness of the membrana tympani,
all of which were at once removed by the application of leeches.

January, 1852. She has not had any return of pain or deafness;
parts natural; hearing normal; no tinnitus.

Mr. Wilde relates an interesting case of inflammation of the mem-
brana tympani and otitis, rheumatic in its character, from which we
extract the following:

I first saw this gentleman upon the 13th February; he complained of
acute pain in his right ear, which, as appears from the foregoing ac-
count, had continued off and on during the previous fortnight. The
pain here described as "shooting from the ear to the temple and top
of the head, accompanied with a boiling and pumping noise, like that
of a steam-engine;" the pain also appeared, according to his own description, to reach to the throat, without making the throat sore; it was increased by sneezing, but relieved by pressing the hand upon the ear and side of the head. The auricle was hot and somewhat swollen; the lining of the meatus and auditory canal was red, tumid, and completely devoid of cerumen; the introduction of the speculum, and the examination, caused a good deal of pain from the tenderness of the parts; the membrana tympani was of a dark, brown-red color, had lost its polish, and appeared to be swollen and pressed outwards: the projection of the malleus could not be discerned; pressure in front of the ear gave a good deal of pain, but there was no tenderness over the mastoid process. Rest, abstinence, confinement to the house, constant fomentations, leeches round the meatus, with small doses of blue pill, James’s powder, and hyoscyamus, at night: and an aperient in the morning, was the treatment resorted to during the next few days.

Upon the 19th, his symptoms, with the exception of the pain in the ear, continued much the same; he had also flying pains of a rheumatic character in the side of the head, the wrists, feet, and generally throughout the body. The pumping and boiling noise remained unabated: the deafness now became complete upon that side. The appearance of the ear continuing unchanged, except that the meatus was more swollen, it was deemed advisable to place him under the influence of mercury,—an opinion in which Dr. Stokes, who saw him with me, at that time concurred. He was accordingly, but with some difficulty, mercurialized by means of small and frequently repeated doses of blue pill, calomel, and opium. When his mouth became sore, the pain in the ear and the noise lessened somewhat, and the general rheumatic affection disappeared; but the meatus and auditory canal now became so much decreased in calibre, owing to the thickening of the lining of these parts, that it was not possible to gain more than a glimpse of the red and swollen membrana tympani. The leeching and blistering were continued, and the surface denuded by the latter were dressed with extract of belledonna and mercurial ointment.

March 10th. The cuticle became detached, and a slight muco-purulent discharge took place from the external meatus; the ear was then syringed with plain tepid water; he was allowed a more generous diet, and placed upon the use of the hydriodate of potash, with infusion of bark and tincture of orange peel. His general health now improved; he slept better, and was able to go abroad and take exercise; the discharge, however, continued to increase, and emitted a very offensive odor; and, at the same time, he began to complain of a deep-seated soreness all over the side of the head, behind the ear, but particularly over the mastoid process and immediately below it. Towards the end of March, upon examining the ear carefully under a good light, a small polypoid excrescence of a light red color, growing from the posterior wall of the canal, and completely filling up the cavity, was detected; this I removed with a wire snare and the discharge then lessened; the soreness of the side of the head, the pumping, and the deafness, however, remained the same. Pressure over the mastoid
process and the post-aural region of the head, very much increased the soreness, and it was now evident that the periosteum covering these parts was inflamed.

During the latter part of the month of April, and all the month of May, the symptoms of periostitis remained much the same, and the scalp itself became inflamed, having a dusky, red hue, pitting on pressure, and feeling excessively soar to the touch. The treatment consisted in the frequent abstraction of blood from the affected part by means of a few leeches, and a small cupping-glass applied over the leech-bites; poulticing, inunction with different ointments, both of a sedative and absorbent nature, slight vesicants, &c., and change of air. Bark, potash, and iodine were also taken with a view to improve the general state of the constitution. He had no headache, rigors, or perspirations, and his sleep and appetite were tolerably good; still, however, the pain continued, and the dusky redness and tumefaction of the scalp remained, although there was no evidence of suppuration. It was determined, in consultation with Mr. Cusack, to make an incision down to the bone, and thus free the periosteum, and give exit to any matter which might be contained beneath it. Accordingly upon the 29th of May, I made a perpendicular incision, about two inches long, nearly parallel with the posterior margin of the auricle, by inserting a sharp-pointed scalpel down to the bone at the point of insertion of the mastoid muscle, and carrying it upwards and a little backwards. The bone did not feel rough or gritty under the knife. A pledget of lint was inserted into it; and when the hemorrhage had ceased, a linseed-meal poultice was applied over it. The wound suppurred kindly, and all the surrounding soreness of the scalp and pain on pressure soon disappeared. As the discharge from the wound increased, that from the meatus lessened, and in about ten days the wound itself healed without any exfoliation of bone. The pumping noise now ceased altogether, the discharge from the ear also lessened very much, and all uneasiness in the parts ceased.

After the removal of polypus growths, Kramer recommends the acetate of lead, in solution, as far surpassing the lunar caustic in preventing their return. "I have even," he says, "observed that the polypus of the membrana tympani, under the influence of the solution of the acetate of lead, shrivels, and is eradicated even more certainly than can be expected from an operation."

Subacute Myringitis generally appears in persons between the ages of 15 and 30. It is unattended by pain, the first symptom being sudden deafness; tinnitus is not always present, but there is a feeling of stuffling in the nose. The nature of the difficulty is learned only by inspection of the membrane, which is of a pink color when seen early, but later it becomes opaque. Mercury is as necessary in this disease as in the preceding. After the constitution has been affected by the mineral, the bichloride should be given in minute doses in tincture of
bark. To relieve the tinnitus aurium, which continues after the subsidence of the disease, Mr. Wilde recommends the arnica montana, as a medicine having specific power over this complaint. He gives fifteen drops of the tincture of the flowers or leaves in a tablespoonful of the infusion of arnica, and some cordial tincture, three times a day. After a few days the dose should be increased one or two drops daily, till it reaches thirty or more, the effects upon the head being carefully watched, and the bowels attended to. Where there is much relaxation of the mucous membrane of the throat and nose, Mr. Wilde considers tobacco smoke inhaled from a good cigar very beneficial, from its stimulant effects.

**Syphilitic Myringitis** is alluded to by but few authors. Lincke describes such a form of disease, but so loosely that it is doubtful whether he had any just conception of its true character. Kramer makes no mention of it, and the author gives but three cases. Without entering into a detailed description, the following case will give the reader in brief the characteristic symptoms and treatment of syphilitic myringitis:

Mr. A. B., aged 30, had a doubtful-looking sore upon the penis, twelve months previous to my seeing him. Considerable doubt was expressed as to the genuine syphilitic character of the sore; but it healed under local treatment. Some months subsequently he had a bubo in the right groin, and a small abscess also formed on the under side of the urethra; he then rubbed in mercury and was confined to the recumbent posture, until the swelling of the groin had completely subsided. After this he experienced great weakness and lassitude, and suffered for several weeks from sore throat. These symptoms were relieved by removal to the country; but on his return to town, an eruption appeared extensively on the genitals, thighs, and abdomen, and he had also some slight deafness. He was benefited by the use of hydriodate of potash; but the eruption came and went, both on its original seat and on the chest and extremities, during the next few weeks. I first saw him with Mr. John Evans, in the middle of October, 1847; he had then no sore throat, but a fresh crop of eruption, in the form of brownish spots interspersed with small pimples, had appeared generally over the back and the outer sides of the arms. He had also become exceedingly deaf, hearing the watch only when pressed against the auricle, and he complained of a sense of giddiness and fulness in the head, but had no pain whatever in the ears, nor any snuffing in the nose. He stated, that his deafness had occurred suddenly, a few hours after rising in the morning some days before; that he had tinnitus at the commencement, but that it had now nearly vanished. Upon inspection, the auditory canal was found dry; and the membrana tympani of an uniform dark brown-red color, so that the situation of the hammer-bone was not easily recognizable. There was no ulceration observable, nor any alteration in the plane of the membrane; but the light
was not reflected from it in the ordinary manner, thus showing it had lost its polish. These appearances were nearly the same upon both sides. He was able to inflate the drums perfectly, and auscultation afforded no evidence either of contraction of the audito-facial passages, or of any accumulation of fluid within the tympanum.

The treatment consisted in the application of leeches round the meatus every second day, and the use of calomel and opium in small and frequently repeated doses. This mode of administering the mineral disagreeing, we were obliged to discontinue it, and substitute injection in its stead. The deafness and the appearance in the ear remained unaltered until the morning on which salivation was produced, and then hearing was restored almost miraculously, and the next day the redness and vascularity in the ears had almost disappeared. Gentle ptyalism was kept up for some days longer. He has not since had any return either of the deafness or other syphilitic symptoms.

Strumous Myringitis occurred in 24 of the 2385 cases given in the table. This is an affection of young persons of a serofulous habit. The first symptom is slight deafness, which is generally attributed to inattention; the meatus is dry, and the tympanal membrane has a uniform pinkish hue, the fauces appear red, and this engorgement extends through the Eustachian tube. There is no pain, or tinnitus, but crackling sensations, gurglings, and loud reports, are felt in the ear; catarrh is often present, and strumous affections of the eye frequently complicate the disease, the system is usually depressed, the patient being languid, pale and inactive. The treatment best adapted to such cases is that employed in strumous diseases generally, as tincture of bark and iodide of potassium, or bichloride of mercury; cod-liver oil, when there is a strong constitutional taint; chalk and mercury to regulate the bowels; counter-irritation by vesicating liniments. These means are to be persevered in for a length of time, and combined with careful attention to diet, air and exercise. Relapses are very common, and of this the patient must be notified.

Mr. Wilde does not advise the removal of the tonsils in these cases, as he does not believe that they are the cause of the deafness which may exist. He prefers the application of nitrate of silver to the fauces and mouth of the Eustachian tube.

Otitis in connection with Ophthalmia.—Strumous affections of the eye and ear may coexist or alternate in the same patient, both diseases depending upon the same constitutional diathesis. The treatment of these cases is the same as that last detailed.

Chronic Myringitis.—Wilde's statistics give 396 cases of this form of inflammation of the ear in 2385 cases of aural disease applying for treatment; Kramer found 397 in 2000 cases; and Clark gives 42 in 140 cases.
Of Kramer’s 397 cases, both ears were affected in 279, and the number of males was more than twice that of females. It does not seem often to be a sequela of acute inflammation, for while the latter occurs only in the ratio of 1 to 22 of all the cases, the former bears the ratio of 2 to 1, showing that the chronic form has no acute stage. It is, however, very frequently the sequela of exanthematous fevers, especially scarlet fever. Kramer found this to be true in one-fourth of the cases of chronic inflammation of this membrane; and Clarke found it, in 22 of 42 cases, or more than one-half.

The earliest symptom of this disease is deafness, which may not be attended with pain; or this latter may come on in paroxysms. The membrana tympani appears of various shades of red, thickened and opaque, and having scattered over the inflamed surface granulations of a pearly lustre. When the inflammation is increased by cold, the membrane becomes of a dark red color, resembling its analogue, pannus of the cornea. In the majority of cases, according to Kramer, the membrana tympani is perforated, and in such instances the Eustachian tube is always free. A morbid secretion flows from the ear of a variable character, but the meatus is generally unaffected. When left to itself, this disease lasts through life. The prognosis is unfavorable, and much more so, according to Kramer, when the hearing distance is short, even though the inflammation be removed.

In the treatment of this disease, cleanliness is of great importance, and this is accomplished by syringing the ear with tepid water. Mr. Wilde uses the nitrate of silver as a local application, avoiding its use when the membrane is inflamed. Kramer recommends a solution of acetate of lead, varying in strength from gr. i. to grs. x. to the oounce of water, to be dropped into the ear two or three times a day; and prefers this remedy to nitrate of silver, or any of the astringent minerals.

The success which attends the treatment of this disease is not very flattering. Kramer effected a perfect eure in 1-14th of the whole number of cases, and improved 11-14ths. This result, he thinks, is not to be wondered at, when it is remembered that in one-half of all the cases of chronic inflammation of the membrana tympani there was perforation of the membrane, and in one-fourth of the whole number of cases there were polypus growths.

The remaining affections of the membrana tympani treated of in this chapter, are Morbid Deposits, Collapse, Artificial and Accidental Perforation, and Artificial Membrana Tympani. We shall pass these sections with but a remark or two. Mr. Wilde agrees with Kramer, that
"the thickening of this membrane, unaccompanied by any other disease of the ear, invariably affords the only true indication for its perforation." Kramer's statistics present some curious facts on this subject, from which it appears, that "in chronic inflammation of the membrana tympani, the hearing is more frequently less deteriorated, when the membrane is still unperforated, than when it is perforated; and, therefore, that there is little prospect of advantage from the operation of perforating the membrana tympani. If, however, the operation should in any case be had recourse to, as large an opening as possible should be made, as it appears that the hearing was more frequently less deteriorated in cases in which the perforation was large than when it was small." (Brit. and For. Med. Rev., July, 1847.) This operation is not very often practised in this country. Prof. Mutter,* has operated eight times in obstruction of the Eustachian tube, but without any benefit whatever to his patient. Dr. Mott,* whose surgical experience is entitled to the highest credibility, believes that, in simple closure of the Eustachian tube, without any other defect of the auditory apparatus, "philosophically and surgically, there is every justification for recommending and performing the operation."

The plan of restoring the hearing by plugging the aperture in the membrane tympani with cotton, first made known by Mr. Yearsley, is of such practical consequence that we shall copy Mr. Wilde's description of the method of applying it:

The cases in which it is most effectual are those where there is a very large aperture in, but not a total destruction of, the membrana tympani. It requires some tact to hit off the exact position in which to place the bit of cotton; but the moment it is done, either by the practitioner or the patient, the hearing is restored. It should be made to fit on or into the aperture in the membrane, not completely to block up the meatus, nor to press against the inner wall of the tympanum. It ought to be passed down with a fine forceps or probe, and patients should be taught how to introduce it themselves; the lady by whom I first saw it employed always carried a bodkin, a little fine wool, and a bottle of oil, for the purpose. I do not think it matters much what the fluid is; I generally use fine oil, and after the bit of cotton is saturated with it, I press it gently between the fingers. As there is always some discharge from the exposed mucous membrane in these cases, a sufficient moisture is kept up for two or three days; but the wool or cotton should be removed from time to time, according to the patient's own sensations, and never allowed to remain in longer

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than three or four days. If there be much discharge present, the wool or cotton may require removal daily. It is astonishing with what adroitness a patient will sometimes hit off the necessary position of the cotton, even after the practitioner has failed to adjust it. Notwithstanding some ingenious attempts at explanation, we still require a feasible solution as to how this remedy acts.

Mr. Toynbee has recently recommended a thin plate of vulcanized India rubber or gutta percha, attached to a wire stem, as an artificial tympanic membrane, in lieu of the wool or cotton remedy. I have no experience of it; but I doubt its general applicability.

Chapter VI. is devoted to the Diseases of the Middle Ear and Eustachian Tube. The first part is occupied with the anatomy of these portions of the auditory apparatus, and malformations and injuries of the tympanum. We shall have space to notice only the more important forms of disease in this division.

Acute otitis, or inflammation of the lining membrane of the cavitas tympani, occurred 69 times in 2385 cases, according to Mr. Wilde's tables; and 6 times in 140, according to Dr. Clarke's. This disease is one of the most painful affections of the ear. The pain comes on often at night, and is of the most excruciating character; in the intermission, there is a throbbing, dull aching in the ear; soreness of the side of the head, and down the neck. Acuteness of hearing at first is replaced by deafness from accumulation of mucus in the tympanum; the patient cannot inflate this cavity; the membrana tympani is of a brownish red color, but not as florid as in myringitis. The meatus, as also the Eustachian tube, becomes affected; the patient has the constitutional symptoms of acute inflammation, as fever, dry skin, furred tongue, costive bowels, restlessness, intolerance of light, and often delirium.

The disease may terminate by resolution, by rupture of the membrana tympani, and discharge of matter externally; or, lastly, and most seriously, by extension of the inflammatory process to the mastoid cells, or inwardly towards the brain.

This disease is to be diagnosticated from myringitis principally by the greater severity of all the symptoms. The treatment is the same as that of myringitis; mercury is more necessary, both to check the disease in the ear, and prevent its extension to the brain.

Subacute Otitis.—Mr. Wilde considers the otorrhoea, occurring during the progress of phthisis, as depending upon a subacute, ulcerative inflammation, which has extended to the tympanum through the Eustachian tube; the membrana tympani, having become thinned, is ruptured during a fit of coughing. Otitis occurring during an attack of exanthematic disease, is the result of an extension of the affection of the throat to the lining of the cavity of the tympanum. Mr. Wilde
shows that many of the cases of acquired muteism are the result of this complication, and very properly urges greater attention to the ear in these diseases. Scarlatina seems to be especially the cause of this unfortunate condition. Thus, according to the report of the Belgian government in 1847, of 1892 cases of acquired muteism, 216 were from scarlatina, 80 from measles, and 28 from smallpox; in this country, of 86 cases, 41 were from scarlatina.

Otitis with Inflammation of the Facial Nerve.—Paralysis of the portio dura, as the effect of otitis, is due to pressure exercised upon that nerve, in some part of its course, or to lesion of its structure. The author attributes to some form of otitis those cases of paralysis unaccompanied by otorrhoea, and remarks:

Independently of the cases of well-marked facial paralysis, such as those detailed in the foregoing section, I have frequently observed a trivial affection of the nerve in connexion with aural disease, which had evidently commenced by inflammatory action in the tympanum, or its external membrane. In such cases, if we stand directly opposite the patient, while the face is in a state of rest, there is no twisting of the mouth, nor any paralytic condition of the eyelids, but the cheek looks slightly fuller than that upon the opposite side; and the ordinary wrinkle, or curved indentation, extending from the corner of the nose to a point a little external to the commissure of the lips, is either altogether deficient, or not so well marked as that upon the opposite side; and if we engage the patient in conversation so as to bring the muscles of expression into view, all the foregoing appearances become exaggerated. I have seen many such cases, where this symptom had not been observed by the patient or his friends, or his medical attendant.

Catarrhal and Chronic Inflammation of the Middle Ear are the results of the extension of this form of disease from the throat, the symptoms of which are partial deafness, from the accumulation of mucus in the middle ear, often relieved by blowing the nose, noises in the car, &c. In the treatment of this disease, the author objects to the introduction of bougies through the Eustachian tube; gaseous or aeriform injections may be of service by improving the condition of the lining membrane, but in no other way.

Slight local depletion, repeated from day to day, by means of a few leeches applied on the external meatus in the early stage of the disease, the use of counter-irritation, by means of blisters, over the mastoid process, and subsequently painting that part with strong tincture of iodine; the use of astringent gargles, particularly of the preparations of alum, so long as the throat exhibits symptoms of disease, will be found most efficacious. I believe the act of gargling is in itself highly beneficial, I presume by the way in which it acts, through the muscles of the pharynx and palate, upon the Eustachian tube. The
application of a strong solution of nitrate of silver to the throat, every second or third day, considerably assists in the treatment. I am inclined to think that its action is not confined to the part to which it is applied, but that it exercises a beneficial influence upon remote portions of the same structure, even the mucous lining of the middle ear. There is generally derangement of the digestive organs accompanying these affections: the tongue is usually flabby, white, and its edge indented with the teeth; the bowels are irregular; the patient complains of acid eruptions in the morning; the face is pale, the skin cold, the spirits depressed, and the patient altogether in that condition denominated "dyspeptic." This is, I presume, the form of the disease described by some writers as "stomach deafness," and in such cases the state of the digestive organs demands attention: but if we confine our treatment to the removal of the dyspeptic symptoms, without employing such local means as I have described, we shall be allowing valuable time to pass by, and when we have exhausted an extensive range of treatment in "setting the stomach to rights," we shall find the aural disease no better than when we began. In other cases the general health appears to be unimpaired.

The general treatment, consisting chiefly of gentle alteratives and tonics, such as I have recommended in cases of subacute and strumous myringitis referred to at the commencement of this section, are equally applicable in the present case. In some females the muriated tincture of iron, given in combination with the bichloride of mercury, is more beneficial than in any other form of aural disease. I have not found the hydriodate of potash as useful in this disease as when the fibrous structures of the ear are affected. It is, upon the whole, an uncertain remedy; and although it occasionally makes what is called "a hit," it very frequently disagrees with the stomach; and, by producing iodization, it rather increases the relaxation and humidity of the mucous surface, which it is intended to benefit. In children and young persons, the iodide of iron, given in the form of syrup, is generally beneficial, and may be continued for a long time. Where aperients are required, small doses of blue-pill, the watery extract of aloes, and taraxacum, will be found a useful combination. A dry, warm atmosphere is not only most agreeable to the patient's feelings, but materially improves the condition of the ear. When the memhrana tympani exhibits evidence of thickening or opacity, it should be treated with nitrate of silver, as I have already explained.

In Chapter VII., the author considers the Diseases of the Internal Ear, and the principal part of it is devoted to Nervous Deafness. The statistics of this form of deafness, according to different authors, stand thus: Kramer found in 2000 cases of disease of the ear, 1028 of nervous deafness; Wilde in 2385 found 114 cases of nervous deafness; and Clarke gives, in 140, 34 of the latter disease. This great discrepancy of authors is owing to a difference of opinion as to what constitutes nervous deafness. Dr. Kramer found in nearly all of his cases "the memhrana tympani white, like paper, and opaque," a
pathological condition, according to our author, consequent upon some form of inflammation, and sufficient to account for the existing deafness. Mr. Wilde, on the contrary, considers those cases entitled to the appellation Nervous Deafness, in which no pathological condition is discoverable in the auditory apparatus. The dissections of Mr. Toynbee (Med. Chir. Trans., vols. xxiv., xxv., xxvi.,) confirm the correctness of our author's views, for they exhibit, in a striking but demonstrative manner, the almost constant traces of inflammatory disease in the membrana tympani, middle and internal ear of subjects known to have suffered deafness.

Nervous deafness, according to Mr. Wilde, is more frequently hereditary than any other form of ear affection, excepting deaf-dumbness.

The subjects of it are generally of a sallow complexion, of a phlegmatic disposition, with a thin, cold skin, and languid circulation, and some are said to have a low state of sensibility of the auricles. In most cases the patients hear better when travelling in a carriage, or wherever they are exposed to a certain amount of noise attended with increased vibration; but this is occasionally observed in other forms of ear disease. The disease commences insidiously, and is often more frequently remarked by the friends than by patients themselves, who are usually most unwilling to admit the possibility of their not hearing as well as other people. Many deaf persons trace back the first accession of disease to grief, affliction, sudden mental emotion, to a shock, or to some great calamity. In many cases it first appears after childbirth; but it ordinarily comes on between twenty and thirty-five years of age. It generally commences on one side, but sooner or later extends to both ears, although the patient almost always hears better on one side than the other. It is strange, but nevertheless true, that in general the musical ear remains unaffected; persons will play in perfect time who can scarcely converse. In nervous deafness, especially in females, the patients invariably hear worse on being in any way excited, as by suddenly seeing a stranger undergoing a medical examination, &c. I think males hear rather better after dinner. Both suffer much from depressing emotions. Tinnitus aurium, so common an attending symptom on every form of aural and many cerebral diseases, is a frequent but not an invariable companion of nervous deafness. It may exist at the commencement of the disease, and be lost in after life; but, except under excitement—and in the majority of such cases I believe the disease is cerebral—it seldom supervenes.

The treatment of this disease should be according to the cause. Mr. Wilde has no faith in the injection of acetous ether into the cavitas tympani, as recommended by Dr. Kramer, or indeed in any topical application whatever. Counter irritation behind the ear, the judicious use of mercurials long continued, and the improvement of the gene-
ral health of the patient, are the means best calculated to effect favor- able results.

The concluding chapter is upon Otorrhœa. This symptom of disease of the ear comes more frequently under the treatment of the practitioner than any other aural affection. Mr. Wilde met with it once in every three and a half cases. We need not here review the causes of this affection; it is but the sequela, for the most part, of some one of the forms of disease already described. The author, however, gives a very complete and practical history of the disease, and its treatment. We have space only for the following upon its treatment:

In simple external otorrhœa, I generally paint the surface engaged with a solution of nitrate of silver, ten grains to the ounce, with a fine camel’s hair pencil, or a bit of cotton on the end of a probe, which I find far preferable to the old practice of dropping in the solution; as, by thus rubbing it on the parts, some more and some less, according to their condition, it removes a quantity of the mucous discharge, which adheres with great tenacity, and thereby makes its effect more certain; it may also be required on some particular spots only; and moreover, by this method, the concha, external parts, and the dress, are not black- ened by it. This application should be repeated every second day, and, in the interim, the ear should be syringed night and morning, and even oftener, if the discharge accumulates, with plain tepid water, from a gum elastic bag, which, when used by friends or attendants, or the patient, is much preferable to the usual piston syringe; and at night a slightly astringent lotion may be poured into the ear till it fills up the meatus, allowed to remain there for a few minutes, with the head bent to the opposite side, and then permitted to run out. The syring- ing must not, however, be overdone: as soon as the discharge begins to moderate, it should be had recourse to less frequently; for if not, it will, particularly in the hands of attendants, serve to keep up the irri- tation.

The various salts which enter into the general composition of eye collyria are here particularly applicable, especially those of alum, lead, zinc and copper. I formerly employed the lead lotion very extensively, but I have found that it frequently, without coming in contact with diseased bone, produces a blackened discharge: when it is used, the liquor plumbi will be found the safest and most efficacious preparation; and the lotion may be preserved clear, and either rose or elder-flower water employed, by the addition of a few drops of acetic acid. The liquor aluminis composition of the London Pharmacopœia is that which I now most frequently prescribe. Solutions of tannin will also be found most useful astringents.

If upon examination we find the meatus thickened, and it and the surface of the membrana tympani pink and vascular, a leech or two, according to the age and strength of the patient, should be applied every third day, several times. When the discharge is fetid, a chlo-
ride of lime lotion used occasionally is of service, being slightly astringent, and correcting the disagreeable smell.

With regard to cleanliness and syringing, so very much depends upon it, particularly among the lower orders, that the surgeon never can sufficiently impress its importance upon the patient or the attendants. In simple mucous discharge without polypus, granulations, or affections of the deep-seated structures, it is the chief part of the treatment; and yet how difficult to have it performed regularly! Allowing the discharge to accumulate is undoubtedly one of the principal means of perpetuating otorrhœa in any of its forms. When the meatus becomes a secreting cavity, with ulceration of its walls, it resembles a fistula, and the longer it has existed the more difficult it is to heal; and this fistulous character, especially in a narrow passage, promotes the continuance of a slight thin discharge, even long after the granulations or other producing causes have been removed. The action of the external air, therefore, upon this secreting surface, similar to what it experienced in health, can never be too much observed. There is, however, a very general prejudice to the contrary; for in two-thirds of the cases of otorrhœa which I am called on to treat, I find the orifice of the meatus filled full of cotton or black wool, which, if treatment be employed, is invariably restored to its position after each syringing. Some time ago I was consulted on account of a discharge from the ears of Master C.; it was then of two years' standing, and was thin and whey-like. He had been under medical treatment during the entire course of the disease; generally made use of syringing, and an astringent wash; never ceased to take tonic mixtures and aperient powders, and had resided twice at the sea-side. On examination, I found the auditory passages converted into secreting cavities, but without fungi, granulations, or caries, and with the tympanal membranes still perfect, but I learned that he had worn plugs of cotton in his ears ever since the discharge commenced; and these were only removed once in every two days in order to syringe and apply the lotion! By throwing aside the plugs, syringing twice a day, and continuing the same astringent applications, the child was cured in a month. It is scarcely necessary to add, that the moment the ear-passage becomes a muco-secreting surface, all traces of cerumen vanish, and it is not in the generality of cases until months after the discharge has ceased that the wax reappears.

With regard to general treatment, a very remarkable difference seems to exist in this country in relation to the management of the diseases of the eye and the ear; that of the former being of too local a nature, while that of the latter is almost exclusively constitutional. How frequently do we see a case of pustular or rheumatic ophthalmia, with a foul, white, loaded tongue, treated by a caustic solution dropped into the eye, or an astringent lotion applied to the eyelids—while a case of otorrhœa, without any derangement of the digestive functions or general health, is recommended tonics, sea-bathing, blistering, and an issue in the arm. If the case is curable,—for it must be borne in mind that only a certain number of those presenting with discharge from the ear are amenable to treatment,—and that we
have fully ascertained the cause and source of the otorrhoea, and have reason to believe, from the appearance of the patient or the history of the case, that the state of constitutional health assists to keep up the local disease, we should by every means endeavor to act on the system. Cod-liver oil, and Peruvian bark are the remedies which I have found most conducive to this end: the former as an anti-strumous fattener; the latter by altering the established tendency to morbid secretion; but notwithstanding that otorrhoea of long standing is reputed to be entirely a constitutional affection, I have seldom occasion to prescribe any course of alterative medicine, unless in cases of marked strumous habit, and when the glands of the neck are diseased. With regard to "drains" and counter-irritation, we may insert an issue in the arm, if only to meet the prejudices of the friends or medical attendants; but sometimes cases occur that of themselves not only warrant but demand such a precaution; for instance, where disease of the brain had appeared in other members of the family, or that the aural discharge had broke out on the subsidence of disease of the skin or any vicarious outlet, or that the child had had convulsions in infancy, etc.; but these are the exceptions to the rule.

Towards the close of an otorrhoea from simple chronic otitis, especially in children, I have frequently remarked, that they are liable to fresh attacks of otalgia, and sometimes small abscesses form round the mouth of the meatus. These are, I believe, best warded off by the application of a vesicating liniment behind the ears, and keeping up gentle counter-irritation for some little time after the otorrhoea has ceased. For this purpose the croton oil dissolved in soap liniment, or the tincture of iodine, made stronger and more soluble by the addition of a little hydriodate of potash or the acetum lyttæ, answers very well.

Among the complications of otorrhoea are polypus growths, caries of the bony case of the ear, facial paralysis, and cerebral affections, all of which are individually examined by the author.

Mr. Wilde very appropriately devotes the concluding portion of his volume to the subject of deaf-muteism, and gives a very complete account of the past and present condition of the unfortunate subjects of deaf-dumbness.

We have now completed the examination of this interesting work, and trust that, from our explanations and quotations, the reader will form a not incorrect estimate of its literary and practical character. We are satisfied that it is eminently suited to the wants of the general practitioner in this country, where diseases of the ear have been so little investigated, and where a work of this completeness is not soon to be written on aural surgery. Its republication is therefore timely, and we cordially recommend it to the attention of the profession.
In the preceding pages we have purposely occupied the space allotted us with the work of Mr. Wilde, not because of its superiority, as a literary performance, to the work with which it stands associated, but solely from the greater interest which attaches to the subject. We cannot therefore dwell upon the treatise of Mr. Walton with that minuteness which we could otherwise wish, and shall be able to give little more than an outline of the work.

We agree with the editor, Dr. Littell, that there was need of a treatise on operative ophthalmic surgery, written in the light of modern science. Of the author's capacity to perform the task, if we had no other evidence, the work itself affords the best and most satisfactory proof. As the pupil of Tyrrel, Scott, and Dalrymple, and as surgeon to an extensive ophthalmic hospital, however, Mr. Walton seems peculiarly qualified to furnish a work on ophthalmic surgery, scientifically and practically written, in the light of modern science.

The following are the subjects treated of in the several chapters: I. The Use of Chloroform in Ophthalmic Surgery. II. Ophthalmic Instruments in general. III. Injuries from Mechanical or Chemical Agents. IV. Foreign Bodies on the Surface of the Eye; Larvae of Insects under the Lids; Foreign Bodies within the Eyeball; Ossification of the Ocular Tissues. V. Affections of the Eyelids; Diseases of the Lachrymal Passages. VI. Affections of the Puncta; the Canaliculi, and the Lachrymal Tube. VII. Caries of the Orbit. VIII. Naevi Materni; Dilated and Tortuous Veins; Aneurism by Anastamosis. IX. Incisions of the Conjunctiva in Chemosis. X. Strabismus or Squint. XI. Tumors. XII. Protrusion of the Eyeball. XIII. Staphyloma. XIV. Conical Cornea. XV. Removal of Opacities of the Cornea by Operation; Transplantation of the Cornea. XVI. Cataract. XVII. Entozoa within the Eyeball; Cysts within the Chambers of the Eyeball. XVIII. Artificial Eyes. XIX. Malignant Affections of the Eye. XX. Artificial Pupil. XXI. Extirpation of the Eyeball.

With this enumeration of the subjects considered, and the assurance that each one is thoroughly discussed and illustrated by clinical cases, and, when requiring it, well executed wood-cuts, we must conclude our short, and necessarily imperfect notice of Mr. Walton's excellent volume.
BIBLIOGRAPHICAL NOTICES.

ART. XII.—Lectures on Surgical Pathology, delivered at the Royal College of Surgeons of England. By James Paget, F. R. S., lately Professor of Anatomy and Surgery to the College; Assistant Surgeon and Lecturer on Physiology at St. Bartholomew's Hospital, London, 1853. 2 vol. 8vo, pp. 499 and 637. Philadelphia: Lindsay & Blakiston, 1854, pp. 699.

These Lectures are a rich contribution to the present advanced stage of Pathological Science, and they hold the same important and highly practical relations to the knowledge and treatment of disease as were held by the great work of the immortal Hunter on the Blood, Inflammation, and Gunshot Wounds. Like Hunter, Mr. Paget is a close student of Nature, an accurate observer, a lucid and candid writer, and a true philosopher. These Lectures were delivered at the Royal College of Surgeons, during the six years from 1847 to 1853; and the author informs us that the plan and the subjects of the Lectures were based upon his studies in the Pathological Museum of the College, that monument to the genius and industry of Hunter. He remarks that "the first portion of the Museum, devoted to the illustration of general pathology, seemed to offer the best plan by which the knowledge acquired by a long study of the whole collection might be communicated.

"The modes were many in which such a subject might be treated in Lectures; but as circumstances had decided the subject, it seemed well to let them determine, also, the method, and to adopt that which was most natural to one engaged in the simultaneous practice of surgery and teaching of physiology. Thus guided, I designed to give Lectures which might illustrate the general pathology of the principal surgical diseases, in conformity with the larger and more exact doctrines of physiology; and the plan seemed the more reasonable, because it was the constant design of the great founder of the Museum.

"The Museum limited while it indicated the subjects of the Lectures. They were, therefore, not constructed to form a system of surgical pathology."

The following are the pathological studies included in these Lectures:—Hypertrophy, Atrophy, Repair, Inflammation, Specific Diseases, Tumors, Tubercle.

Upon each of these subjects our author has brought to bear all the light reflected from the vast pathological collections and cabinet of facts which he has enjoyed such peculiar facilities for studying, while he has carefully availed himself of the knowledge hitherto attained by his coadjutors in the great field of pathological investigation. In such labor, Mr. Paget displays many rare excellencies, by which many of his learned cotemporaries should profit. He is very careful and judicious in his selection and statement of the facts from which principles are to be deduced; whenever there are doubts or conflicting opinions, he
scrupulously gives them the fairest statement; he attentively interrogates Nature, and unveils the simplicity of her processes; and finally, though he is preeminently learned in microscopy and all the modern advancements in science, he does not allow his mind to be dazzled or misled by the gorgeous light with which they have irradiated the whole field of our knowledge of Nature and disease; but he attempts so to focalize this light as to put every doubtful point to the severest test of which it is susceptible from such agencies, thus relieving many questions of much doubt, or settling them finally, so far as these means of investigation are concerned. Like all truly learned men, Mr. Paget has no love of high-sounding or new names, but he writes in a pure and lucid style; and, with a profusion of clearly-stated and apposite facts and illustrations, he labors to throw a flood of light upon every subject which he discusses.

As these Lectures, now republished in this country, should be read by every member of the profession, we will not attempt an extended analysis of them.


This small pamphlet we have read with equal surprise and gratification. It is probably known to most of our readers that a society has been established in London, under the auspices of a number of distinguished men, both professional and laymen, for the purpose of investigating the causes, the habits, the period of incubation, the contagiousness, the methods of treatment and cure, the prophylaxis, and all other points of interest, relating to epidemic diseases. In this term are not only included those most popularly known as epidemics, such as yellow-fever, typhus fever, cholera, &c., but all others which may in any way be regarded as general in their origin or progress, such as smallpox, scarlatina, diarrhoea, dysentery, hooping cough, &c., &c.

The investigation of these important subjects has heretofore been left almost exclusively to unaided individual effort, and hence the failure, as is believed in too many instances, to discover the general laws by which a great number of these zymotic maladies are governed. The good influence of such an associated effort for the investigation of these important matters may be seen almost at a glance. It is, perhaps, simply for want of such an effort, that the medical profession is so greatly divided in opinion, and hence is so feeble in its influence upon governments and legislators, in questions which so nearly and dearly affect the best interests of humanity. There are certain investigations which can best be left to the care and study of isolated individuals, such as mathematics, logic, ethics, &c., but there are many others which can only be thoroughly investigated by associated effort, such as geology, which depends for accuracy upon the observations made by different investigators in different parts of the world, from which
the truth can only be determined by a comparison of results. So also is it with astronomy, which requires the observation of several individuals not only in different places, but in different years, and even different centuries, to determine its laws with precision.

"In the science of medicine," says the learned president of the society, B. Guy Babington, M.D., "the two methods are pretty equally blended; for so varied are the facts on which it is founded, so infinitely modified by a thousand different circumstances, that it requires the combined efforts of many to amass a sufficient stock of information to enable us to discriminate that which is essential from that which is accidental, and thus to arrive at trustworthy results. So far indeed as medicine partakes of the nature of exact science, that is to say, in its chemical, its anatomical, its microscopical, its pathological elements, it may be studied and advanced by individual efforts, and new truths may be worked out in the retirement of the study or the laboratory. But where it is only conjectural, and not reducible to exact rule and precise results; where, from the imperfection or complication of our data, we must have recourse to the probable instead of the certain; where we must balance chances, estimate averages, and strive to reconcile conflicting evidence,—there must we act in combination for the attainment of our object, since the experience of no individual is adequate to furnish a sufficiently broad basis on which to establish a general law."

The highest earthly interests of humanity are involved in these questions, and it is no less the duty of the general public than of our profession that the objects contemplated by this society should be fostered and encouraged in every possible way; and it appears that in London this aspect of the question is recognized, and to some extent appreciated, if we may judge from the fact that the society embraces among its supporters and laborers many lay individuals. Would not such an association among us be productive of great and happy results? A Hygienic Society here, which would examine all those matters which affect the health and lives of human beings in this city alone, would find work enough for considerable numbers, and by the result of its labors, obtain an influence in the proper regulation of health measures, and the enactment of sanitary laws, which would be of incalculable benefit to the commercial prosperity of the city, and the happiness and comfort of every inhabitant.

J. H. G.


By J. Forsyth Meigs, M. D., Lecturer on the Practice of Medicine in the Philadelphia Medical Association, etc., etc. Second edition, revised and enlarged. Philadelphia: Lindsay and Blakiston. 1853. 8vo, pp. 711.

The first edition of this work constituted one of the series of the "Medical Practitioners' and Students' Library." The present edition has received many valuable additions, which, we are confident, will add to its deserved popularity with the profession, as a practical work on the diseases of children.
Art. XV.—Hallucinations; or, the Rational History of Apparitions, Visions, Dreams, Ecstasy, Magnetism, and Somnambulism.
By A. Briere de Boismont, Docteur en Médecinc de la Faculté de Paris; Directeur d’un établissement d’Alienes, etc., etc. First American from the Second Enlarged and Improved Paris Edition. Philadelphia: Lindsay & Blakiston, 1853. 8vo, pp. 553.

To those who sympathize “with the grand creed of supernaturalism” this will prove an interesting volume. As a philosophical treatise on mental pathology, however, it possesses but little to commend itself to our perusal.


The original treatise of John Hunter, on the Venereal Disease, published in 1786, has considerably enlarged by the addition of notes and emendations of successive generations of editors. Nor does this growth seem to have been unhealthy. From a somewhat attentive examination of the volume, we find little to which judicious criticism would take exception. It is fitting that the investigations of Hunter, which removed the rubbish and laid the foundations of a rational and scientific syphilography, should form the basis of a work on the venereal disease. And it is no less proper that the researches of Ricord, who has reared upon the foundation thus laid the majestic superstructure of a rational syphilitic pathology and therapeutics, should be added as a commentary on the text of his great predecessor. To the present edition we have superadded the notes of the English editors, Home and Babington, and the American editor, Dr. Bumstead; the former being essential to the illustration of the views of Hunter, and the latter to bring the practical portions of the work down to the present period.

We regard, therefore, the publication of this work in its present form, embracing as it does the views of the two most successful students in this speciality—one writing at an early, the other at a later day, but both pursuing the subject in the same inductive method—as timely and appropriate, when so much attention is being given to this department of medicine.
PART THIRD.

FOREIGN MEDICAL RETROSPECT.

PRACTICAL MEDICINE.

Of Acute Peritonitis and its Diagnosis in Infants at the Breast. By Dr. Isidore Henriette, Physician to the Foundling Hospital of Brussels. [Jour. de Med. de Bruxelles.]—The great frequency of affections of the system of serous membranes in infants at the breast, is a subject worthy of the deepest consideration of those who devote special attention to the study and treatment of the diseases of children. The peritoneum, the pericardium, the pleura, the meninges, far more frequently than is believed, present pathological alterations which prove the peculiar tendency of these exhalent organs to become effected in children of early years. With the exception of meningitis, the symptomatologic manifestations of which are usually striking, these diseases are diagnosed with difficulty. We do not mean to say that pleurisy, pericarditis, and inflammation of the peritoneum can only be recognized after death, but that the functional disturbances which they create are frequently so slight as to require on the part of the physician the greatest attention.

We shall attempt to extricate the latter disease from the obscurities which surround it, by coordinating the elements of its diagnosis which have been furnished by authors, and describing what we have observed ourselves. We shall establish, finally, its differential diagnosis from entro-eolitis, a frequent disease of infancy which may be readily confounded with peritonitis.

In the first place, if we seek for the cause of idiopathic peritonitis in young children we are quickly at a loss. Its sudden development is not the least strange peculiaritiy of this affection. We know that in the adult spontaneous peritonitis is rarely observed, and that it is ordinarily encountered only in those peculiar conditions which are produced by the puerperal state, by traumatic lesions, and by perforations of the digestive tube. Its etiology, then, is most uncertain. In the two cases which have occurred in our service, without having recourse to suppositions and hypotheses, no cause could be inferred; it is important to mention that there was nothing abnormal in the umbilical cicatrix.
In the adult, the symptoms of peritonitis are well marked: it is difficult to mistake them; the symptomatology is so plain, that without a want of experience that can only be admitted in young persons upon their entrance upon the profession, it is impossible to avoid a rigorous diagnosis.

Is it so in infants? No. Here we are destitute of the information afforded by the patient; here the disease is not reflected, as in the adult, by the contracted face, the small, cored, peritonical pulse. Pain upon pressure exists, indeed, and meteorism; but these two morbid manifestations occur also in affections of the intestinal tube, and yet in a great measure the diagnosis must be based upon them. It is therefore well to define accurately their conditions, their intensity and progress in peritonitis of young infants, as distinguished from entero-colitis.

The onset of peritonitis in infants is rapid; we cannot say whether it is preceded by shivering, as in adults, but we can assert that it is not announced by any prodromes. The patients that we have observed, enjoyed a satisfactory state of health until the very onset of the peritonitis. As far as we could perceive, until then they presented no unusual symptom.

Entero-colitis commences less suddenly; at first the child refuses the breast, or suckles with indifference for two or three days before the attack; then borborygmus occurs, and the evacuations soon manifest derangement.

**In Peritonitis.**

The abdominal sensibility is greater than in any disease of the abdominal organs; the child cries upon the slightest pressure.

Meteorism occurs with the greatest rapidity. At the very commencement of peritonitis the abdomen becomes tympanitic almost while we are looking at it, while, at the same time, dullness is established over the inferior or pubic region.

Vomiting is rare, and usually occurs only at the outset; the matters ejected are unmixed, very green, and stain a linen cloth.

Constipation was a marked symptom in the two cases we observed.

The countenance is little changed; the eyes are more fixed than usual, perhaps; the plumpness of form is unaltered.

The child is motionless, and cries when it is moved.

The respiration is entirely thoracic, and is greatly accelerated; the inspirations are short and incomplete.

**In Entero-colitis.**

The abdominal sensibility is less acute; slight pressure does not cause the child to complain.

Meteorism occurs less rapidly and always bears a relation to the intensity of the abdominal lesion.

Vomiting is frequent; the matters ejected are almost always mixed, and of a yellowish green color.

Diarrhea is an almost constant phenomenon.

The countenance is rapidly altered; the eyes and mouth are surrounded by bluish rings: emaciation is rapid.

The child frequently flexes its limbs upon the abdomen.

The same symptoms occur but much less strikingly. The diaphragm does not remain motionless and passive as in peritonitis.
Such are the most striking symptoms which we have observed. They differ in some respects, particularly in regard to the appearance of vomited matters and of the countenance, from those described by Billard, almost the only physician who has carefully studied peritonitis, in children at the breast, or given a description of it at all complete. This is astonishing, for, since this author wrote, infantile pathology has been very extensively explored, and several masterly treatises have been devoted to it. In these, however, this redoubtable affection receives only a passing notice. Some persons may complain of our omission of the signs of peritonitis furnished by the general symptoms, and particularly by the pulse. We have not mentioned them because they are identical with those observed in other febrile affections.

Case I.—Acute peritonitis; death.—A male child, forty-two days old, entered the hospital on the 25th of May, 1850. The lower limbs were covered by a papulous syphilitic eruption; a sero-purulent, sometimes sanguinolent, discharge oozed from its nostrils. In consequence of the obstruction of the nose, respiration was laborious and lactation difficult.

The child was placed upon mercurial preparations, and confided to a healthy nurse, and soon became fat and hearty. Towards the end of June the eruptions had disappeared, but the ozena was not cured. The nurse, having conceived a great affection for the child, consented to take the bichloride of mercury in order to cure it. The results of this treatment were soon manifested; the child improved most rapidly.

On November 8th, the child became obstinate all at once, uttered cries, refused to take the breast; the face was flushed, the eyes fixed; vomiting of bilious matter occurred. The abdomen became enormously distended; it was hot; it could not be touched without causing the child to cry and to shed tears. Constipation; hurried thoracic respiration; high fever. (Two leeches near the umbilicus, emollient cataplasms; laxative enema; diet.)

The child cried all night, lying motionless in its crib.

On the 9th, more vomiting; one consistent dejection. The abdomen was very tense and painful. (Protracted warm bath; four leeches to abdomen; emollients.)

The child died in the course of the day.

Autopsy 24 hours after death. No emaciation. The peritoneal cavity was filled with a flocculent sero-purulent liquid; there were various intestinal adhesions. The peritoneum was highly injected; there was little or no redness of the intestines, the mucous membrane was healthy; the liver was covered by a purulent layer; the intestines were greatly distended by gas. No other organs presented the slightest alteration, except the nasal bones, which were thickened from periostitis. The umbilical cicatrix was complete, and without redness.

Case II.—Acute peritonitis; death.—A new-born child was brought to the hospital, Nov. 17, 1852. It was a female, very small and feeble. The eyes were invaded by a grave purulent ophthalmia.
It was put under treatment for this affection, and for a stomatitis (muguet) which supervened shortly after, and, at the commencement of January, all of its functions were well performed, it had gained flesh, and would have left the hospital but for the inclemency of the season.

On the 14th of January, the child became cross, and cried when it was moved, and showed no inclination to nurse. The left lower extremity was oedematosus, and was covered by erysipelatous patches. (Hygienic precautions.)

Jan. 16th. The erysipelas disappeared from the left limb, but invaded the opposite limb.

Jan. 18th. The inflammation abandoned the inferior extremities, and attacked the left side of the trunk and the lower part of the arm. In the evening there was bilious vomiting.

Jan. 19th. The abdomen became enormously distended; the child no longer vomited; the belly was hot, and excessively painful. The slightest touch made the little patient cry. There was dullness at the inferior portion of the abdomen, but fluctuation could not be perceived; the face was flushed, the eyes fixed, the inferior extremities motionless, the respiration incomplete, thoracic; onc consistent dejection; fever. The erysipelas was still manifest on the arm. (Four leeches to the abdomen; emollients; laxatives; diet.)

The child died in the afternoon.

Autopsy.—Liver enormous, fatty, yellow. Sero-purulent liquid in peritoneal cavity; recent false membranes and adhesions of the intestines; a slight amount of purulent serosity in the left pleural cavity. The lungs, spleen, and intestines presented no pathological alteration.

The cellular tissue of the left leg and arm were infiltrated by serum. There was nothing abnormal in the articulations.

Is this case the peritonitis was discovered during life. The case which preceded it had taught us a useful lesson.

We shall say nothing of the treatment of this disease, except that it is our intention, having derived so little benefit from antiphlogistics and emollients, to combine the mercurial preparations with these, when the occasion presents itself.

We are not, however, very sanguine as to the eventual result of this combined treatment, for death arrives so promptly in this disease, that we can hardly believe that constitutional therapeutical agents can have time to act.

Case III.—Acute peritonitis; volvulus; death.—Since we recorded the preceding observations, we have met with a third case of peritonitis in a newborn child, complicated with volvulus. This is its history:—

A female child, born at the Maternity, was brought to the hospice on the 22d of March, 1853, the seventh day after its birth. It was a large infant, of good constitution. Its body was covered by psoriasis guttata. Suspecting a specific cause, although we could not detect the opaline border which Biett regards as the pathognomonic sign of the
venereal affection, we confided the child to a nurse who was already
taking mercurial preparations for the cure of a syphilitic child whom
she was nursing.

Until the sixth day after her admission, we observed nothing in the
little patient; she nursed well, slept well, her functions were well per-
formed, the eruption did not progress; but, on the 28th, we found a
radical and menacing change in her situation.

The abdomen was tense; there was considerable meteorism, exquisite
sensibility, dullness above the pubes, short and hurried respiration; the
countenance was anxious; the eyes were fixed; the limbs were motion-
less; the child cried when was she moved; she had not urinated since the
preceding evening; no vomiting; constipation; feverish pulse; cold
extremities; the eruption had faded.

The catheter was passed, but it did not evacuate a single drop of
urine. The child was placed in a hot bath, with the hope of bringing
back the eruption; the abdomen was fomented, emollient injections
were administered, and a table-spoonful of the syrup of manna.

In the afternoon of the 28th, the patient vomited yellowish matters
resembling fæces to the eye, but inodorous. The psoriasis had com-
pletely disappeared. The little patient was expiring.

A catheter introduced into the bladder and also into the rectum
brought away neither urine nor fæces. The diagnosis had been written
over the patient’s cradle:—Acute peritonitis and volvulus.

The child died, then, on the day upon which the disease com-
menced.

Autopsy.—Several of our colleagues and resident students of St.
John’s Hospital were present at the post-mortem examination.

The bladder was contracted, it contained not a drop of urine; the
peritoneum was highly injected, and contained a turbid flocculent
serum; the intestines were glued together by a grayish, semi-liquid
substance; the small bowels were strangulated by bands of lymph; the
ileum was invaginated; the rectum was empty, whilst the portion of
intestine above the obstacle was filled with yellowish liquid. The con-
vex surface of the liver was covered by false membranes; the spleen
was enlarged. The lungs, kidneys, encephalon, heart, and other organs
were normal.

This observation is interesting in several particulars. It confirms,
in the first place, the description we have already given of the symp-
toms and progress of this disease; and it was accompanied by a phe-
nomenon which is not mentioned by any of the physicians who have
written upon the diseases of infancy, a complete suppression of the
urinary secretion. As to the causes of this symptom, we can only
speculate upon them. There is another important question in connec-
tion with this case. Can it be regarded as an example of spontaneous,
idiopathic peritonitis? Many physicians deny such a disease altogether,
but a careful examination of the above case seems to demonstrate its
existence. In fact, the first symptom which appeared was the rapid
distension of the abdomen, accompanied by the ordinary symptoms of
peritonitis in children, with dullness above the pubes, whilst the psoria-
sis still preserved all its distinctiveness, and showed no tendency to disappear. A metastasis could have been inferred if the abdominal symptoms had followed the disappearance of the cutaneous eruption, but this was not the case.

We shall conclude these brief and incomplete remarks by insisting upon a capital fact, which we noticed in each of our three patients: the rapidity with which effusion and the organization of false membranes occurred. As soon as pain and meteorism were discovered, percussion indicated that effusion and purulent agglutination had also taken place. We have not spoken of fluctuation, because we were unwilling to resort to the manoeuvres necessary to detect it, in consequence of the extreme pain which they would produce.—*Virginia Med. and Surg. Jour.*

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*On the Application of Tincture of Iodine as an Ectrotic Remedy in Smallpox.* By J. Crawford, M. D., Professor of Clinical Medicine in McGill College, Montreal.—It is now upwards of nine years since I first recommended the application of tincture of iodine as an ectrotic remedy in smallpox, and although I observe that the suggestion has been noticed by Dr. Copland, in his Dictionary of Medicine, and by Dr. Dunglison, in his work on Therapeutics, and also by some others in the United States, I would nevertheless desire again to draw the attention of the medical profession to the benefit that a more extended experience has convinced me would follow a general application of the remedy.

Epidemics of the dangerous malady of smallpox have been fortunately rare amongst us, and therefore the opportunity of further testing this remedy had not been afforded me, till the latter end of the last year, and earlier months of the present, during which period I have had occasion to treat, both in hospital and private practice, several cases of very grave variolous disease, and would desire to lay my further experience before the profession, anxious that a fair trial and just estimate of the application should be made, while I feel fully confident that it will maintain the reputation I have deemed it deserving of. I would here appeal to those who have seen much of the natural smallpox, or its effects, how few cases escape pitting and uneasily scars, when the disease is allowed to run its course without interference, and I would also ask, how many attempts have been made in consequence, to supply an ectrotic remedy, and how difficult of application, or disagreeable, and even inefficacious, are any that have been hitherto recommended. The Herculean undertaking of cauterizing the several individual pustules, in severe cases, quite precludes its application. I have reason to think the compound tincture of iodine a very powerful and efficacious remedy, which has been tried with very satisfactory results in the Montreal General Hospital by my friend Dr. Campbell, but from my being under the impression that the addition of the hydriodate of potass caused more pain, I have not employed this form. The disagreeable mercurial mask, the inefficacious co-
eriting of gold-leaf, cotton, or collodion, are now in a great measure laid aside. I stated formerly, on the occasion of my first suggestion of this application in the Medical Gazette published in this city in 1844, that I was led to try it in smallpox, from the very marked benefit I had derived from its use in erysipelas, and various other cutaneous diseases, for several years previously. I was then satisfied of its antiphlogistic powers and soothing effects, and trusted that a more general employment of it in variola would establish its claims to general confidence.

During the late epidemic of variola, I have had several opportunities of trying its powers, and my cases have been observed by many members of the profession, to whom the issue has afforded every satisfaction. I have reason also to know that several medical practitioners have followed my example with success, while others have made only a very imperfect and insufficient occasional application, which neither could afford a satisfactory result, nor determine the advantages derivable from it. I have been favored with the opinion of several physicians of this city, of the highest standing in the profession, on the advantage of using this remedy, which I subjoin. The application I have used is a saturated solution of iodine in spirit of wine, which is to be brushed freely over the face once or twice daily, from the earliest day of the eruption that is practicable, and continuing the repetition of the application daily, or oftener, during the period of the matura-
tion of the pustules. The earlier the application is commenced, the more efficacious it proves. The inflammatory and ulcerative processes are controlled, and the intolerable itching relieved, by which means scratching, and its evil consequences, are obviated. For some time I was disposed to confine the application to the face, as being the part most disposed to ulceration and pitting, as well as that most desirable to be preserved from marks. I have, however, on many occasions applied it to various other parts, for the sake of experiment, or contrast, and also to relieve the intolerable pruritus, and have even extended it over nearly the whole body, at the patient's desire, without any evil consequence or inconvenience from the most extended application. The relief it affords to the itching (if it conferred no other boon) would of itself be a sufficient recommendation of the application. Its antiphlogistic and febrifuge properties, however, are very manifest, and I have no doubt modify and moderate the fever, and thereby operate in a most salutary manner. The medical treatment I have combined with it is so simple and mild, that a great deal cannot be attributed to it; being merely small doses of calomel and Dover's powder occasionally, during the day, and, at night, as a sedative. When pits are left, I have observed that they principally occur in the nose, and I am inclined to think that this may in some degree be owing to the insufficiency of the application to this sensitive part, or from the disagreeable vapor causing irritation of the eehneidian membrane, or eyes, which makes the patient more desirous to escape from its application; but even this inconvenience may be easily obviated by keeping the eyes shut, and, if requisite, stopping the nostrils.
The immediate effect of the application is pain, which is more complained of by some than by others. It speedily subsides, and gradually abates in severity, after the first few applications; and the relief to the itching it affords is so gratifying to the patient, and the effects so manifest to the friends, that they always remark the contrast of the parts "painted," with those left "unpainted"; and frequently request a further extension of the application.—Montreal Med. Chron.

On the Local Application of the Vapor of Chloroform.—In an article in the Dublin Quarterly Journal, Dr. Hardy gives several examples of the application of the vapor of chloroform to the vagina and neck of the uterus, in painful affections of these parts, by means of an instrument which he has invented for that purpose. The following are his conclusions:—

"In observing the effects of chloroform as applied locally in the form of vapor in the above cases, I have endeavored to obtain as correct a notion of it as possible, in order that a true estimate might be arrived at of its value as a remedy. Besides the cases here recorded, I have applied the vapor locally in various other forms of irritation. One of these in particular I was anxious to know its action in—namely, pruritus pudendi, a disease exceedingly troublesome and unpleasant to the patient, and for the relief of which she is often very reluctant to ask a remedy until forced to do so. I have used it in a case of this kind in the person of a very intelligent patient, who for a length of time had been annoyed, particularly on the approach of a menstrual period, by this distressing complaint, for which she had made use of various remedies. The vapor of chloroform, she informed me, afforded her relief from her uneasy sensations. On referring to one of the cases (Case v.) detailed, it will be seen that there was a very severe sense of scalding in the vagina, which seemed to depend a good deal on uterine irritation. Knowing the heat caused by the vapor of chloroform, I feared this patient should have suffered severely from its application; but, on the contrary, she was quite relieved of it; so in pruritus pudendi, arising from a similar cause, the like results have been obtained as in her case.

"If future investigation as to the effect of the vapor of chloroform when locally applied coincide with the results already observed in the series of cases herein detailed, it seems reasonable that the following conclusions be considered deducible:—

"First. That in many forms of disease attended with pain or irritation the local application of the vapor of chloroform will frequently act as quickly in affording immunity from suffering as though inhaled in the usual manner.

"Secondly. That the vapor locally applied is not attended with any unpleasant affects (save the sensation of more or less heat) either at the time or subsequently, and is therefore eligible under circumstances contra-indicating its use by inhalation.

"Thirdly. That as a remedy, its local application is preferable to the
use of opium and most narcotics in spasmodic and painful affections, particularly of the uterine system, owing, first, to its freedom from causing derangement of the digestive organs, and secondly, to its greater rapidity of action."

On Chronic Excoriations of the Tongue of Children. By Frederic Betz. (Dub. Quart. Jour.)—Professor Moller, of Königsberg, describes a chronic desquamative process of the tongue, which he had observed in six cases.* The patients were middle-aged females. The excoriations appeared in the form of irregular deep red spots, for the most part sharply circumscribed, either altogether stripped of epithelium or very thin over them, while the hyperemic and swollen papillae projected somewhat beyond the level of the surrounding parts. No morbid secretion could be observed on these spots, nor did any deep ulceration take place. They existed chiefly on the borders and tip of the tongue, more frequently on their under surface, and on the inside of the lips, never on the posterior parts of the mouth. They occasioned a troublesome sensation of burning, gave the patients a disgust for food, deprived them of the sense of taste, and interfered with the free motions of the tongue.

Dr. Betz observed a very similar disease in five cases in children, which he does not wholly identify with that described by Professor Moller, but the points of difference do not appear to be great. Perhaps Professor Moller may bring forward further communications on the subject, when he shall have had opportunities of observing his form of disease in children. A red spot of roundish or oval form appears on the edge of the point of the tongue, but never on its middle line, nor on the base, and is surrounded by a well-defined, often slightly elevated redder margin. This red, sharply defined spot increases from the edge inwards, extending in a curve, and when it arises behind advancing towards the tip. Dr. Betz has only seen it on the back of the tongue; but he has observed the spots in three situations at the same time:—on the left half of the tip and on both margins of the body of the organ, the remainder of the tongue being covered with a whitish fur. The tongue is not swollen or harder in these spots, nor does any secretion or ulceration arise. The little patients made no complaint, nor did the disease appear to be an object for treatment. The morbid process consists in an exfoliation of the horny epithelium of the papillae filiformes,† splitting at its point into many thread-like processes,—a desquamation of the filamentary papillae of the tongue. They consequently appear much lower on the red fleshy spot; even lower than the papillae fringiformes. The spot so denuded is not painful to the touch. Each half of the tongue desquamates by itself; that is, the desquamation does not attack both halves at the same time,

* Deutsche Klinik, No. 26.
† See Kölliker's Gewebelchre, 1852. p. 351.
nor does it advance simultaneously on both. When the tongue has
exfoliated, the process recommences after three, six, or eight days. I
have watched these chronic excoriations during three years in a boy
in whom they existed since an attack of jaundice, which occurred about
four weeks after birth. The other patients were girls, the eldest of
whom was eight years of age. In these children eczematous and im-
petiginous eruptions appeared from time to time on the face and on
the head. As the disease occurs before detention, a bad tooth cannot
be regarded as its cause. Dr. Betz could not perceive any influence
on the motion of the tongue or on the sense of taste. Since the de-
squamation of the epithelium is connected with a hyperemia of the fil-
iform papille of the tongue, but without the occurrence of ulceration,
the author would be inclined to substitute the designation "Pityriasis
linguae" for that of chronic excoration.—Journal für Kinderkrank-
heiten.

Chloroform in Hypochondriasis. (Dub. Quar. Jour.)—At the
meeting of the College of Physicians in Ireland in June, Professor
Osborne stated that he had lately, in two cases, opportunities of ob-
serving a peculiar effect of chloroform taken into the stomach, in
controlling the depressing and saddening feelings belonging to hypo-
chondriasis. Considering that state to be produced by a depraved
sensibility of the stomach or colon, and frequently of both, he was led
to the internal employment of chloroform, which, being promptly vol-
utilized at the temperature of the stomach and before being decom-
posed by the process of digestion, ought to be expected to act as a local
anaesthetic, even though the dose should not be sufficient to produce
any change in the function of the brain.

The first patient who presented the conditions requisite for this
experiment was a married woman, and a mother, aged 33, of a quero-
ulous disposition, as was well marked in her countenance, and who
had been on a former occasion under his care and that of another prac-
titioner, complaining of a variety of pains in the abdominal region;
and she, although relieved, yet persevered in the belief that she still
had some internal disease. She now appeared to labor under spinal
neuralgia. After this had yielded to the application of nitrate of
silver to the spine, and some other remedies, she still continued to feel
an indescribable sensation of depression, and of internal annoyance,
no longer to be referred to the spinal nerves;—no cause for it could
be detected. The appetite was good, and the action of the bowels
regular. In two days, after taking ten drops of chloroform thrice
daily, she began, for the first time, to acknowledge that she was
better, and in a few days afterwards was free from complaint. The
second case was that of a caretaker in the Linenhall, aged 29. He
complained of the deepest dejection of spirits, and of an uncontrollable
aversion to make any exertion. His countenance expressed sadness
and moroseness. All the functions were in a healthy state, except
that the heart's action became tumultuous when excited either by emo-
tion or exercise; but no organic disease could be detected. He stated
that he had not been addicted to excess of any kind, and that there was no cause for his lowness of spirits. He got valerianate of zinc, and also pills to regulate his bowels; but although the heart's action became steadier, yet the depression and inward sensation continued the same. After taking twenty drops of chloroform thrice daily for two days, he began to confess, what he never did before, that he was better. His sleep being still unsatisfactory and disturbed by disagreeable dreams, he was ordered to take forty drops at bedtime. He now stated that he slept with a pleasing dream of seeing his brother, who had gone to America. During the two following nights he took the same dose; and, although his sleep was interrupted by the disturbance attendant on a man in a dying state in the same ward, yet when he did sleep his dreams were pleasant, being usually that he was enjoying the company of the most agreeable of his friends. He was dismissed with a marked improvement in his countenance, and acknowledging that he was better.

These cases are selected as being nearly free from complication. It must, however, be recollected, that there are several other uses to which chloroform may be applied in affections of the stomach and intestinal tube, but this appears to be one of the greatest value, inasmuch as no other medicine can be named which in this respect seems to come into competition with it. How far the effect is permanent and capable of completely removing the sensation of hypochondriasis, or in what degree it may require to be resumed or repeated, Dr. Osborne as yet has not been able to determine; neither did he think it necessary before this association to clear himself from the absurdity of bringing it forward as a universal nepenthes.

With regard to the mode of administering chloroform internally:—as its specific gravity is nearly 1.5, and it is insoluble in water, it must, when swallowed, soon settle at the bottom of the fluids in the stomach; and although it is vitalized, yet being covered, and under pressure, it may remain in contact sufficiently long to irritate the stomach at the part of contact, as was proved to take place in the case of camphor by Orfila. Hence, then, it is desirable that it should be diffused or diluted before it is taken. In aqueous mixtures, even when shaken up, it soon falls, so that it cannot be equally measured out, and its pungency is annoying even to the mouth. In gum Arabic mucilage it soon collects in large globules at the bottom of the bottle, covered with a white powder of arabine which it has precipitated. To obviate this inconvenience it has been proposed to give it suspended in syrup, but to make a syrup of the same specific gravity 1006 grains of sugar to the ounce of water would be required, while that of the Pharmacopœia contains only 874 grains; besides, chloroform has a heavy sweet taste which renders the addition of syrup peculiarly objectionable. The menstruum which Dr. Osborne used in the above and other cases was the decoction of Irish moss (carrageen). With this chloroform forms a uniform mixture, and in the proportion of ten drops to the ounce they remain for an indefinite time without separation taking place. The taste of the mixture is sweet like that of a heavy syrup, to relieve which it may be well to add a few drops of some aromatic or bitter
tincture. Another mode of avoiding the pungency of chloroform is by giving it in combination with tinctures, as it is soluble in alcohol, and remains dissolved even in proof spirit. The following is a specimen of this kind of formula, and is peculiarly grateful to the taste, and susceptible of various additions and alterations, according to the requirements of individual cases:—Chloroform, and tincture of ginger, of each half an ounce; aromatic spirit of ammonia, two drachms. Mix. Twenty-five drops to be taken thrice daily in a wineglassful of milk."

New Mode of preparing Ointment of Nitrate of Mercury.—We copy the following note from Mr. Wilde's recently published treatise on the Diseases of the Ear:—There is no other medicine in the whole materia medica so frequently prescribed by the practitioner which presents the same differences, both in appearance and effects, as the ointment of the nitrate of mercury. Prepared as directed in any of the pharmacopoeias of the three kingdoms, it is impossible to procure it alike in any four different establishments. It is found of all shades of color,—straw-colored, gray, green, yellow, orange, and of every degree of consistence, dry and hard, or soft and pasty. If mixed with almond oil, as in diluting it into an eyesalve, it soon becomes green, and gets a very unpleasant smell, whether covered up or not; and in this state it is often very irritating. Many apothecaries in Dublin do not adhere to the pharmacopoeial formula, but make it up according to a form of their own; some use fresh butter instead of lard; and others different kinds of oil, as from habit or experience they find best. On explaining my difficulties, some years ago, to Mr. Donovan, he procured me a citrine ointment of a very dark orange or brown color, soft, perfectly and equally smooth, and which does not alter in any way by keeping, by exposure to light, by mixing with oils, or even by being gently heated to the point of fluidity; and it never acquires an acid smell. Its therapeutic effects I have had long experience of, and they are decidedly superior to those of the ointment in common use, Mr. Donovan has not made known its constituents, nor its mode of preparation. Mr. Nicholls has made for me a citrine ointment precisely similar in color, smell, consistence, and effects; and he informs me that he uses rape oil instead of olive oil, and does not let the heat employed during the preparation exceed 200°. Mr. John Evans has employed cod-liver oil, and also seal oil, and the preparations thus produced are exceedingly elegant and useful ones. Mr. Carroll likewise uses cod-liver oil in the composition of this unguent. Messrs. Bowley have obtained for me a brown citrine ointment, somewhat like those already mentioned, and they inform me that it is by using only the very purest olive oil. I find this ointment a decided improvement on the old preparation, and its composition should be investigated by those engaged in the preparation of medicines and pharmacopoeias. When about to be used, it should be melted to the consistence of cream by placing the vessel containing it in hot water. It forms an admirable application in ophthalmia tarsi, as well as in various diseases of the ear.
On the Modus Operandi of Fecundation. By Waldo I. Burnett, M. D. (Am. Jour. of Sci. and Arts.)—With every inquiring mind there is a deep interest connected with the development of animal life. To watch the origin and rise of new forms, to trace the successive phases through which they pass, as the ideas on which they are based become more and more definitely expressed, until finally the perfect animal is produced,—these have been favorite studies from the earliest times with some of the most genial minds, and over which they were accustomed to dwell with increasing delight. But more interesting still, because more wonderful, is the study of those necessary preliminaries of all individual development—the mysterious conditions of fecundation. To observe, after nature has prepared the material, how she puts up a new structure, and to trace the adaptive idea in the lying of each part, require but opportunity united with careful diligence and patience. But to lift the veil beneath which lies hidden the more than mysterious relations of individuality, this is to tread on the confines which separate the material from the immaterial world.

There is no question in physiology so difficult and at the same time so interesting as—How is a new individuality started by the conjugation of the sexes; and where so little could be observed, there has been more scope for speculation.

In modern times, however, with certainly better instruments if not better opportunities, we have looked for less talk and more knowledge; and in this respect, it may be justly said that we have approached pretty near that boundary, which, as it is the limitation of that which can be perceived by the senses, it is the real confine between the known and the unknown in physical science.

As it would be profitless to notice the labors of those numerous men, who, in this department have written upon what they really knew nothing, yet speculated much, we shall attempt to show the state of our real knowledge on this ultimatissimum of physiology—the modus operandi of fecundation.

Modern histological studies have, we think, pretty definitely settled
two fundamental and important points: 1st. That the ovum is, morphologically, only a nucleolated cell; and 2nd. That the sperm-cell is the true homologue of the ovum.

The ovum (fecundated) produces the embryo; the sperm-cell the spermatic particle. The embryo and the spermatic particle are the correlative representatives of the female and the male sex. One is the metamorphosed nucleus (vitellus) of the one; the other, the metamorphosed nucleus (nucleus of the daughter cell) of the other. In both, the ovum and the sperm-cell, the process of segmentation seems a necessary preliminary to the evolution of the new being.*

The strict correlation between the essential products of the sexes is as wonderful as it is beautifully suggestive of the unity and simplicity of plan by which nature proceeds. This point, so seductive in all its relations, might be dwelt upon in detail, but we will continue with main and general facts. The ovum, as a nucleated or nucleolated cell, continues to grow, and whatever size it may attain to by the endogenous formation within its capsule of new cells, yet, when complete, it is, (even though belonging to the Ostrich or Epiornis,) morphologically, only a great compound nucleated or nucleolated cell. All these conditions of origin, growth, and maturity, can be satisfactorily studied in the lower animals, and we would especially recommend the compound Ascidiae for this purpose. The ovum, thus complete, is ready for fecundation.

We have already said that the sperm-cell is the analogue, or more properly homologue, of the ovum; its origin and development, as we have traced them in all their details, are precisely the same as those of the ovum. The sperm-cell increases to a definite size, its nucleus (vitellus) then regularly segments, 2, 4, 8, 16, &c., and the results of this segmentation are daughter-cells. The condition of the sperm-cell at this moment is like that of the ovum produced by the same process of segmentation. I mean the mulberry-like condition. But at this point there is a digression, for with the sperm-cell the nucleus of each of the daughter-cells is changed into a spermatic particle, while with the ovum, the whole mass is metamorphosed into the new being by a process of substitution.

The spermatic particle, then, is only a metamorphosed nucleus of a cell, and, perhaps, were the analogy carried out completely, each daughter-cell would be the representative of a miniature ovum.

Physiologically, the phenomena we have thus briefly described, obtain equally in the vegetable kingdom; for, as recent discoveries have shown, even in the simplest cellular plants, there is a conjugation of two kinds of cells, the product of which terminates in a new generation; in the other plants, the superior cryptogamia, and the phanerogamia, there are parts which in a developmental as well as morphological

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point of view, correspond to the essential male and female products of animals.*

Throughout the organized world, therefore, the conditions which wait upon the true generative process are the same—the combination of the representative products of two distinct sexes—and these products, whatever may be said of their form, are always physiologically the same;—they are cells or cell-products.

Here we would make a general statement which embodies a great deal of physiology on this subject: A true generation must be regarded as resulting only from the conjugation of two opposite sexes, from a sexual process in which the potential representatives of two individuals are united for the elimination of one germ. The germ power thus produced may be extended by gemmation or by fission, but it can be formed only by the act of generation, and its play of extension and prolongation by budding or by division must always be within a certain cycle, and this cycle is recommenced by the act of the new conjugation of the sexes.

In this discussion, we have satisfactorily reached this point that the ovum and the spermatic particle are the potential representatives of the sexes to which they respectively belong. From their union results the condition of fecundation; the grand question now is, What is the modus operandi of this fecundating act? Bischoff's view, based upon speculative probabilities rather than upon observation, is, that contact alone of the spermatic particle with the ovum being sufficient for fecundation, impregnation consists in a kind of catalysis which has its exemplification in chemical conditions as enunciated by Liebig, (see loc. cit., p. 425.) But if catalysis embodies conditions in the organic like those of its relations in the inorganic world, it falls very far short of affording the requisite explanation of these phenomena, as we hope soon to show. This field of probabilities and possibilities we shall enter upon again.

Newport's contributions upon the physical phenomena of this subject are far the most complete that we have, and being the results of a most trustworthy observer, they deserve our special attention.

Newport's experiments and observations show, in brief, that contact alone of the spermatic particles with the ovum is requisite for fecundation, that each ovum requires several particles; and that there must be duration of this contact. Here is a limit to observation of physical facts, and we regard these important data worthy of full trust, considering the source from which they come. This author discusses briefly the question of the impregnative power, and from the fact that the spermatic particles are sometimes seen to disappear on the surface of the egg-envelopes, he thinks it may be fair to conclude that the agency of this body is material in its operation; on the other hand, the fact

* We would refer to a profoundly physiological memoir by Robin, titled, "Ovum, its Existence as well in the Male as in the Female of Plants and Animals," &c. Compt. Rend., 1849.
of a mere momentary contact producing changes in the ovum, suggests in his mind the so-called catalytic power of certain known bodies. But he thinks that neither this last, nor endosmosis, are sufficient to account for the phenomena of this grand act.

The view of Keber has at least the merit of being unique if nothing more. As long ago as 1835, Martin Barry* announced that he had observed spermatic particles without the ovum. It should be mentioned, however, that long previous to this, Prevost and Dumas† in their researches found these particles within the envelopes of the eggs of frogs. But Keber's alleged discovery is, that the introduction of the spermatic particles within the ovum, takes place through a special opening, a kind of micropyle, or an infundibuliform passage. This discovery was made upon the eggs of muscles (Unio and Anodonta).

The announcement of the presence of such a structure on the ovum is indeed wonderful, and more especially so since other observers, whose attention has been particularly directed to the embryological study of these animals, have failed to notice it, although one would suppose that an apparatus of this kind must be very visible. Keber affirms that he has observed a like structure in the ova of some other animals which he has examined. But, however well fortified he has sought to make his observations, they certainly need more than the usual confirmation, and we cannot but regard it as far from being a settled fact in embryology, that the ovum has a direct structural communication externally for the ingress of spermatic particles to its interior.

After all this discussion of facts, we revert to the primary question, What is the nature of the fecundating act? We have seen that its physical phenomena consists in the contact of active vital spermatic particles with the mature ovum; that this mature ovum, thus effected, experiences peculiar changes which terminate finally in the evolution of a new being possessing the characteristics of the male as well as the female parent. It is true that, as was observed by Prevost and Dumas, and as has since been confirmed by Barry, Newport and others, the spermatic particles may force their way through the envelopes of the egg some distance into its interior, but we regard this as an unessential condition of the fecundatory act; adhering by their heads to the envelopes of the egg, the incessant action of the tails of these bodies would obviously tend to force them inwards, and especially through such homogeneous, soft tissues as the egg-envelopes.

By referring to the resultant phenomena of this fecundating process, we may perhaps gain some insight into the conditional if not the real nature of its agency. We have already said that the spermatic particle is the potential representative of the male; what signification is it to be attached to its mere physical form, that is, whether it is conical, globular, &c., we know not; and this seems the more hidden from our perceptions, from the fact that exactly similar forms and

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sizes,—in fact, physical relations apparently identical,—belong to spermatic particles of animals as widely dissimilar as could be. This fact alone, of the correctness of which we are well assured from our own observations, should be sufficient to convince us that we have here to deal with no very simple relations or properties. But let us pursue the subject a little farther. I scarcely need remark, that the offspring partakes equally of the physical peculiarities of both parents. It will at once be perceived, that in no way can a child receive those of the father except through the medium of the spermatic particles. And so, however strange it may appear at first, yet the conclusion is irresistible that spermatic particles must contain, concealed within them, in fact must be the vehicles of, not only the general peculiarities of the father as an animal, but mental dispositions also, and, as it is too often true of our own species, morbid taints superadded to all. It is wholly insufficient to say with Bischoff, that these anomalous conditions belong to the catalytic action; or with Newport, that they may be the exemplification of a force, peculiar and *sui generis.* For there is something above and beyond the wakening of latent forces, of one particle that is positive with another that is negative. The grand fact is, that the act of fecundation includes—whatever may be said of its also vitalizing the ovum—the communication or the transmission of the *individuality* of the male parent to the ovum; and the material organ of this transmission is, exclusively, the spermatic particle. We cannot see that these phenomena have an adequate explanation in any chemical relations of matter yet known, and what is more, we cannot conceive the possibility of this ever being the case, unless, indeed, chemistry gets beyond the domain of physics. Not but that chemistry involves points which are equally obscure, such as affinity, isomorphism, &c., but then the conditions of vitality, and especially the grand manifestation of it in question, certainly seem to us to include relations which have no correlation whatever with those pertaining to inorganic matter. To us the relations and conditions of cells, which are the primordial forms of organization, demand the *teleological* view of organic life.* Individuality is the distinguishing feature of organization, and we recognize in it something more than a mere collocation of physical conditions; we regard it as an idea which exists before organization, which last is only the language in which the idea is expressed. The conditions of this process of fecundation which we have just reviewed, will accept no other explanation, say what physiologists may about the *unphysical* character of such a view; we must have something beyond mere combination, which lies with physics; this we have in development, which lies with life.

In conclusion, we may say, that as the domain of science lies with demonstrable phenomena, so its legitimate study is with the sensible and tangible. The conditions of immaterial agencies, and their re-

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* See the Relations of Cells to the Physical and Teleological Views of Organization, in Silliman's Journal, xv, 87, Jan., 1853.
lations with material forms, must be accepted as pure phenomena incapable of the analysis of ordinary scientific facts. But, after all, how much more of an enigma is the process of fecundation than the essence, the primordial cause of everything connected with both the inorganic and organic world about us. Science should put out her long, tentacular arms in all directions, laying hold of the tangible and the sensible, but it should be remembered that the supra-sensible is beyond her pale, and that "multa esse constant in corpore quorum vim rationemque perspicere nemo, nisi Qui fact, potest."

PRACTICAL MEDICINE.

Yellow-Fever in Philadelphia. (Quart. Sum. Trans.)—Dr. Jewell presented to the College of Physicians, Philadelphia, at its meeting in August, the history of the fever which prevailed in that city in the month of July.

It appears that the barque Mandarin arrived at that port July 12, from Cienfuegos, Cuba, and, after undergoing the usual scrutiny at Quarantine, was allowed to proceed to her wharf on the following day. There was no cause of alarm until the cargo was removed, when a very offensive smell was noticed to proceed from the hold, which became intolerable whenever the bilge water was disturbed by the pumps. The first case of suspicious fever occurred July 19, in the person of a carman, whose stand was near the point where the cargo was discharged; and from this date to the 27th, seventeen cases occurred in this vicinity. Of these eleven died. In but eight was it known that black vomit existed, all of whom perished. Dr. J. concludes:—1. That no disease of a malignant type was prevailing in the city previous to the arrival of the Mandarin. 2. That none of the seamen discharged from the Mandarin have sickened. 3. That none of the laborers employed in unloading the Mandarin have taken the disease. 4. That the fever did not develop itself until after the cargo was discharged, when, it is believed, that the noxious emanations which had been latent in the hold, had an opportunity, acted upon by certain exciting causes, as heat and moisture, to disseminate itself, and coming in contact with other elements of decomposition existing on shore, and in the docks, soon poisoned the atmosphere of the immediate neighborhood, where the vessel lay moored. 5. That in no instance can the disease be traced to any individual, except among those who either visited or resided in the immediate vicinity of the wharfs where the vessel lay. 6. In no instance has the disease been communicated to any person visiting, or engaged in attendance upon the sick.

At the meeting of the Society in September, Dr. Jewell presented additional particulars, and new cases of fever:—The barque Mandarin was taken in charge by the Board of Health, July 26, scuttled, cleansed, and finally extensively repaired, and dispatched with a cargo for New-Orleans. Although workmen were constantly employed upon her after her removal from the wharf by the health officer, no one suffered an attack of fever. In addition to the morbific atmosphere
which developed itself on board this vessel when her cargo was discharged, there existed in the immediate vicinity of the wharf causes which we must suppose had an agency in the development of the disease. Such were the outlet of a sewer, with its accumulation of putrid animal and vegetable matter, which was exposed to the rays of the sun at low water; a foul wharf; a filthy avenue, improperly drained; numerous damp and confined cellars, subject to an occasional overflow by the ebbing and flowing of the tide-water, and various minor causes fruitful in the production of atmospheric changes injurious to health.

Dr. J. has tabulated the cases which he has collected, 44 in all, with the following results: 9 cases were under the age of 20; 18 between 20 and 30; 10 between 30 and 40; and 7 over 40. Twenty-five were males and nineteen females. Twenty were natives of Ireland; four of Germany; five of England; and fifteen of the United States. Thirty-seven could be traced directly to the infected district; in four the origin was doubtful; and in three no clue could be obtained as to where the disease was contracted. Of the 44 cases, 34 died; the mean duration of the disease in those who died, was four days; in one case it was protracted to the fourteenth day. In 26 of the 44 cases recorded, the dark-colored "coffee-grounds" ejection from the stomach, or black-vomit, was observed. When placed under the microscope this substance exhibited the true blood-corpuscles in every case but one; this case recovered, and its genuineness is therefore doubted. In 11 cases, post-mortem examinations were made, and, in all, the yellow or ochre-colored liver was detected in whole or part; the "coffee grounds" fluid, or malaric blood was also found either in the stomach or intestines of all these cases. The mortality was 80 per cent., or 5 to 1 of recoveries.

The treatment generally pursued in the first stage was blood-letting from the arms, and by cups to the back and abdomen, emetics, mercurial purges, diaphoretics, &c. In the second stage, or as soon as a remission took place, which was generally about the third or fourth day from the attack, calomel, as a sialogogue was administered in some cases, in others quinia, in three or five-grain doses, every one or two hours. If reaction was not prompt, brandy or wine internally, and local stimulating applications by blisters and rubefacients, were resorted to. Quinia in full doses, on the first intimation of a remission from fever, appears to have been a favorite remedy. In some cases, over seventy grains were administered daily for several days, and, as far as we could learn, without any annoyance to the brain or other organ, but with advantage. In Blockley Hospital, cases were treated without quinia in any stage of the disease; calomel pushed to salivation was the principal remedy employed.

In the discussion which followed this communication, the fact of a fatty degeneration of the liver having been detected in those who had died of yellow-fever, was referred to by Dr. La Roche, and confirmed by Drs. Bache and Keating in the autopsies made at the Pennsylvania and St. Joseph's Hospitals. In all the cases, the cells of the liver were found to be filled with an oily substance.
Surgery.

Aneurismal Tumors upon the Ear, successfully treated by the Ligation of both Carotids.—Dr. Mussey reports a case (Am. Jour. Med. Sci.) of ligation of both carotids for aneurismal tumors occurring upon the ear. The patient was aged 19, and had from childhood a cutaneous naevus in front of the left ear; about eight years since small elevations of the integument were observed at the points where the tumors arose, having a perceptible pulsation after exercise. They gradually increased in size, and at the time of the operation one occupied the cavity of the concha, rising above the level of the antitragus, and another covering the tragus, and, extending some way anterior to it, was as large as a middling-sized nutmeg. There was also a globular tumor of the same character beneath the ear and between the mastoid process and ramus of the jaw, having the size of an Isabella grape. The most promising course of treatment was thought to be the ligation of one or both carotids. The success of Mr. Travers’ case in 1809, in which the primitive carotid was tied for “aneurism by anastamosis of the orbit,” of Mr. Dalrymple’s case in 1813; and Dr. J. M. Warren’s case in 1846, where both carotids were tied for a vascular tumor of the mouth, face, and neck, gave a reasonable hope of success in this case. Accordingly, on the 1st of November, the left carotid was tied, and the pulsation in the tumor ceased immediately. No unfavorable symptom occurred, and on the 12th day he was allowed to sit up, when indistinctness of vision in the left eye was complained of; this gradually passed off. Though the tumors diminished in size, the entire success of the operation was doubtful, and in four weeks the operator tied the right carotid. In both instances the ligation was applied just below the crossing of the omohyoid muscle. One ligature came away in sixteen days, the other in twenty. The tumors now subsided more rapidly, and subsequently their reduction was hastened by the application of collodion. In seven weeks scarcely a vestige of the tumors remained, and in three months the cure was complete.

Amputation at the large Articulations. By Wm. H. Van Buren, M. D., Surgeon to the N. Y. Hospital.

Compound Comminuted Fracture of the Femur, near the Great Trochanter, with extensive Laceration of the soft Parts; Amputation at the Hip-Joint; Death. Eliza Reid, æt. 9, was admitted into the Hospital on the 5th of July, two hours after being run over by a railroad car, which produced a compound comminuted fracture of the femur, and extensive laceration of the anterior portion of the thigh; the wound extending from two inches below Poupart’s ligament to the knee-joint. No pulsation could be felt in the anterior tibial artery. There was considerable vomiting before admission. Reaction having taken place, a consultation was called, and amputation at the hip-joint advised; Drs. Cheesman, Buek, and Markoe being present. At 10 o’clock, the patient being placed under the influence of ether, the operation was performed, by antero-posterior flaps, and the wound brought
together as rapidly as the safety of the patient would admit. Very little blood was lost during the operation. The patient vomited during the administration of the ether, rejecting some half-digested food, which had been taken before the accident. The shock of the operation was excessive, but in two hours the patient had completely rallied, under the careful use of stimulants, and, all circumstances being considered, passed a favorable night. The condition of the patient appeared promising until the morning of the 7th, when the pulse began to grow more feeble and frequent, and slight delirium was noticed. From this time she sank gradually, and died at 2 o'clock, P. M., forty-six hours after the injury, and forty-two after the operation.

The fatal issue in this case was attributable mainly to the excessive depression of the powers of life, which always follows railroad injuries. The child rallied from the fearful injury she had received, and also rallied well after the operation; but sank in the effort at reparation. A post-mortem examination showed union already partially effected in the stump, and no internal injuries were detected. The mode of operating adopted in this case, was that which had already been performed by the attending surgeon, in a case followed by recovery; the posterior flap being made by an incision carried from without inwards.

Compound Comminuted Fracture of Humerus, near Shoulder-Joint, with Wound of Brachial Artery; Amputation at Shoulder-Joint; Recovery. Christopher Fricke, æt. 35, a healthy German, of temperate habits, was admitted on the 1st of July, with a comminuted fracture of the humerus, at its surgical neck, accompanied by severe bruising of the surrounding parts, and occasioned, a few hours previous to his admission, by the fall of a building, at which he was employed at work. One of the fragments of the humerus had been forced through the integuments on the inside of the arm, near the axilla, lacerating the soft parts extensively, and wounding the brachial artery. The limb was much infiltrated with blood; its temperature was much lower than that of the opposite side, and no arterial pulsation could be detected below the seat of the injury. No hemorrhage. On the following day, reaction having taken place, a consultation was called upon the case. It was determined to endeavor to secure the wounded artery, to explore the extent of the injury, and, if possible, to endeavor to save the limb. A ligature was accordingly placed beneath the axillary artery, after the administration of ether; and the incision thus made was prolonged downwards, over the brachial artery, into the original wound. Several arterial points were secured, but the comminuted state of the bone, and the extensive detachment of the soft parts around its head, together with the extensive infiltration of blood amongst the injured parts, rendered the removal of the limb evidently advisable, and this was accordingly effected by means of antero-posterior flaps. Serious collapse followed, from which the patient rallied in a few hours under stimulants, and subsequently recovered, without a serious symptom. He was able to leave his bed within three weeks from the operation, and was discharged, cured, on the 11th of August.—N. Y. Med. Times.
Excision of the Tonsils.—In a report on the Surgery of Cortland County, to the Medical Association of Southern Central New-York (Trans. of Assoc.), Dr. C. Green makes the following interesting remarks upon the practice of removing the tonsils:—

I have operated on about twenty different patients, and in thirteen of the cases I have amputated both tonsils. The ages of the patients have varied from three and a half to thirty-six years. The circumstances indicating the necessity for these operations have been various, but the principal one has been the tendency to repeated attacks of tonsilitis, and of pharyngitis. In several instances there have been superadded to these indications for removal the existence of deafness, and an embarrassment of articulation. Another circumstance has, in a few instances, induced me to remove the tonsils, viz: laborious respiration during sleep, producing exhaustion, disturbed sleep, and even incubus. These symptoms are often observed in young children, and are very distressing, and sometimes seriously encroach upon the general health. There are cases where the tonsil is not much enlarged, but where the large mucous follicles (of which it is a congeries) become obstructed by calcareous concretions, which keep up a sub-inflammatory state of the tonsil, the fauces and the adjacent parts. In these instances, the removal of a portion of the tonsil will prevent the calcareous accumulation, and allow the surrounding membrane to resume its normal condition. The amputation of the tonsil is also indicated where, in the case of children, the tonsil is very large, and where suffocation is threatened at every renewal of inflammation from the impression of cold, and where there is danger of the induction of croup by extension of the inflammation.

The question arises, is there no therapeutical agent which can supplant the knife in the treatment of enlarged tonsils? I answer, in brief, that after repeated trials of nitrate of silver, iodine, and other medical treatment, and after marking the experience of other surgeons for the relief of this affection by medicines, and comparing the results with the effects of the knife, I can say most emphatically, that for safety, promptness, and efficiency, the knife is superior to all other means employed.

Another question frequently put to the surgeon by patients, and sometimes by physicians too, is, "Do the tonsils grow again, after amputation?" Prof. Hamilton, in an able article on enlarged tonsils, in the third volume of the Buffalo Medical Journal, says (page 195) that, according to his experience, when the whole or two-thirds of the gland is cut away, no more trouble is experienced from it; but that when one-half, or one-third is removed, the balance does not generally disappear, and not unfrequently it again enlarges. This is not in accordance with the experience of many surgeons, nor with my own. Dr. Hyde has seen it but once. My opinion is, that in nearly all the cases of supposed regrowth, it is an appearance and not a reality. Dr. J. Mason Warren, of Boston, in an able article on "Enlargement of the Tonsils, attended with certain Deformities of the Chest," published in 1839, (Am. Jour. Med. Sci., Aug., 1839, p. 525,) mentions one case in a list of nineteen, where, at the end of a short period after amputation, an
appearance was presented as if they had been re-generated. This, he remarks, arose from the original shape of the tonsil, in which the base was very broad, and extended some distance down the throat. The appearance of reproduction arose from the upper and lower portions rising or curling up, as it were, after the apex was removed.

This leads me to speak of lobed tonsils. I have had two cases in which the tonsils were each divided for about two-thirds of their lateral depth into two lobes. In the first of these cases, both lobes stood out prominently from the arches of the palate, so that I removed them by operating twice on each tonsil—each lobe being about the ordinary size of a hypertrophied tonsil, the remaining portion atrophied; and an entire relief of the symptoms, for which removal was demanded, was the result. In the other case, I was not aware of the existence of the posterior lobes, until some days after the amputation of the anterior ones. At the end of that time, the patient, a young lady, presented herself again, saying that her tonsils had grown again; and, to my astonishment, I found, on looking into her throat, two plump-looking tonsils as ever need be, standing out about three-quarters of an inch from the edges of the palate. It was twilight, and I did not like to yield my opinion, previously expressed in reference to the reproduction of amputated tonsils, until I could have more light upon the subject. The next day, by a strong light, I examined the throat, and found at the base of the "new" tonsil the cicatrix left by the amputation of the anterior lobe. The difficulty was at once explained. The anterior lobes had pushed the posterior ones backwards and downwards along the side of the pharynx, so that their existence was not suspected before operation, and at the time of it they were obscured by the eaulagia, which immediately formed about the divided surface of the first lobes. When the pressure of the anterior lobes was removed, the posterior ones resumed the usual position, and we had a marked instance of what is supposed to be a regrowth of the tonsil. I am willing, however, to subscribe, in part, to Dr. Hamilton's views on this subject, for I believe that if only a small portion of the gland is removed, the same condition of the organ remains—the morbid vascularity is kept up, and the tonsil continues to enlarge. The conditions which contra-indicate amputation, where for other reasons it is desirable, are inflammation of the substance of the tonsil, and the hemorrhagic diathesis.

As to results of the operation, I must say that they have, in my experience, been almost uniformly gratifying. I cannot recall to mind one instance where I think injury was done to the throat by the operation, and but two instances in which no benefit was derived. I have witnessed profuse bleeding in but one instance. This was in the person of a young man with whose constitutional peculiarities I supposed myself acquainted, and so did not make the inquiry, which I rarely omit, whether he was apt to bleed much for slight wounds. In this ease I found the patient to be of a decidedly hemorrhagic tendency, and in ten or fifteen minutes after the operation, I found him in the state of partial syncope; and it was not until a minute afterwards that I was aware of the extent of the hemorrhage; for immediately after the operation he reclined upon a settee, and in that position, instead of disgorging
the effused blood, he swallowed it, and when faintness came on, he vomited a large quantity of coagulate. I immediately applied the neck-cloth, filled with pounded ice, and the bleeding was promptly arrested. This, by the way, is the most efficient remedy for this accident which we possess.

My strong conviction is, that this operation ought to be resorted to much oftener than it is by a majority of practitioners. There is no doubt that some operators have made this a surgical hobby, and see an indication for cutting in every throat, but the mass of practitioners, so far as my observation and acquaintance extend, are willing to let the matter go, if they can be excused from operating, or, perhaps, in many instances, they do not appreciate the indications for the removal of enlarged tonsils.

Felt Splints. By F. H. Hamilton, M. D.—Some years ago, I think in 1845, Felt Splints were brought to me by an agent of the manufacturer. The felt was sold in sheets, and also in pieces, modelled so as to be readily adapted to the form of the limbs. In some respects it was superior to gutta percha, and I am inclined to think that on the whole it was the best splint ever used. I cannot learn that these splints are now manufactured in any part of the United States, and I will therefore inclose you the recipe for making them, which was kindly given me by the agent, and which I have frequently used myself:—

Dissolve three pounds of gum shellac in two quarts of alcohol. It should be dissolved in a tin vessel, furnished with a tight cover to prevent evaporation. Spread a piece of old or new woolen cloth on a board, and with a clean brush saturate both sides of the cloth with the solution. Hang it up until it is thoroughly dried. Lay it again upon the board and apply a second coat of the solution to one side only of the cloth. Dry again, and apply a third coat to the same side. There will now be three successive layers upon one side and one on the opposite. While the last coat is yet fresh, fold the cloth so that the side having three coats shall be applied to itself. Now, with a hot flat-iron, smooth and press the surfaces together. When it is cold, a slight rubbing with sand-paper makes it fit for use. It becomes a firm, almost unyielding board, but exposure to a moderate heat will make it pliant, so that it can easily and accurately be adapted to any surface. —Buff. Med. Jour.

EDITORIAL AND MISCELLANEA.

Institutions for the Treatment of Special Diseases.—There is a necessity existing in all large towns for the establishment of institutions for the treatment of certain diseases. The idea is in part realized by the creation of institutions for the insane, the deaf and dumb, the blind, etc. But in European cities this principle is carried out much farther in the erection of hospitals for the treatment of certain forms of disease which, from their nature, require isolation from other diseases, or methods of treatment difficult of application in general hospitals.
Thus we have hospitals for the venereal disease, for skin diseases, for consumptives, for sick children, orthopaedic institutions, &c. &c. In each of these the greatest facilities are afforded for the treatment of the several forms of disease peculiar to each, either in surgical appliances or remedial measures.

There is existing in New-York an equal, and owing to its immense immigrant population, perhaps a greater necessity for the creation of institutions for the treatment of special diseases than in foreign cities. No charitable enterprise could be initiated more laudable in its inception, and more humane in its results, than the erection of a hospital for the consumptives. This large class of patients, which crowd the wards of all our hospitals, and hourly apply for relief at every public charity, demand special provision for their remedial and hygienic treatment, which no general hospital can afford. That phthisis is in any considerable degree amenable to treatment we do not assert, but that the pauper consumptive may be greatly benefited, his life prolonged, and the ills of a protracted and insidious disease greatly mitigated by being placed under circumstances best adapted to his physical and mental condition, there can be no doubt. There is also the same need of a hospital for drunkards. It is a well established fact that a large class of confirmed inebriates are laboring under a species of insanity as destructive to the mental and physical health of its victim, and as dangerous to society at large, as that which afflicts nine-tenths of the inmates of any lunatic asylum. To restore them to health requires total abstinence from all that can intoxicate, and a lengthened term of moral training, surrounded by influences all tending to invigorate the moral and physical nature of the individual. We need not specify other instances in which the philanthropy of our profession should employ itself in ameliorating the condition of the sick. It is not our province to appeal to the public to erect hospitals, and create charitable institutions; this belongs to private effort and individual appeal; but we may not inappropriately urge this subject upon the attention of the profession, well satisfied that the public will second with material aid any effort which they may put forth to establish new charitable institutions in our city. When the initiatory steps have been taken in such an enterprise with the proper motive, there has never yet been wanting a public emulation in its successful prosecution.

We may notice in this connection the recent establishment of two private institutions based on the considerations above given; the first an orthopedic institution, in the neighboring city of Brooklyn, by Drs. Louis, Bauer and Barthelmes; and the other, an institution for the treatment of the accidents of parturition, in this city, by Dr. Sims, late of Alabama. Of the qualifications of the former gentlemen to treat the deformities incident to articlar diseases with an enlightened conception of the pathology of these affections, and the principles of treatment, our readers have had ample means of judging by the recent highly interesting papers which they have contributed to this Journal. Their institution is prepared for the reception of patients, and well supplied with attendants and all the appliances necessary for the successful treatment of the subjects of articlar disease and deformities. Compelled by delicate health to seek a residence in a northern climate,
Dr. Sims has located in New-York, and opened a private institution in one of the pleasantest portions of the city, for the purposes already indicated. There is not a more pitiable class of patients in community than the subjects of vesico-vaginal fistula—an accident which Dr. S. has treated with much success.

An Act relating to Appointment of Members of the State Medical Society.—We desire to call the attention of county medical societies and our readers to the following "Act" of the Legislature, passed June 4th, 1853. By this it will be seen that the ratio of representation from county medical societies is materially increased; an increase which it is hoped will augment the scientific resources, and further the best interests of the parent society. The passage of this law, we believe, is mainly due to the efforts of Dr. Thomas W. Blatchford, of Troy.


Passed June 4th, 1853.

The people of the State of New-York, represented in Senate and Assembly, do enact as follows:

§ 1. Section third of said act is hereby amended as follows: Instead of the words "said society shall be composed of one member from each of the county societies in the State," it shall read, "said society shall be composed of as many members from each county medical society as there are members of the assembly from such county."

§ 2. This act shall take effect immediately.

To the Medical Profession in New England and New-York.—We have received the following circular from Prof. Hooker, with a request that we would call the attention of the profession to the matter. We hope that the desires of the chairman of the committee will be liberally responded to, and that every member of the profession will feel that he is individually responsible for the production of a portion of the materials for the report.—Eds. N. Y. Jour.

The undersigned, chairman of the committee on epidemics in New-England and New-York, in order to make a report at the coming session of the American Medical Association, must have material for this purpose from medical men in different portions of the field indicated. No report has been made from this section since the appointment of the committee at the session in Charleston in 1851, simply from want of such material. The chairman would therefore call upon such of the profession in New England and New-York, as have in their possession interesting facts or results of general observations, to furnish them to him, that they may be embodied in his report. It would be well to have the observations cover all the period since the appointment of the committee, viz., May, 1851. It is not deemed necessary to specify the
points on which observers can report, as these will readily suggest themselves. It is desired that all communications be forwarded by the 1st of March.

WORTHINGTON HOOKER.

_New Haven, Dec. 20, 1853._

_Harvey demonstrating the Circulation of the Blood._—We have received from the publisher, Mr. G. S. Appleton, an engraving of Mr. R. Hannah's celebrated painting, representing Harvey demonstrating to Charles 1st his theory of the circulation of the blood. As a strictly professional piece, laying aside all other considerations, it is deserving of the approbation of the profession. In the execution of it the artist has taken great pains to preserve the likeness of Harvey, and was guided by his excellent portrait, by Cornelius Jansen, in the College of Physicians, London. This engraving deserves a place in the office of every physician.

_Adshesive Plaster._—Mr. John M. Davidson, of this city, has forwarded us a specimen of adhesive plaster, which upon trial we have found to possess many advantages over that in ordinary use, and which we commend to the notice of the profession.

**OBITUARY.**

**Death of Thomas G. Mower, M. D._**—Dr. Mower died at his residence in this city on the 7th of December last. He was one of the senior surgeons of the U. S. army. Dr. Mower served with distinction in the Frontier War of 1812. He was a gentleman of varied scientific attainments and a profound scholar in the science of medicine. His communications to the literature of the profession were few, but able and scientific. In the second volume of the _N. Y. Journal of Medicine_ will be found a paper from his pen, on the History of the Institution of Meteorological Observations by the Army Department, and the existing state of Meteorology in this Country, which is highly creditable to the scientific zeal and literary taste of its author. In the inception of this Journal he was one of its warmest supporters.

**Death of R. L. Scruggs, M. D._**—We regret to notice in _The Southern Journal of the Medical and Physical Sciences_ for November, an announcement of the death of Dr. Scruggs, one of its corresponding editors. He died at his residence in Shreveport, La., on the 27th of Sept., of yellow-fever, which prevailed as an epidemic in that vicinity. Dr. S. was a native of Tennessee, but had been a resident of Louisiana for the last fourteen years of his life. He was an eminent physician, a vigorous practical writer, and his loss is mourned by his editorial associates.

**Death of Francis Bullock, M. D._**—Dr. Francis Bullock, Resident Physician of the Lunatic Asylum, of Kings Co., at Flatbush, L. I., died Aug. 1, 1853, of typhoid fever, in the 26th year of his age. Dr. Bullock had filled the appointment, which he held at the time of his death, for the past three years and a half, with great fidelity and acceptance, and evinced a skill and maturity of judgment indeed singular in one so young.
TILDEN & Co's MANUFACTORY OF MEDICINAL EXTRACTS
At New Lebanon, New York
TILDEN & Co. 98 John Street New York.
TO READERS AND CORRESPONDENTS.

ERRATA OF THIS NUMBER.

The reader is requested to correct the following errors, which have inadvertently crept into this number of the Journal.

Page 162, line 6, for "§iv," read "§iiij."
“ 165, “ 18, insert “for” after “prescribed.”
“ 166, transpose lines 7 and 8.
“ 168, line 6 from bottom, for “stag” read “stage."
“ 231, for “Parreira” read “Pereira.”
“ 256, “ 8 “ dele “not.”

The following publications have been received:

A Treatise on the Diseases of the Eye. By W. Lawrence, F. R. S., Surgeon to St. Bartholomew’s Hospital, etc., etc. A New Edition. Edited, with numerous additions, and two hundred and forty-three illustrations, by Isaac Hays, M. D., Surgeon to Wills’ Hospital, etc. etc. Philadelphia: Blanchard & Lea, 1854, 8vo, pp. 948. (From the Publishers.)

A Practical Treatise on Inflammation of the Uterus, its Cervix and Appendages, and on its Connection with Uterine Disease. By James Henry Bennett, M. D., Member of the Royal College of Physicians, etc., etc. Fourth American, from the Third and revised London Edition. Philadelphia: Blanchard & Lea, 1853, 8vo, pp. 430. (From the Publishers.)


Clinical Report on Dysentery, based on an Analysis of Forty-nine Cases With Remarks on the Causation, Pathology, and Management of the Disease. By Austin Flint, M. D., Professor of the Theory and Practice of Medicine in the University of Louisville, Ky. Buffalo: Jewett, Thomas & Co., 1853, pp. 90. (From the Author.)

Clinical Report on Chronic Pleurisy, based on Analysis of Forty-seven Cases. By Austin Flint, M. D., Professor of the Principles and Practice of Medicine in the University of Buffalo, N. Y., and in the University of Louisville, Ky. Buffalo: Jewett, Thomas & Co., 1853, pp. 58. (From the Author.)

To Readers and Correspondents.

**Human Anatomy, Physiology and Hygiene.** By T. S. Lambert, M.D., Lecturer on Physiology at the Pittsfield Institute (for young ladies), etc., etc. Illustrated with nearly three hundred Wood-cut and Lithographic Engravings. Hartford: Broeckett, Hutchinson & Co. New-York: Ivison & Phinney, 1854. 8vo, pp. 456. (From the Author.)

**Prize Essay, on the Use and Abuse of Alcoholic Liquors, in Health and Disease.** By William B. Carpenter, M.D., F.R.S. Author of "The Principles of Physiology," etc., etc. With a preface, by D. F. Conde, M.D. Philadelphia: Blanchard & Lea, 1853. 12mo, pp. 178. (From the Publishers.)

**A Treatise on Venereal Diseases.** By A. Vital, (dc Casis), Surgeon of the Venereal Hospital of Paris, etc., etc. With colored plates. Translated and Edited by George C. Blackman, M.D. Fellow of the Royal Medical and Chirurgical Society of London, etc., etc., etc. New-York: Samuel S. & Wm. Wood, 1854. 8vo, pp. 499. (From the Publishers.)

**Materia Medica, or Pharmacology and Therapeutics.** By William Telly, M.D. Vol i. No. 9. Springfield, Mass.: Jefferson Church, M.D., 1853. This number fully sustains the character of the work. We shall wait with no little desire for the completion of the work. From some cause the 6th and 8th numbers have not been received.

**The Therapeutical Powsers and Properties of Veratrum Viride.** By Wesley C. Norwood, M.D., of S. C. New-York: 1854. 8vo, pp. 40. This pamphlet is intended as a circular, setting forth the author's views of the use of Veratrum Viride in Medicine, and also commendatory notices of physicians who have used his tincture in practice.

**Homeopathy: An Introductory Address to the Students of Sterling Medical College.** Nov. 24. 1853. By Charles A. Lea, M.D. Prof. &c., Columbus, O., 1853. 8vo, pp. 40. Like all the productions of Dr. Lee's pen, this is a finished performance. It is a master-piece of argument, based upon facts which have, and will to all time, prove the baselessness of this heresy.

**A Lecture Introductory to the Course of Lectures in the Medical Institution of Yale College, Sept. 9th, 1853.** By Jonathan Knight, M.D., Prof. of Surgery. New-Haven, 1853. 8vo, pp. 19. This is an exceedingly interesting lecture, containing as it does a succinct account of the rise and subsequent history of the Medical Department of Yale College,—the fourth medical school, in order of age, established in the United States.

**Doctors Commons, an Ethic Address delivered before the District Medical Society, for the County of Burlington, N. J., Jan. 10th, 1854.** By S. W. Butler, M.D., President of the Society, Burlington, 1854. 8vo, pp. 12.

Communications intended for publication, and Books for Review, should be sent, free of expense, directed to Drs. Purple and Smith, Editors of the New-York Journal of Medicine, 183 Hudson-street, New-York. Persons at a distance may direct parcels, or exchanges, paid as above, under cover, to M. J. B. Bailliere, Rue Hauteville, Paris; or H. Bailliere, 219 Regent-street, London; or Lindsay & Blackiston, Philadelphia; or Wm. B. Ticknor & Co., Boston. The attention of Correspondents is respectfully requested to the above, as the Publishers are frequently subjected to unnecessary expense for postage and carriage.

All remittances of money and letters on the business of the Journal, should be directed to the Proprietors.
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PART FIRST.

ORIGINAL COMMUNICATIONS.


The extensive demand for sulphate of quinia, and its consequent high price, and, indeed, the frequent impossibility of obtaining it, in the portion of Missouri where I have recently practised, induced me to subject to the test of experiment various remedies which have from time to time been proposed, as substitutes for that invaluable medicinal agent, in the treatment of intermittent fever.

Among others, a succedaneum, quite recently presented to the notice of the profession, by Drs. Scelle Montdezert and Piorry (viz., common salt), has claimed our attention, and forms the subject of the present paper. For a history of its use by these gentlemen, their mode of administration, &c., the reader is referred to a paper, by W. P. Lattimone, M. D., in the American Journal of Medical Sciences for July, 1852. Professor Herrick, of Rush Med. College, has also reported two cases, in the N. W. Med. and Surgical Journal, for Sept., 1851, which go to corroborate the success obtained by MM. Montdezert and Piorry.
Although the credit of introducing chloride of sodium, as a remedy for intermittent fever, to the notice of the profession generally, is undoubtedly due to the French physicians above mentioned, it appears that it was used for this purpose prior to that time. Soon after I had commenced experimenting with it, I mentioned the subject to a neighboring physician (a gentleman of undoubted veracity and professional skill), who informed me, that some years previously he had heard of its being used as a domestic remedy for fever and ague by the people in that neighborhood. I also learned, from a highly respectable lady, that her husband's grandfather, many years before, was in the habit of curing fever and ague among his negroes, by giving copious draughts of salt water from a large salt spring on his farm.

Notwithstanding the favorable reports which have been made, the remedy has been but little used in this country, because its antiperiodic influence was doubted. And it has been thought not inappropriate again to introduce the subject to the notice of the profession, with the hope that it may receive more general attention. The experiments were commenced for the purpose of determining, with some degree of accuracy, a knowledge of its value in intermittent fever, by exhibiting it in a large number of cases. And no better field could have been selected for the experiment, not even the far-famed Pontine marshes, whether we consider the very general prevalence of the disease, or the protean and obstinate forms it here sometimes assumes. In consequence however of my removal to this city, it was prescribed in but twenty-two cases, occurring in twenty individuals, a summary of which is now presented as they were recorded; there has, consequently, been no attempt at a selection of the cases. I was enabled to ascertain the permanency of the cures in but three patients, and the condition of the spleen in but one. It would have been very desirable to have observed its effect on the spleen, which, according to Piorry, is diminished in volume with marvellous celerity. These unavoidable imperfections in the history of the cases
arise from the fact, that most of the patients resided at a considerable distance from my office, and were prescribed for without having been examined; and, indeed, from the very general prevalence of the disease, most persons have become so familiar with the use of quinia (which is usually kept in the house, and prescribed as a matter of economy and convenience by the head of the family, when necessary), that a resort to the physician in ordinary cases is rarely thought of. But I think we may safely surmise, that hypertrophy of the spleen existed in every case, excepting, perhaps, in cases 13 and 16, which were recent cases, occurring in very young subjects; because, in malarious districts, this pathological condition exists almost universally, and can be readily detected by careful percussion, even in persons who have never had what are commonly termed miasmatic diseases (intermittent and remittent bilious fevers), and who enjoy apparent good health. It appears to be the direct effect of the malarial poison, and it is a fact well known to practitioners in miasmatic districts, that in all diseases occurring there, even in those not strictly of malarial origin, the morbid effects of this poison are more or less obvious, requiring for their treatment specific remedies, in addition to their ordinary therapeia.

Case 1.—Elisha E., æt. 3 years, prescribed for April 28th, 1852. He had intermittent fever last spring, which was then checked, but returned the ensuing autumn, and has recurred at irregular intervals to the present time. Quinia, arsenic, &c., have been used. The present attack is of the tertian type. Skin pallid and sallow, and his general health is somewhat impaired. B. Chloridi sodi 3ij; mucil. ulmi f3j. M. A teaspoonful to be taken every three hours, commencing twenty-four hours before the next paroxysm is expected.

I was informed by his father to-day (May 3d), that the paroxysms were at once arrested by the above mixture. There was no disturbance of the stomach or bowels. Thirst.

Case 2.—S. M., farmer, æt. 30, prescribed for May 3d, 1852. He contracted intermittent fever last autumn, and
relapses have occurred, at intervals of a few weeks, to the present time, notwithstanding the abundant use of quinia, and other tonics and anti-periodics. The present attack has existed for several days, and presents the quotidian form. His complexion exhibits the appearance characteristic of the disease. B. Chl. sodii 3j; mucil. ulmi. f5 iv. M. Tablespoonful every two hours during the next intermission, as there is not now sufficient time to take the requisite quantity before the paroxysm is expected. On the 5th the chill returned at the usual time (although the salt was taken as directed), but in a much milder form; thirst; four dejections without pain, and no nausea.

This patient was accustomed to having his chills arrested immediately by sulphate of quinia, and was unwilling to risk again the prophylactic virtues of the chloride. But, from the marked diminution of the violence of the paroxysms, there is great probability that, if it had been continued, it would have arrested the disease. The disorder was suspended by liq. potass. arsenit. gtt. xv, ter in die.

Case 3.—Elizabeth M., æt. 13, quotidian intermittent; prescribed for May 5th. The present attack has existed several days. She had the disease last autumn, and occasional relapses have occurred to the present time, sometimes assuming the quotidian form, and at others the tertian. Has been accustomed to use quinia to arrest the paroxysms. General health pretty good during the intervals of the attacks. She was ordered chl. sodii 3ij in mucilage every three hours until six drachms were taken, commencing eight hours before the return of the paroxysm was expected. The disease was thus immediately arrested. She vomited once after taking the second dose, which was soon repeated and well retained. Four dejections, without griping; no nausea; thirst.

She was directed to take a drachm of the chloride night and morning for three or four weeks, as a prophylactic. The disease subsequently returned, but I could not learn with accuracy how long it was kept in abeyance. Her father
informed me, however, that it did not return so soon as it had formerly done, after the use of quinia.

Case 4.—T. G. M., farmer, æt. 30, prescribed for 5th of May, for the tertian form of intermittent fever. He had the disease last September; it was then checked, and he has been free from it until three weeks since, when it returned, and was promptly arrested by sulph. quinia. Since then he has been using, as a prophylactic, bitters composed of bark, gentian and rhubarb, but a relapse occurred, notwithstanding, on the 21st day. His skin is pallid, but he feels pretty well during the intermission. He was ordered chloride of sodium 3ij in mucilage, every four hours, commencing fifteen hours before the paroxysm is expected to return, and to take four doses. Only six drachms (three doses) were taken, the paroxysm having occurred one hour after the last dose, and six hours earlier than it was expected. There was thirst, but no disturbance of the stomach or bowels. This patient objected strongly to the taste of the remedy; and, as he doubted its efficacy, and was very anxious to have the disorder immediately arrested, I prescribed sulph. quinia grs. x, aromatic powder grs. x, opium gr. j; to be taken five hours before the next paroxysm was expected. This promptly checked the disease.

The above case was very unsatisfactory in determining the value of the remedy. It cannot be counted a failure, nor, indeed, have we any positive evidence it would have produced the effect desired, if the quantity prescribed had been exhibited. I may remark, en passant, that I usually prescribe ten grains of quinia at a single dose, in intermittent fever, five hours before the accession of the paroxysm, combined with an equal quantity of aromatic powder, when there is a want of gastric sensibility, and sometimes with an opiate, or a purgative dose of calomel, when indicated. Given in this dose, a concentrated effect is developed at the proper time, which makes it more potent in arresting the disease, than if distributed over a long interval: a second dose is rarely necessary. It is preferable, also, as a matter of convenience to the patient.
Case 5.—Leonard W., æt. 6 years, prescribed for May 8th, 1852. He contracted intermittent fever last November, and relapses have repeatedly occurred during the winter and the present spring. He has now had two paroxysms, occurring on alternate days. Skin pallid and sallow, but he complains of no particular disorder during the intermission.

R. Chloridi sodii, 3ijss. To be taken in mucilage, before the next paroxysm is expected. The chill returned on the 10th, at the usual time, and the following mixture was then ordered: R. Chloridi sodii 3iv; mucil. ulmi f3ij.; tablespoonful every four hours, commencing fifteen hours before the next paroxysm is expected. This increased quantity of the salt promptly arrested the disease. No nausea or purging; thirst. From the readiness with which the second paroxysm was arrested by four drachms of the salt, it seems not improbable that the first might have been prevented, if as large a quantity had been given. Of this, however, we can only surmise.

Case 6.—A negro woman belonging to Mrs. S., æt. 20. She has been subject to the tertian type of intermittent fever for several months, it having been from time to time suspended by quinia. The present attack (May, 1852) has existed four or five days. Her general health is somewhat impaired. R. Chl. sodii 3ix; mucil. ulmi f3ijj, M. A tablespoonful every three hours, commencing eighteen hours before the next paroxysm is expected. The above dose promptly arrested the disease, nor had there been a relapse up to May, 1853 (one year from the time the salt was prescribed), as I learned from Mrs. S. There was thirst, but no disturbance of the stomach or bowels followed the use of the remedy.

The promptness and permanency of the cure in this case is very remarkable, when we consider the length of time the patient had been subject to the disorder, and the frequent relapses which occurred when it had been suspended by the use of quinia. So well pleased was Mrs. S. with the effect
of the remedy in this case, that she subsequently wrote me from Virginia, where she had gone to visit her daughter, requesting the recipe for the "invaluable prescription," for the benefit of her friends there.

Case 7.—Ellen B., æt. 4 years, prescribed for August 1st., 1852. She had intermittent fever for the first time last summer, and since then the paroxysms have recurred at irregular intervals to the present time. They have been suspended sometimes by quinia, and at others by liq. potass. arsenit. The present attack has existed for several consecutive days. Skin pallid and icterode, and her general health is considerably impaired. R. Chloride sodii ʒiv; mucil. ulmi ʃiji. M. A tablespoonful every three hours, commencing twelve hours before the next paroxysm is expected. The disease was thus at once arrested. Thirst; no disturbance of the chylopoietic viscera.

Case 8.—Mary B., æt. 6, sister of last patient, was prescribed, at the same time, for a like form of the disease. She has also been subject to occasional attacks of intermittent fever for the last twelve months, which have been checked from time to time by the usual remedies. Her aspect and general health is similar to that of the last patient. She was also ordered the same prescription, which had the effect of at once suspending the disease.

Case 9.—Anna B., æt. 9, sister of the last two patients, was prescribed for August 4th. She has also been a victim of intermittent fever for twelve months or more, the paroxysms recurring every few weeks. The present attack, which has existed several days, offers the quotidian variety. Skin pallid and icterode, and her general health is much impaired. R. Chloridi sodii ʒv; mucil. ulmi ʃiiss M. A tablespoonful every third hour, commencing fifteen hours anterior to the time for the next paroxysm. By this treatment, though the disease was not checked, the paroxysm was postponed two hours. The same plan of treatment was directed for the next day, that had been pursued the day previous, which completely arrested the disease.
We may very justly infer from the history of the last three patients, that there was considerable visceral derangement and impairment of the general health. The cases had proved exceedingly rebellious to the ordinary remedies, and even when under the potent influence of sulph. quinia, the paroxysms often persisted for several days seriatim. The strongly marked. I regret that the permanency of the cure antiperiodic effects of the chloride here was certainly very was not reported to me.

Case 10.—A negro girl belonging to Mr. C., æt. 15, prescribed for August 5th. She had intermittent fever last autumn, and the ensuing spring, but has been free from it for several months, until to-day. Her general health is moderately good. As it was uncertain what type the disease would assume, she was ordered chl. sodii .3vj dissolved in mucilage, to be taken in divided doses at suitable intervals, before the hour for the chill to-morrow, anticipating it might prove to be of the quotidian type. The paroxysm returned on the next day, notwithstanding the treatment, and for two consecutive days without any obvious amelioration. Mrs. C. then gave a teaspoonful of corn meal mixed with water, every two hours during the next intermission, after which the disease did not return. There was thirst, but no disturbance of the stomach or bowels from the chloride.

Corn meal, I may remark, is a domestic remedy for ague and fever, often used by this family, and others in that neighborhood, and it is said, in most instances, to check it at once. It would seem, in the above case, to have been efficacious. At any rate, the salt was here considered a failure.

Case 11.—A negro girl belonging to Mr. S., æt. 12, prescribed for August 6th. She has had the tertian form of intermittent fever four or five days. Never had the disease before, although it has prevailed extensively in the family. General health good. As the paroxysm was expected in nine hours from this time, she was ordered chl. sodii, 3i, dissolved in mucilage, every hour, until she takes six doses. On the 7th, the disease returned at the usual time, each dose of
the chloride having been soon followed by emesis. She was then directed 3ss doses at sufficient intervals to allow 3vij to be taken during the next intermission. On the 11th, I learned that the vomiting continued, though less frequently, and that the paroxysms still recurred, but in a milder form. Quinia was then prescribed, and the disease immediately subsided. Thirst, but no nausea or dejections.

In consequence of the emetic effect of the salt in the above case, it cannot be considered a fair test of its anti-periodic virtue, as it is probable a very small portion of the amount taken was retained. The paroxysms, notwithstanding, became milder, but this may have been owing to the influence of the vomiting per se.

Case 12.—A negro girl, æt. 18, the property of Mr. D., prescribed for, August 20th. Her master informs me that she has had the tertian form of intermittent fever for three months, it having been suspended from time to time by quinia, &c., to return again on the 7th, 14th, or 21st days. She has now had two or three paroxysms, occurring on alternate days. Her general health is somewhat impaired, B. Chl. sodii 5ix; mucil. ulmi 5iij. M. A tablespoonful every three hours, commencing eighteen hours before the next paroxysm is expected. Nine drachms of the salt were taken, which immediately arrested the disease; nor did it return until Nov. 1st, as will be seen by referring to Case 20. No nausea or purging; thirst.

Case 13.—Child of Mr. D., æt. two years; prescribed for August 23d, 1552. It has had the quotidian form of intermittent fever six or seven days; never had the disease before. B. Chl. sodii 5iss; mucil. ulmi 5ss. M. A teaspoonful every three hours, commencing twelve hours before the time for the next paroxysm. This patient subsequently had several paroxysms; the chloride, as I learned from its father, having produced no obvious benefit and no disturbing effects. It was not repeated. Sulph. quinia was then prescribed which at once suspended the disease.

The parents of this child were of the lower order of Irish,
who, as is well known to physicians that prescribe much for them, are not in the habit of rigidly following directions in the administration of medicines; and I have reason to suspect that the mixture was not exhibited properly in this instance.

Case 14.—Joseph M., æt. 16; prescribed for August 28th. He contracted intermittent fever last autumn, and since then he has suffered with frequent attacks of the disorder, which have been suspended by the preparations of bark, &c. The present attack, which commenced five days since, offers the tertian form. Skin pallid and icterode; but he feels very well during the intervals of the attacks. R. Chl. sodii 3vi; mucil. ulni fœij. M. A tablespoonful every three hours, commencing twelve hours before the next paroxysm is expected. He had a paroxysm at the usual time, on the day he took the above prescription, but none subsequently, although nothing more was taken to arrest the disease. Free vomiting of bilious matter occurred soon after the cold stage subsided.

Case 15.—Elizabeth M., æt. 12; sister of last patient. She was also prescribed for on the 28th for the same form of intermittent, which had existed with frequent suspensions since the preceding autumn. Skin pallid and sallow; general health impaired. R. Chl. sodii 3vi; mucil. ulni fœij. M. A tablespoonful every three hours, commencing twelve hours before the time for the next paroxysm.

This prescription had no obvious influence in mitigating the disorder, and was not repeated, because the patient lived some distance from me, and did not again apply until she had had four or five additional paroxysms. Quinia was then prescribed at her request, which at once checked the disease. Copious bilious vomiting also occurred in this case soon after the algid stag of the paroxysm, which immediately succeeded the use of the chloride, had subsided.

Case 16.—Son of Mr. J. S., æt. 2½ years; prescribed for Sept. 17th, 1852. He has had the quotidian form of intermittent fever for several days; has never had the disease before. Health always perfectly good anterior to the present
indisposition. The following mixture was ordered: b. Chl. sodii \( \frac{3}{15} \); mucil. ulmi \( \frac{3}{15} \). Two teaspoonfuls every three hours, commencing twelve hours before the period for the return of the paroxysm. The disease was thus at once arrested. No nausea, but some alvine discharges; thirst.

**Case 17.**—A sister of the last patient, æt. 5 years; prescribed for also on the 17th, for the same form of the disease. This too is a recent case, and the patient's general health is pretty good. The paroxysms have now recurrent for five consecutive days. b. Chl. sodii \( \frac{3}{15} \); mucil. ulmi \( \frac{3}{15} \); to be taken in tablespoonful doses every three hours, commencing twelve hours before the next paroxysm is expected. The direction was misunderstood, so that but half the quantity prescribed was administered, which, however, had the effect of promptly arresting the disease. Several dejections; no nausea or vomiting; thirst.

**Case 18.**—Reuben D., farmer, æt. 40; prescribed for Sept. 17th. He contracted intermittent fever about twelve months ago; and since then, it has continued to recur at irregular intervals, although quinia has been freely used, both to arrest the disease and as a prophylactic. Complexion pallid and slightly sallow; but he feels pretty well during the apyrexia. b. Chl. sodii \( \frac{3}{15} \), mucil. ulmi \( \frac{3}{15} \); to be taken in tablespoonful doses every three hours, commencing eighteen hours before the time for the next paroxysm. This treatment failed to arrest the paroxysms, nor were they postponed or rendered milder. Twelve drachms of the chloride were then directed during the next apyrexia, in \( \frac{3}{15} \) doses every three hours, beginning eighteen hours before the disease is expected to recur. This increased quantity of the remedy had the effect of suspending the paroxysms at once, and most likely it would have done so in the first instance. There was no disturbance of the chylopoietic viscera; thirst.

**Case 19.**—Emma H., æt. 5; prescribed for Oct. 30th. She contracted intermittent fever about a year since, which has continued with irregular intervals of exemption to the present time. It has sometimes assumed the tertian and at
Hutchison on Common Salt in Intermittent Fever. [March,
others the quotidian form. She has used for it both quinia and arsenic. The present relapse recurred four days since, and is of the tertian type. Her complexion is pallid and sallow, and there is a feeling of general malaise. R. Chl. sodii 3iv, mucil. ulmi f3iss; half tablespoonful every three hours, commencing eighteen hours before the next paroxysm is expected. This treatment suspended the disease at once. Thirst; no nausea or vomiting; no dejections.

Case 20.—Negro girl, aet. 18, belonging to Mr. D.; prescribed for to-day, (Nov. 1st.) This is the same patient whose case was described in No. 12. She has been free from intermittent fever from that date (Aug. 20th) to the present time, when the disease again appeared in the tertian form. General health improved. Chl. sodium was again prescribed, 5x, during the intermission, at suitable intervals, which immediately suspended the disease.

By referring to Case 12, it will be observed, that there was a much longer immunity from the disorder, after it had been checked by the salt, than had existed at any time since the disease was first contracted, notwithstanding the magnum remedium had been previously repeatedly used to arrest the paroxysms.

Case 21.—The master of the patient (Cases 12 and 20,) called again to-day (Feb. 4th, 1853) for the "salty mixture" which had previously been prescribed for his negro girl with such happy effects, the disease having again returned, after an interval of more than three months. Ten drachms of the chloride were ordered, in divided doses, during the next apyrexia, which checked the paroxysms as promptly as it had formerly done. Nor had there been a relapse up to July 5th, (five months.) No disturbance of the chylopoietic viscera, but thirst as before.

A striking fact will be observed in the history of this patient. The paroxysms were not only at once suspended in every instance, but the disease was kept much longer in a state of temporary extinction, when checked by the chloride, than when quinia had been used for the same purpose. This
may be an accidental circumstance, occurring independently of the greater remedial or prophylactic influence of the chloride in this instance; but to justify such an inference would require pretty clear evidence, when we remember the much more frequent occurrence of the relapses after the use of quinia.

Case 22.—Miss Matilda G., æt. 20; prescribed for April 27th, 1853. She contracted intermittent fever about twelve months ago; since then it has continued to recur at irregular intervals, sometimes assuming one form and at others another. She has used arsenic, quinia, &c., which produced a temporary suspension of the disease. The recent paroxysms of fever have been accompanied by frontal neuralgia, which begins and subsides with them; and sometimes the neuralgia occurs alone, apparently as a substitute for the intermittent fever. They have occurred simultaneously for the last four consecutive days. Her skin is pallid and sallow, and she complains of general debility and malaise. The following mixture was prescribed to-day: Chl. sodii 5ix; mucil. ulni fʒ iij. M. To be taken in tablespoonful doses every second hour, commencing twelve hours before the time for the next paroxysm. From some cause or other she omitted one dose, so that but viiss5 of the salt were taken.

On the 28th, the paroxysm returned in a much milder form, having been postponed three hours: repeat same prescription. On the 29th, the disease recurred in a more severe form than yesterday, but was again postponed (one hour). The suffering arising from the combined influence of the two disorders was so great, that the patient was unwilling again to rely on the chloride to arrest the succeeding paroxysm. Twenty grs. of chinoidine were accordingly prescribed, which at once arrested the disease. The salt produced thirst, but no disturbing effects.

Notwithstanding the above case was one of long standing, the general health considerably impaired, and the complication of neuralgia existing, the remedy exercised so favorable an influence, as to induce me to believe it would have
been efficient in suspending the disease, if it had been used perseveringly.

Recapitulation.—Age.—9 were under ten years of age, 6 between twelve and twenty, 4 between twenty and forty, and 1 at forty.

Sex.—7 were males, 12 females, and 1, sex not known.

Race.—16 were white, and 4 black.

Proportion of Cases cured, benefited, &c.—Of the 22 cases reported, in 12, or 54.5 per cent., viz., Nos. 1, 3, 6, 7, 8, 12, 14, 16, 17, 19, 20, 21, the paroxysms were immediately suspended. Nos. 12, 20, 21, occurred in the same patient.

In 3 of the cases, or 13.6 per cent., viz., 5, 9, 18, one paroxysm only occurred after the remedy was commenced. It was completely successful, therefore, in 15 cases, 68.2 per cent. In cases 2, 11, 22, the paroxysms were postponed or moderated. No. 11, it will be remembered, vomited after each dose, so that the salt was not returned in sufficient quantity to have produced any marked antiperiodic effect. For No. 2, 4, 13, and 15, the remedy was not prescribed a second time, the patients objecting; an increased dose might have arrested the disease. Case 4 did not take all that was prescribed. In one case only (No. 10), after fair trial, was there no obvious good effect from the remedy.

Permanency of the Cures.—In three of the patients only, for reasons which have been elsewhere stated, was I enabled to ascertain with any degree of accuracy the permanency of the cures. Cases 12, 20, 21, which occurred in the same patient, had longer intervals of immunity from the disease each time when checked by the salt, than when quinia had effected the same purpose; and when last heard from, five months had elapsed without a return of the malady. It was said of No. 3, that the disorder did not return so soon as it had previously done when checked by quinia; and of No. 6, it will be remembered, that the patient had not relapsed twelve months after the paroxysms had been checked by nine drachms of the salt, although they had previously returned quite frequently after the use of quinia. So far as the evidence goes,
therefore, (which, however, is too limited for a general conclusion,) it indicates the superiority of the chloride of sodium over the usual remedies in the permanency of the cures effected by it. And here we should not lose sight of the favorable influence that may have been exerted by the quinia before the salt was prescribed.

The difficulty of effecting positive cures of intermittent fever by any remedy or course of treatment, however rigidly pursued, is very great, and sometimes impossible, even though prophylactics be continually used, as long as the individual remains exposed to the cause which developed it. The writer can here speak emphatically, because he has, on two different occasions, been compelled to "fly his country" in order to get rid of this harassing pest. In a number of cases, and among others now distinctly remembered are No. 6 and 7 detailed above, the paroxysms would recur every two or three weeks, notwithstanding quinia with Vallet's mass and other remedies to relieve the disordered viscera, including counter-irritation over them, were diligently plied.

**Duration of the Disease, and general Health of the Patients.**—In a large proportion of the patients the disease had existed a very long time. Of most of them it is noted, that they had been its victims from six to twelve months. By this it is not to be understood that the disorder then commenced de novo, but that it had recurred more regularly and with shorter intervals during that period than previously; for many of them had been its victims for a much longer time, and indeed a few could scarcely remember any period of their lives when they were not from time to time subject to the disease. In four cases (11, 13, 16, 17), the patients had never had the disorder before; and in most of them (all but the very recent ones), there was of course more or less impairment of the general health, with visceral obstructions.

**Modus Operandi.**—We have seen that chloride of sodium does cure intermittent fever, and now the interesting question arises, What is its modus operandi? Upon this subject there is a variety of sentiment. It is the opinion of M. Scelle Mont-
dezert "that paroxysmal fevers arise from the presence of fibrin in the venous blood," and that the salts of quinia, and also *chloride of sodium,* "owe their efficacy as antiperiodics to the fact that they dissolve the fibrin abnormally present, thus restoring the venous blood to its normal conditions." (See Dr. Lattimore's paper.) I suppose he means *excess* of fibrin, or of colorless corpuscles (which, as Mr. Paget remarks, cannot, by any mode of analysis yet invented, be separated from the fibrin of mammalian blood),* or of both, constituting the disease which Prof. Bennet, of Edinburgh, calls, very significantly, *leucocythemia,* and which he has recently described as occurring in cachectic states of the system, attended with organic disease of the lymphatic glandular system, and more particularly of the spleen, which he includes in that class. Not having seen the memoir of Montdezert on this subject, which was presented to the French Academy of Medicine, I am unable to say how his conclusions were arrived at; whether they are the result of a carefully conducted analysis of the blood, before and after using the remedy, or merely a conjecture. It would be necessary, in order that his views be generally adopted, that they should be based on very satisfactory evidence. The enlightened state of medical science at the present day, and the rigorous exactness to which it is aspiring, demands that all its facts should rest on the most indubitable evidence of their truth.

It is believed by M. Piorry (who was one of the committee appointed by the Academy to report upon the memoir of M. Scelle Montdezert), that enlargement of the spleen is the cause of all paroxysmal fevers, and that chloride of sodium cures intermittent fever, like the sulphate of quinia, by acting on the spleen and diminishing its volume, and this sometimes in less than a minute. We are prepared to admit, that the spleen, when of abnormal size, *tends* to keep up the disease when once contracted, and that it is diminished in volume by sulphate of quinia and chloride of sodium (but not pari

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passu) with the fever; for we feel quite sure that the fever is often cured, whilst the spleen remains moderately enlarged. And the fact which he announces, that "whenever the spleen has a greater length (measuring in a line from the middle of the axilla to the anterior superior spinous process of the ilium) than from 31 to 33 lines, intermittent fever exists," is certainly not true in the malarious districts of this country, if it is otherwise in the field of Piorry's observation. If this were a fact, there are very few of the denizens of our miasmatic regions who would not be doomed victims of the disease; because, as has been already stated, enlargement of the spleen (often to the extent of 31 or 33 lines in its longitudinal diameter) exists almost universally in such localities, in persons who have for some time resided there, even though they may never have had intermittent fever, and a fortiori in those who have had the disease, but have for a long time enjoyed an absolute immunity from it.

A theory of its mode of acting, which, it occurs to the writer, is more consistent with reason and established truth, is, that chloride of sodium (being an antidote to the poison which produces intermittent fever, in certain doses) enters the circulation by means of absorption, and neutralizes the miasmatic effluvia which probably operate on the system through this channel; or, in other words, that it develops a condition of the system which is inconsistent with the existence of malarial disease.

We know that bark is an antidote to the miasmatic poison, because, in most instances, its constant use will keep off such diseases from individuals who have been subject to them, and that they return when the remedy is omitted, if the individual continues exposed to the cause which produces them. We can have no better illustration than this of the sequence of cause and effect. Our experience with chloride of sodium in paroxysmal fevers has not yet been sufficient to determine accurately its value, in preventing a recurrence of the attacks when constantly used; but there is every reason to believe
it will prove not much inferior to the preparations of bark, and for the same reason.

Common salt may also act beneficially in intermittent fever by increasing the quantity of red globules in the blood, thereby removing the anemia which is one of the most constant concomitants of the disease. According to the experiments of M. Plouviez, made upon himself at intervals during twenty-five months, a saline regimen has the effect of increasing the weight and strength of the body. He began with a teaspoonful daily, which he increased to a tablespoonful, continuing to take this dose on several occasions, for a period of three or four months. The regimen appeared to produce plethora. The blood, analyzed while under the full effects of the salt, was found to contain more of the globules and salts, but less of the albumen and water.—*United States Dispensatory.*

**Dose and Mode of Administration.**—The quantity given varied from eight to twelve drachms during the apyrexia. At first, eight drachms were given, but the amount was subsequently increased to nine, ten, and even twelve drachms in one instance, with obvious benefit. Children required somewhat larger proportional doses than adults.

Mucilage of elm was selected as the vehicle, on account of its convenience, and because it sufficiently disguised the remedy, which was deemed a matter of importance; for it would have lost much of its efficacy, or have been repudiated altogether, had the patients known they were taking simply common salt; as it is well known to physicians that the influence of the mind upon this disease is very considerable. The following was the formula used:

\[
\begin{align*}
\text{R. Chloridi sodii } & \text{ iiiij.} \\
\text{Ulmi pulv. } & \text{ iiiij.} \\
\text{Aq. bullientis } & \text{ f} \text{viiii.}
\end{align*}
\]

Infuse two hours and strain. This forms a saturated solution. Dose, a tablespoonful every two, three, or four hours, so that five or six doses may be taken during the apyrexia. It was not deemed necessary to precede its employment by evacuants, because the patients had recently used such remedies during their former attacks; and moreover, I preferred to
use the salt alone, because its real value could thus be better determined. When it is necessary to precede the use of the salt as an antiperiodic, by emetics or cathartics, perhaps there is nothing better for the purpose, in ordinary cases, than the same remedy administered in emetic doses, which will usually produce also moderate catharsis.

*Disturbing Effects.*—In most of the cases the remedy was well tolerated by the stomach, nausea or vomiting having occurred in but four (3, 11, 14, 15). Four cases also (2, 3, 15, 17,) had moderate alvine evacuations, unattended with pain. There was considerable thirst in every case; no other unpleasant effects. When given in the above manner (dissolving it in as small a quantity of water as is possible), it is less likely to disturb the stomach, than the same or even a less amount would in a larger proportion of the solvent. The taste was objected to by some, whilst others disliked it much less than quinia.

*Conclusions.*—From our experience of the antiperiodic virtues of chloride of sodium as detailed above, we think the following conclusions may be legitimately deduced:

I. Although inferior to cinchona and its preparations, it yet forms a *very good substitute* for them in intermittent fever, having failed, as we have elsewhere seen, to produce a speedy suspension of the paroxysms in 31·8 per cent. of the cases only: in a majority of cases therefore it may be substituted for quinia.

II. It may be used instead of, and indeed *preferably* to quinia, first, in cases not unfrequently met with, where the latter remedy is forbidden by the very unpleasant nervous and cerebral symptoms it produces (delirium, tinnitus aurium, cephalalgia, faintness, &c.), an example of which I have recently seen in the New-York Hospital, when sulph. copper was substituted. Secondly, where quinia, from frequent repetition, has lost its effect in ague. Thirdly, it is commended on the *score of economy*, which is a consideration of importance to the poor especially, who are now in a measure debarred from the use of quinia by its high price. And
fourthly, it is always at hand, whilst quinia sometimes cannot be obtained.

III. It has been found to be more energetic in curing ague than any of the vegetable or mineral tonics commonly used for that purpose, excepting bark, and should therefore be preferred to arsenic, which has been ranked by M. Andral, Prof. Wood, and indeed most other authorities, next in value to quinia. And moreover, I think arsenic should never be used until after quinia and common salt have failed to do good, on account of its unpleasant and sometimes disastrous consequences to the general system and stomach, and the increased facilities it affords for using the remedy as a toxicological agent.

Green Ave., January, 1854.

Art. II.—Case of Perforation of the Rectum, followed by an Extensive Fæcal Abscess of the Nates. With Illustrations. By Lewis A. Sayre, M. D., Surgeon to Bellevue Hospital, etc., etc.

On Saturday, 23d July, 1853, I was called about 11 p.m. to see the Rev. Dr. B., who was said to be dying with what was called "Neuralgia of the Rectum." He had had a severe rigor about 4 o'clock that afternoon, which lasted about three hours, and left him in a state of great prostration.

I found him bolstered up in bed between two persons, who were fanning him, chafing his temples, and endeavoring to make him swallow some stimulants; his surface was cold and clammy, bathed in perspiration—mouth partially open—lips almost bloodless—pulse 140, very feeble and intermittent—constant hiccup, and complaining of intense pain in the rectum and nates, with an inability to pass his urine. Upon placing my hand upon his nates, I distinctly felt crepitation, and heard gurgling of air, deep underneath the glutei muscles, which were hard, firm to the touch, and distended in all directions to such a degree as to make his nates much too large to correspond with his legs, arms,
and other parts of his frame. On passing my finger into the rectum, I distinctly felt the edges of an old, hard, and well-defined ulcer, situated just below the upper edge of the superior sphincter, and in the posterior aspect of the intestine. I immediately pronounced it a case of internal fistula, or a faecal abscess, which had been caused by the escape of faeces through the perforation of the bowel. But I found it impossible to convince him of the correctness of my diagnosis, as he had been most positively assured by his homoeopathic attendant (who had been in attendance previous to my being called, and who had seen him that very day) that it was a clear case of pure "Neuralgia of the Rectum," or "Rheumatic Gout of the Rectum," and they had thoroughly succeeded in convincing him of the correctness of that diagnosis.

By continued gentle pressure upon the two nates, the air was expelled into the rectum, and the pressure being taken off from the bladder, he was enabled to pass his water, and was much relieved of his intense suffering. As he had had no sleep for many days, and was much exhausted, I administered an anodyne with stimulants, and ordered him some broth, and covered the nates with an anodyne poultice.

24th.—I saw him early in the morning, and found that he had passed a comfortable night, and had had more sleep than for two weeks past; but was still unwilling to admit the correctness of my diagnosis. I therefore sent for Professor Parker, who came immediately and examined him with his finger in the rectum, and perfectly confirmed my previously expressed opinion; but finding him so extremely reduced that it would be dangerous to hazard his life by so extensive an operation as it would require to lay open the immense abscess which had been formed, he therefore advised that I should endeavor to sustain his system awhile, allay the pain by narcotics, remove the inflammation and hardness of the nates by the constant application of poultices, and express the air whenever the cavern became filled with gas, and to
postpone the operation until his system was better able to rally from the shock which it would necessarily produce.

25th.—Found him suffering great pain in the nates, and very restless—had had a free passage from the bowels of softened faeces about six hours previous, without much pain at the time of the passage, but in from two to three hours after the operation the pain became intense, and the fulness and distension of the nates much more marked; this he stated had been the case after every passage for some months, the pain always being very much worse some hours after the operation than at the time of the passage. I accounted for this phenomenon from the fact that at each passage a small portion of faeces would escape through the perforation, and, in a few hours, becoming decomposed, would form a large amount of gas, and thus, by its distension, produce the pain. By gentle pressure upon the nates the gas could be easily expelled into the rectum with immediate relief from the pain, after which he would be comparatively easy until the following day, when, after another passage, the same routine would be passed through. He continued in the same condition, with but slight change, for eight days, when the excessively hot weather caused such rapid decomposition that I was summoned in haste to see him, and found him cold, almost pulseless, constant hic-cough, great tympanitis, and retention of urine. On passing the catheter until I reached an inch or more beyond the ordinary length, the water began slowly to flow out of it and to drop immediately from the extremity of the catheter, without describing an arc, pressure being required over the bladder in order to empty it. The bladder contained only about half a pint of urine, and the abdomen was as much distended as before the urine was drawn, and much more resonant upon percussion. Upon examining his nates I found the whole glutei muscles of either side distended to their utmost, and just between the tuber ischii and trochant-er major of the left side, about six inches from the anus, finding a more prominent point than at any other place, I
plunged an exploring needle into it, and was compelled to pass two inches and a quarter before the point became free; when I withdrew the instrument, it was instantly followed by a shrill, whistling noise, and the most offensive odor that I ever experienced. Another opening was made in the opposite nates, through which the gas escaped freely; but, as the great tension had been removed, it was not accompanied with the same whistling sound which attended the first puncture. As soon as the gas had escaped, his breathing became easy, his abdomen flaccid, and all his symptoms of immediate suffocation subsided. Finding from the odor that the cavern contained other material than gas, I made a free incision into the first puncture, and to my utter amazement obtained, by measurement, over one quart of faces and matter, in addition to what was necessarily lost in the tapping. After the incisions, an injection, passed in at one side, flowed freely out at the opposite opening. A probe passed readily from each of these openings into the rectum and swept over a large surface under the glutei muscles, but his condition was entirely unfit to risk the incision through the muscles into the rectum.

He continued rapidly to improve after these free incisions were made, having his bowels regularly moved every day without assistance, and at each passage a free discharge of faces from each of the openings; after which it was injected freely to keep the cavern clean, and he was fed on the most generous diet with stimulants.

In ten days after the abscess had been punctured, his general health had so much improved, that upon consultation with Dr. Parker we concluded that it would be safe to make the incisions into his rectum, but on account of his great debility we were afraid to administer any anaesthetic, and were compelled to rely chiefly upon brandy to enable him to sustain the operation.

On the 13th August, assisted by Drs. Parker, Thebaud, and Mr. Bartholf, my student, I proceeded to make the necessary incisions.
The patient was laid upon his side and face, with his limbs slightly flexed, and nates exposed to a good light, when a probe was passed, from the right external opening four inches from the anus, three inches and a half before it reached the ulcer in the intestine. With a long probe-pointed bistoury pushed down upon the finger in the rectum, a single cut sufficed to lay the parts freely open. The parts divided were firm, almost cartilaginous, from long-continued inflammation. There was not much hemorrhage, but still the patient sank considerably and required very free use of brandy. After some few minutes, however, he rallied, the pulse became stronger, and it was thought by those present that he would be able to bear the incision upon the opposite side. Not having a probe-pointed bistoury of sufficient length to reach from the external opening into the rectum, which was nearly six inches, I took a long straight-pointed knife, and passed it down upon my finger into the rectum, and made a rapid incision through all that portion of the gluteus maximus muscle included between it and the anus. The hemorrhage was considerable, but readily checked by ice and pressure, only one ligature being required.

The patient bore the operation with the most heroic fortitude, never uttering a groan or complaint, and at its completion expressed great delight that it was over, and immediately rolled upon his back, and swooned. His mouth fell open, the surface became pale, the pulse ceased at the wrist and elbow, and the heart was scarcely audible, respiration ceased entirely, and in fact he was to all appearances dead. Immediate resort was had to artificial stimuli, as mustard and hot water externally, and brandy and ammonia was attempted to be administered internally; but finding him unable to swallow, artificial respiration was immediately resorted to, and it became necessary to continue it for some minutes before respiration took place, after which brandy and ammonia were administered, ad libitum, until complete reaction ensued, which occupied nearly an hour and a half from the operation, during which time he drank over a pint of brandy, and nearly a half ounce of aqua ammoniae.
The cavern, which was considerably larger than the head of a foetus at the sixth month, and lined with black, ragged, fetid sloughs, was then filled with lint, saturated in Le Doyen's disinfecting fluid, and covered with ice to prevent hemorrhage. I administered 15 drops of Magendie's solution, and left directions for him to take brandy and beef-soup every hour. In the evening I found him tolerably comfortable, pulse 110, but quite firm and regular; had had three hours of refreshing sleep since the operation, but was unable to evacuate his bladder, which was emptied by the introduction of the catheter, which operation was repeated about 12 o'clock at night.

August 17, 6 A.M.—Introduced the catheter and evacuated the bladder, which had not yet recovered its contractile power, and required pressure over the abdomen in order to make the urine flow. In all other respects as comfortable as could be expected.

1 P.M.—After again drawing off his water by the introduction of the catheter, with the assistance of Dr. Thebaud and Mr. Bartholf, I removed the lint from the wound, which was excessively offensive, and made a more careful examination of the cavern than had been done the day before.

The coccyx had sloughed from the sacrum, and two of the coccygeal bones were found loose in the wound; the fingers could readily pass under the swollen integuments on the posterior aspect of the sacrum, nearly as high up as its junction with the lumbar vertebrae. In order to relieve the tension over the sacrum, a third incision was deemed necessary, and made between the two others, nearly parallel to the sacrum, and about two inches in extent; the sacrum was not denuded of its periosteum, except at its coccygeal extremity, which was readily felt to be exposed, by the probe or fingernail. The sacro-ischiatic ligaments of the left side were exposed and partially sloughed, hanging with ragged shreds. The fat in the recto-ischial fossae of either side had been entirely destroyed, leaving a cavern which would readily receive the two fists of an ordinary-sized adult; the tuber ischii of
either side were exposed, but not denuded of their periosteum; just external to the tuber ischiī of the left side, deep under the muscles, a sinus was discovered running in a curved direction 6-3-4 inches to a point just back of the scrotum, and, by elevating the limb, gave exit to about a wineglass of pure healthy pus. The upper border of the ulcer, which had been the commencing-point of all the difficulty, was thick, hard, and white; the lower and back portions between the incisions had sloughed away; the whole cavern was of a greenish black color, and excessively fetid; the walls of the abscess were from an inch to two inches in thickness.

After washing out the intestine by an injection, the abscess was carefully injected with Labarraque's solution, and dressed with lint saturated with Le Doyen's disinfecting fluid and tinct. myrrh, and covered with a yeast poultice. The dressings were changed and the catheter introduced every six hours for the succeeding four days, after which he was enabled to evacuate his bladder without assistance.*

The discharge was very copious and offensive, and at each dressing a large amount of sloughing shreds were washed off by the injection. He was fed upon the most generous diet, and brandy and quinine were administered liberally. In about ten days from the operation, the wound had assumed a healthy aspect, and granulations were abundant, particularly from the deepest part of the abscess, around the edges of the ulcer, where the growth was so rapid as almost to assume a fungous appearance, and for some time I hesitated about the propriety of its removal, fearing that it might be malignant, as the patient had lost two sisters by cancerous disease.

But, by the advice of Dr. Dupierris, a distinguished and accomplished surgeon of Havana, I was induced to let it remain, as he stated that he believed, in so deep and large an

* From the 11th of August to the 15th the thermometer ranged unusually high, and on Sunday the 14th over 100 persons died from the effects of heat in this city and Brooklyn.
abscess, the central part would grow up more rapidly than the rest, and act as a sort of pillar or central brace to which the sides could be afterwards attached by paring the edges and bringing them together. This was a new idea to me, but I am frank to confess, from the result in this case, it seems to be practicable.

The above drawing, by Mr. Rennie, was made four weeks after the operation, when the wound was reduced more than one-third by the abundant granulations which were forming in it, and, with the exception of the deep and narrow sinus upon the left side, which extended down as far as the scrotum, everything was healthy; this was injected with iodine without any benefit, and I then wished to draw a lead seton through it, but was unable, as the probe came down against the ramus of the ischium and pubis. I therefore covered the probe about six inches, by melting upon it nitrate of silver, and then passed it into the sinus, and left
it until the caustic was dissolved. This fortunately excited a healthy inflammation and closed the sinus, and on the 1st of October, with the assistance of Dr. Thebaud, I pared off the edges of the wounds, and also the fungous central tumor of its mucous covering, and brought the edges together by two straight ordinary darning needles and a twisted suture, one needle on either side, and dressed with adhesive straps and pressure.

On one side union took place by first intention, of the whole wound, and on the other to a considerable extent; but finding it too close to admit of free flexion of the body, and also obstructing the passage from his bowels, I was compelled to destroy the adhesions on one side, and allow it to granulate from the bottom with a much wider cicatrix. A large bougie was introduced into the rectum daily, and retained some minutes in order to prevent too much closure of its orifice, and the wound dressed with lint spread with Turner's cerate.

On the 1st of November the parts had entirely healed, leaving him perfect control of his anus by some sort of artificial sphincter, and Dr. B. left for the country for recreation, his general health being much better than for some years previous. An issue which I had established in his arm about six weeks previous was discharging freely, and I have given him directions to continue with it through life. Having had asthma and slight cough for some years, together with repeated hemorrhages from the bowels, and this being the third time he had been operated upon for fistula within ten years, and as nature seemed determined to have some drain, I therefore placed it in his arm.

The accompanying drawing represents the parts as healed.

As I intend making a few remarks on this truly formidable case, which, so far as I am able to ascertain, is by far the most extensive case of faecal abscess on record, it seems necessary that I should give some history of its formation, and also the previous condition of the patient.

Dr. B. is a man of large muscular frame, and is of a nervo-
sanguineous temperament. He has been afflicted with severe attacks of asthma and some slight cough since the age of puberty, with almost weekly hemorrhages from the bowels. For many years he was a close student, and lived a very sedentary life, which induced severe and obstinate constipation, which eventually produced hemorrhoids, and finally a fistula, which continued open and discharging for some years, during which time his cough ceased and his attacks of asthma were not so frequent or severe.

In 1847 he was operated upon by a surgeon of this city, and the fistula partially healed; he still suffered great pain at stool, and there was constantly a discharge of pus and blood per anum.

I saw him first in September, 1850, and found a small fistulous opening in the left side of the anus, running close by the side of the intestine, and opening into it just above the superior sphincter. I laid it freely open, dividing the sphincter, cauterized the whole extent of the wound with
nitrate of silver, and succeeded in causing firm granulations and a cicatrix, from its deepest points of opening in the intestine, in about three weeks. Soon after this, while travelling in the northern part of this State, he had a very severe attack of asthma, almost threatening suffocation, which was followed by a cough, which has been more or less persistent until the spring of 1852, when he began to suffer from the common epidemic of carbuncles and furuncles which has been so prevalent in this region for the past two or three years. He continued suffering from these during the whole season, having in the space of six months no less than 47 on various parts of his body. During all this time his cough and asthma were very much relieved, the hemorrhage from his bowels had ceased entirely, and his general health better than it had been for years previous, which he considered a very good compromise. As the suppurating ulcers on the surface of the body began to heal, his asthma and cough returned more frequently, and his bowels became more irregular and constipated.

In March, 1853, whilst making great effort to pass hardened faeces, he had slight discharge of blood, followed by great pain and uneasiness in the rectum, which continued with more or less severity until the operation. For one or two months after this, the pain would be most intense at the time of the passage, but since that time the pain would come on with greater severity, with a sense of fulness and tension of the parts some three or four hours after the operation.

One or two gentlemen of great eminence in this city examined him at this time with the speculum, but detected nothing except a very firm contraction of the sphincter, and were disposed to regard it as a case of stricture—the ulcer not being detected, as it was situated below the superior border of the sphincter, instead of above it, which is by far the most common position. Dr. S. P. White, however, who examined it in May with his finger, stated that he felt what seemed to him to be the edges of an ulcer, but having no speculum he could not be positive; and it is highly probable
that the firm contraction of the sphincter was dependent upon the presence of this ulcer in the fibres of the muscle, acting as a source of irritation. From this time he fell into the hands of the Homœopathists, and the result has been detailed above.

Observations.—In the first place, we notice in this case an affection of the lungs of many years’ standing, and a varicose condition of the hemorrhoidal veins, relieved by the establishment of a fistula, and by abscesses in various parts of the body, and aggravated by the arrest of these discharges; thus proving the necessity of establishing an issue in some part of the body, when we wish to heal a fistula in a constitution complicated with pulmonary difficulty or a hemorrhagic tendency.

2d. The position of the ulcer. It may be in the fibres of the sphincter and difficult to detect, and not invariably above the muscles, which is the common position.

3d. That after an abscess has been formed, the pain is much more severe some hours after the passage from the bowels, when gas has been formed from decomposition of the escaped faeces, than at the time of the operation.

4th. The immense collection of feces and pus, with extensive destruction of the parts, and depth of the sinuses, without making any attempt to ulcerate towards the external world, which is the general tendency of all foreign bodies.

5th. The singular fact that the granulations from the bottom of the abscess were so much more abundant than at any other place, as to assume a fungous excrescence of two inches in length, and nearly two inches in circumference at its base, and eventually became attached to the surrounding walls and converted into healthy tissue.

6th. The wonderful recuperative powers of nature, that were enabled to repair such extensive destruction of parts, and the replacing of so useful and perfect an external sphincter.
During the last year, I have had under charge the male infant of a lady of this city, with a swelling of one of his hands, which presented peculiarities not usually met with. The history of the case is as follows:

The child was born in the month of December, 1852, in every respect free from disease. Six weeks after birth, a swelling commenced on the dorsum of the right hand, and, gradually increasing for a period of six months, finally attained to three times the size of its natural dimensions, and then ceased. The tumefaction, extending from the second joint of fingers to about an inch and a half above the wrist, was convex in shape, and almost of the hardness of marble. The temperature was much below that of the surface of every other part of the body, and was generally whiter than the surrounding skin, although at times it would assume a dark red or purplish hue. The infant experienced no pain from it, using the hand as freely as the other; no impression could be made upon it by pressure, unless considerable force was used. The health of the child was unimpaired; every organ performed normally its functions, and there was no interruption whatever to his natural growth and thriving. He would occasionally have attacks of colic, which did not always immediately yield to treatment, yet they did not differ materially from the same complaint in other children. His sleep was natural, appetite good, and he was possessed of the ordinary intelligence of children of that age. Vaccination passed through its progress satisfactorily, and for the last two or three months dentition has gone on without affecting the system unpleasantly, showing that no constitutional cause existed.

The disease corresponds with what authors have described under the name of Sclerema,—induration of the cellular tissue, or skin-bound disease. The treatment which I
adopted was of no avail. It consisted of embrocactions, unguents composed of iodine and mercury, vapor douches and the like.

*Remarks.*—In examining the different treatises on diseases of children, very little is found explaining in a satisfactory manner the true nature of this affection, or from which we can derive instruction of any great practical value. Its character, pathology, and treatment, are not understood, and there appears to be considerable diversity of opinion among writers in regard to it. The following is a *resumé* of the writings of medical men who have given this disease particular investigation, several of whom have had frequent opportunities of watching its progress in the hospitals for children in Paris.

The term "sclerema" has been employed to designate this disease; and by it, no doubt, is understood hardness or induration. Its locality is the areolar tissue, and may be general or confined to particular regions, as the face, neck or extremities. Infants are the usual subjects of it, although cases have occurred in children and adults.

*Symptoms.*—The disease usually shows itself from two to twelve days after birth, and is characterized by an engorgement, swelling, coldness, and rigidity of the part affected, resisting the impression of the fingers. Sometimes it manifests itself at the commencement of fever, or it may be preceded by it two or three days. The skin is smooth and shining, and appears stretched firmly over and bound down to the subjacent parts, and conveys to the touch the sensation of a frozen dead body. The color varies; it may be red, purple, a dirty-white, or yellow, like wax exposed to the air. The system, when the disease is extensive, is more or less affected. Swallowing becomes difficult, resulting frequently in trismus.

The infant does not nurse, utters constantly feeble and plaintive cries, and respiration becomes labored. This may continue some time, usually four or five days, and finally ends in death. M. Bouchut, formerly Interne of the Hô-

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pital Necker, Paris, says: "Many children with this malady retain for a long time the power of motion, using freely their arms and legs; with others there is a stiffness of the whole body. When seated on the face there is usually great difficulty in opening the mouth, or moving the lips. The cutaneous sensibility is preserved throughout the whole body. They appear at times to suffer greatly, crying in a sharp, shrill, yet feeble tone, the peculiarity of which has attracted the attention of medical men, and has been compared by some to the crying of young mice. Cough does not always appear at the commencement of the disease, but it shows itself after a while, and accompanies it to its close. Respiration is ordinarily feeble and incomplete; in some cases, however, it is very rapid, and presents the characters of the hurried respiration of pneumonia.

Diagnosis.—The disease may be distinguished from ordinary œdema of adipose tissue by its hardness, and not yielding to pressure, by the suddenness of the attack, and the coldness of the part affected.

Elephantiasis, although attended with œdema and hardness, and occurring on the face and extremities, is generally developed in small tumors, varying in size, and is unlike sclerema, inasmuch as the skin in the former is uneven and wrinkled, while the latter is smooth and even.

According to some authors, it may be confounded with the adipose induration which occurs sometimes on the approach of death; but the history of the case will generally prevent confusion on this point.

It is often complicated with other affections, and the most frequent is icterus. It has also been associated with pulmonary congestion, lobular pneumonia, intestinal irritation, colic, and disease of the heart.

Causes.—M. Paletta, of Italy, in a paper read before the Institute of Milan, attributed the cause (in newborn infants) to incomplete respiration, from an insufficient development of caloric, producing torpor and coldness of the extremities, followed by induration of the cellular tissue.
He noticed they occurred more frequently during the spring and fall.* Other authors agree with him in attributing the cause to the same influence, opining that "the cold, interrupting the insensible perspiration, retards the circulation, and condenses the mucous and serous fluids in the tissues."

M. Billard, in his work, exhibits statistics to prove that cases are more often seen during the winter. M. Pastorelli, of the Foundling's, near Trento, Italy, observed it to be particularly prevalent in May and August.† Underwood, Denmard, Audrey, and Dugos, ascribed it to cold. M. Breschet, to an open state of the foramen ovale; and M. Denis, to an inflammatory affection of the cellular membrane. M. Barron, of the Hopital des Enfants trouvés, considers it a simple infiltration of the cellular tissue, owing to derangement of either heart, lungs, or large vessels. Others, to an imperfectly developed state of the child, to a cachectic condition of the mother, or to premature birth.

**Prognosis** is only favorable when the disease is local, and unaccompanied with any organic affection.

**Pathology.**—It will be perceived that great difference of opinion exists with regard to this branch of the subject. There are some who regard induration of the cellular tissue as the original and primary disease; others, on the contrary, attribute it solely to some internal lesion. Post-mortem examinations have discovered a yellowish or greenish sero-albuminous fluid in the cells of the areolar tissue, and the hardness has been ascribed to the coagulable quality of this fluid, as well as the condensation of the fat, the result of mechanical pressure. Many regard sclerema as an affection of the skin; others think it answers in all respects to the characters of simple oedema. The skin and areolar tissue have been found quite dry, no fluid flowing from it when cut, but infiltrated with an exudation similar to the congealed fat of animals. The lesions which appear the most important are

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* Archives Générales de Médecine. Vol. v.
† Dublin Quarterly Journal, Feb., 1853.
those which have been noticed in the internal organs, consisting of sanguineous engorgements of the lungs, brain, and liver, and a stasis of the blood throughout the whole venous system.

The methods of treatment suggested by writers do not vary materially. So much uncertainty still exists with regard to the true nature of the disease, so little understood is its pathology, that no rational plan has been proposed.

The indications are, 1st, to remove all internal congestion by suitable evacuants, followed by proper stimulation. 2d, to endeavor to soften the indurated parts, and bring back heat; this may be accomplished by exciting the skin with irritating frictions, thus restoring the capillary circulation, and promoting the absorption of the effused fluid. Leeches, blistering, unguents of iodine and mercury, have been employed, fomentations of emollient and tonic decoctions, such as bran and cinchona, have been advised, and in some instances have been of service. Scarifications, electricity, and bandaging, have their advocates, and are useful; but, on the whole, treatment in ordinary cases seems of no avail.

Art. IV.—A Case of Congenital Malformation, (with Illustrations.)
By John G. Sewall, M. D., Physician to the Northwestern Dispensary, N. Y.

Mrs. McD., born in Ireland, though a resident of the United States from infancy, 32 years of age, married at 19, always by report in good health, is the mother of seven children. All, previous to the subject of this paper, were large, healthy, and easily born. While last pregnant she reports herself unusually well. Labor, at full term, was tedious two days and nights by report, yet natural. The placenta was very small, delivered naturally. Says she never was off her knees since the quickening, and to this circumstance attributes the malformation. Was attended in her confinement, August 2d, by a female. Infant survived twenty minutes.
Post-mortem, Aug. 3d.—External conformation of head, trunk (as far as umbilicus), and upper extremities natural. From below umbilicus, there is a sudden narrowing of the abdomen, as if from a pressing together of the ossa innominata, presenting a sharp-feeling, curved projection at their pubic portion. Instead of the lower extremities, there is found, projecting from a point a little to the right of the median line, a stump four inches in length, curving upwards, like the arc of a bow, and inclining to the left. Its right outline is continuous with the curve of the right side of the body. Its left forms an obtuse angle with the left side of the body. Its extremity, not bifurcated, but pointed, presents no scar. On its upper side, three-fourths of an inch from its extremity, there is a small fistulous opening terminating in a cul de sac. From the upper surface of this stump, at its junction with the trunk, there depends the scrotum of natural size, upon the upper surface of which, near its centre, is a small pocket, whose opening, directed upwards from the surface, upon careful examination, is found to conceal within its fold what appears to be a miniature glans penis. This glans is about the size of a No. 3 shot, of a purplish color, furnished with a corona and a frænum, and is sheathed within the pocket like the natural glans within the prepuce. There is no trace of a meatus. This glans further connects with what seems to be a rounded cord simulating the corpora cavernosa. There is no trace whatever of an anus. About three inches from the root of the scrotum, at the median line of the back,
is a small nipple-like projection of skin. The cord is natural, and arises from about one and a half inches above symphysis pubis. Entire weight of body four pounds.

Dissection.—Brain not examined. Organs of chest natural and healthy. Liver, of usual prominence, natural. Small intestines natural. Large intestine terminates at the left iliac region in a cul de sac of a pear shape, about the size and color of the adult gall bladder. It is contained within a fold of peritoneum which is loosely attached to the posterior wall of the abdomen. Otherwise, it floats freely in the cavity of the abdomen in an isolated state. Bloodvessels are distinctly seen to ramify on its surface through the peritoneum. The kidneys are of natural size, and in their natural situation, but entirely disorganized, containing within their capsules only a soft, pultaceous, homogeneous mass. There is no trace whatever of a bladder, and no ureters can be demonstrated. Within the scrotum was found one testicle; the other was still in the abdominal cavity. The stump above referred to, on close examination, proves to be the left thigh, though connected with that portion of the pelvis situated upon the right side of the body, its naturally posterior aspect presenting anteriorly. Its development appears to be perfect in form, though much below the normal size, it being but about three inches in length. The patella, with the ligamentum patellae, occupy their normal situation, project pointedly upwards, and complete the lower extremity of the stump. The pelvis has undergone a marked arrest of development, especially in that portion represented by the right ilium, it being not more than one half the size of its fellow, both being far below the normal average. They are united by bony tissue, presenting one compact mass, whose entire width does not exceed one and one-half inches. There is
furthermore apparent a remarkable twisting of the ilia upon their own axes, by which the right one has come to occupy to a great degree the situation naturally belonging to the left. In this way is to be explained how the left thigh presents itself upon the right side of the body in a reverse position. The pointed crest in front of the ilia is evidently formed by the ischia and ossa pubis applied to each other in an imperfectly developed state.

Nothing definite as respects the sacrum and coccyx can be determined. These are, however, applied to the last two lumbar vertebrae, themselves in an imperfect state. Several small plates and prominences of bone irregularly disposed and closely compacted together, which probably represent their component parts in an arrest of development. With the exception of these irregularities the spinal column is in its natural condition.

The peculiar disposition of the parts above noticed, together with the absence of some of the viscera, and the arrest of development in others, may be explained on the supposition of violence done to the foetus in an early stage, by which, a change in normal development being produced, an arrest of any subsequent evolution in the direction of the injury, as well as of the processes already established, is produced.  

226 West 30th-street.

ART. V.—On the Ultimate Cause of Malarial Diseases. By J. R. Black, M. D., Ohio.

It is a trite yet just observation that the road to truth is slow and laborious. This, the philosophic physician is free to confess, applies with peculiar emphasis to the science of medicine. True, there is not now, nor has there been, a lack
Black on the Causes of Malaria. [March,
of discoveries to extend the boundaries of our knowledge; but, unfortunately, in very many instances, this knowledge is either so elementary or complicated as to be neither reliable nor satisfactory. Nor can this imperfect state be attributed to a want of patient and distinguished effort. The teeming medical press can testify to its abundance on the one hand, and a candid intelligence must award it a long list of profound and searching intellects on the other.

Inferior minds, who follow the beaten path of medical investigation, may strive in vain for an original thought. If they are desirous to add to the stock of ideas to discover truth, or a clue to it, they must leave this beaten path of medical inquiry pursued by a Sydenham, a Cullen, or a Rush. To follow up and endeavor to complete the peculiar views of such men, would only result in thinking what they have thought, or repeating what they have written. The true course to pursue (and the writer's aim) is not to provoke thought by a review of their opinions; but endeavor to trace nature in her varied workings on the animal economy.

For more than a century vigorous efforts have been made to arrive at definite conclusions on the subject of malaria. The main strength of the exertion has been to establish, by hypothetical reasoning and experiment, the existence of a specific poison. And, to judge from the diversity of views existing at the present day, we should say that success in this point is as far, if not farther distant than ever. Under such circumstances, any thought in a new vein of investigation may be looked to with peculiar interest, as tending either to retard or advance the efforts of the physician to master disease.

Malarious diseases (I use the word "malaria" in its popular or assumed sense) are observed to prevail under a variety of circumstances, but few of which are either constant or uniform. They do not seem to be proportionate to the amount of moisture in the air or earth, or to the quantity of vegetable matter in a state of decay. Were they dependent on
either of them, separate or combined, then experiment and observation might measure the amount and intensity of the effects in any specified locality; but the firm believer in the hypothesis of vegetable decomposition would never have foreseen the disastrous consequences which befell the British troops in Spain, during the peninsular war, nor the uncommon prevalence of intermittents in the auriferous regions of California. The valley of the Mississippi, compared with either of them in vegetable decomposition, and, on this hypothesis, must be pronounced totally uninhabitable. I cannot conceive it necessary that the opponents of this view should prove the entire absence of vegetable matter in the soil. It is sufficient to know that it is extremely limited, and that often, in localities where it is so, malarious diseases are more frequent than in others composed almost exclusively of vegetable matter.

To the opinion that the specific poison is transmitted by the winds, there are so many difficulties attached, as to render it of little or no value in explaining these discrepancies. Even admitting the assumption, it is wholly at fault with my personal experience in California. Arriving there on the 7th of June, I proceeded immediately to the mountains, and there remained until forced to return by a most obstinate intermittent. The last rains had occurred about the beginning of April, and, at the time of my arrival, everything presented the evidences of excessive drought. The grass and herbage of all kinds were thoroughly dried, with the exception of that along the river-borders low in the valley. The rivers, until within fifty miles of my station, were pure, cold, and swift in their course. Nor did I ever observe a marsh or pool of water within the same distance. The air was clear, pure, and exhilarating, and the winds came with great regularity from the southeast in the day, and from the northwest in the night. It was not, however, until the months of August, September, and October, that the night winds became regular and strong. The sun had scarcely disappeared below the horizon, when the tall and
scattered pines began to wave in the wind. The defiles of the mountains for a time remained calm and serene, but before long the wind swept down the gorges, producing a very chilling sensation. The simple foliage of a tree was no longer either a safe or comfortable shelter for the miner, and the warmth of a fire became as grateful at night as the gentle cooling breeze from the south had been in the day. From April to November, there is a complete deprivation of any appreciable moisture—no rain, no dew, or fogs. To the medical topographist there is no feature of interest, with the exception of the great contrast between the temperature of the day and night. The habits of the miners are exceedingly simple, and they are not in general addicted to intoxicating drinks. While in the mountains, I, in common with many others who had never before suffered, was attacked with intermittent fever. From August to February of the year following, I was never free from it a week. Enlargement of the spleen, derangement of the liver and stomach supervened; and to such an extent as to compel me to abandon the country. Such a case does not form the exception but the rule. According to my observation, at least nine tenths of the diseases prevalent there are unequivocally of malarious origin. Dysentery is a very common disease, next in frequency, perhaps, to intermittent fever; and to show the intimate connection of these diseases, I may mention that I occasionally observed a most inveterate intermittent pass immediately into dysentery, the latter suddenly and permanently curing the former. Any attempt to trace these diseases to the decomposition of vegetable matter in that country must prove utterly abortive. On the one hand, there is the day wind from the wide Pacific; and, on the other, the night wind from the barren, snow-capped mountains. Besides, the unhealthy season occurs at the very period in which there is the least possible chance for vegetable decay. The months of August, September, and October are superlatively dry; but present, owing to the strong night winds, the most marked variations of temperature.
The facts adduced to controvert the hypothesis of decomposition are equally forcible against the doctrine of animalcular development. The advocates of this view closely associate vegetable growth or decay with the production of animalculæ, and whatever is conducive to the increase of the one, is also conducive to the increase of the other. It might be urged further, that the animalcular hypothesis fails to account, analogically or otherwise, for several peculiarities of the miasmatic poison. 1st. The remarkable exemption of cities, and the greater danger on the first than on the second floor of a house, receives from it no explanation. 2d. The animalculæ are said to be scattered or dissipated by the heat of the sun with day, and brought together in increased numbers and power by the shades of night. If this be so, why are not woods and shaded places more infested than the opposite? Analogical reasoning would lead to the prediction that those unknown forms of animated existence most active at night, would be the very ones most abundant and energetic in shaded situations, yet on this hypothesis we have an assumed exception of an assumed existence.

Moisture and heat combined cannot account for malarious diseases, for vessels cruising in the Gulf of Mexico, when the temperature of the air is high, and nearly saturated with vapor, are comparatively exempt. The same exemption obtains in low latitudes, however moist, provided the soil be covered with a dense foliage, or the surface with water.

Nor can heat alone account for malarious diseases, for in such a case they should advance with it pari passu. However, it is a well-established fact that the intensity of these diseases does increase with the temperature, and that below a certain range they cease entirely. Such an occurrence is sufficient evidence of a very intimate relation between them, and in view of this it will be well to review some of its most obvious effects on the organized world. It is doubtless true that this agent is entitled to the highest rank of vital stimulants. An illustration of this is seen in its vivifying influence on the vegetable world. The
slumber or death of winter is succeeded by new energy or life from a simple increase of temperature in the spring. A high degree of heat or caloric also accelerates the growth and maturity of plants, and, some say, of animals. Familiar instances of the power of heat, and of heat alone, as a vital stimulant, are found in the simple hatching of an egg; in the revival of consciousness and motion in hibernating animals; and the development of life in the countless sperms of animated existence. Now, in most of these examples, it does appear as if heat had more influence over their lives than over that of man; but the difference is more apparent than real. The amount of heat in vegetables and the lower animals is almost wholly due to external circumstances; but in man nature provides internally means to maintain a uniform temperature, in spite of outward circumstances. This wonderful provision, particularly in man, of preserving nearly or quite the same temperature, under the most extreme conditions of heat and cold, may be applied a fortiori to prove that it has more influence on life in him than on vegetables or the lower animals. Indeed, the range of temperature which the latter must necessarily undergo from adverse winds, and the change from day to night, would prove immediately fatal to the human body.

When a person is exposed to a high temperature the motion of the blood is increased, the skin acts with increased energy; in short, all the actions which the undue heat excites, tend in the end to the cooling of the body. So also cold, when applied continuously or vigorously, tends to excite those functions on which depends the heat of the body. But, in detail, there is this striking difference, that while heat applied to the body either gradually, powerfully, or moderately, excites immediate actions to preserve it from change, cold, when applied gradually and insidiously, excites no such actions. In cold bathing there is generally a perceptible and healthy reaction; but when cold is applied more gradually and continuously, as in sleeping on a damp bed, or on the bare earth and open air, there is no perceptible normal or
healthy reaction. The disorder or disease which almost invariably succeeds such imprudences, clearly demonstrates the potent influence of heat, and the disastrous consequences which its removal effects. In these examples it is reasonable to believe that the body, particularly if previously subjected to a high temperature, is unprepared to meet or withstand the drain upon its supply. This is borne out by the fact, that those who too suddenly remove the artificial means by which the bodily heat is preserved, are almost certain to suffer more or less ill consequences. Nature seems to speak by emphatic signs that she is not prepared to provide an immediate equivalent for the artificial means which habit has taught her to depend upon.

M. Chossat has also shown, in his experiment on animals, the power of heat on life. The true cause of death in inanition he attributes to a loss of the calorifying power. Birds, whose death seemed impending, "were almost uniformly restored from a state of insensibility, and a want of muscular power, by artificial heat. Their temperature rose, they flew about the room and took food when it was presented to them."*

Moreover, observation shows, that the portion of our species having the calorifying power in the least degree, suffer most in a variety of forms from the effects of cold. According to Copeland, more than one-half of the deaths and two-thirds of the diseases of children are caused more or less by it.

These statements lead to the conclusion that heat is among the most salutary agents on life—a point readily conceded by all; but, at the same time, it forms, according to various authors, the active cause of a variety of diseases, such as hepatic disorder, cutaneous irritation, and cerebral congestion. It is improbable that the law meets with an exception in this case. In our readiness to look to other causes of our afflictions than those for which we are individually re-

* Carpenter's Human Physiology, p. 685.
sponsible, we have laid these diseases almost solely to the change of nature; our own artificial habits, and perverse violations of nature's laws, are not taken into account. The constant effect in this age of steam is to subject the body to the greatest possible variations of temperature. If any physical exertion is to be performed, it is done with all possible haste, every muscle is strained, and then we fly to the coolest recesses of art to charm the body with the striking reverse of temperature. The amount of heat has but little to do with disease; it is the change which brings on the disastrous effects. Almost every case of diseased liver finds its origin in peculiar variations of temperature. If this organ be supplied with a due amount of healthy stimulus, its actions will correspond thereto. If suddenly called to perform a more active duty, it will, with care, soon become acclimated, but neither this nor any other organ ever becomes habituated to great and constant changes of function without disease, disorganization and death. Extremes in the moral world are sinful even in the most natural acts. The same is true, even more pointedly, in the physical. The great principle of moderation is the true source and secret of health in many who are very weakly constituted. But to investigate the effects of extremes, a knowledge of the comparative power of the agent is necessary. It has already been shown that heat is among the most powerful agents acting on the body. A full, cold drink of water, taken into the stomach when the body is fatigued and heated, often proves immediately fatal. Again, the sudden abstraction of heat from the lungs is the most potent and common cause of pneumonitis. The simple application of cold to, or more properly the abstraction of heat from, the feet will often check the menstrual discharge. In short, this same simple and sudden agent is acknowledged to be a fruitful source of disease. Nearly all the diseases, however, referred to this origin are those by which the effects are developed by a sudden cause. There is no account of this source producing disease by a periodical action. When it acts on a particular part of the body, or on
predisposed constitutions, it may produce diseases totally differing from each other; but, though they thus differ, no one disputes the exciting cause; it is the same nevertheless. The point we wish to prove is, that the abstraction of heat from the body at night forms the essential cause of malarious diseases. The power of the agent abstracted, and its immediately deleterious effects no one doubts; but, in applying this explanation, the preconceived notions of malaria clash severely with it. The ingenious, well-spun, and learned hypotheses are not to be overturned by so simple an explanation. But we ask an attentive consideration of this subject, for we regard it in application as presenting by far the most plausible theory or hypothesis yet advanced.

The power of heat as a vital stimulant being admitted prepares us to anticipate for the important effects which follow its removal, and also that these effects will be increased in proportion to the elevation of the cause. If the vital stimulant, caloric, be of a high range and long continued, then there will be a corresponding increase or intensity of effect, following its removal. In brief, and in accordance with a physiological law, the greater the stimulant, the greater the subsequent depression or reaction. Now, it is well known of malaria that it prevails very rarely under a summer temperature of 60°; and that, as advance is made towards the equator, this class of diseases assumes, pari passu, an intense and violent character.—Where the heat is moderate and barely able to produce the disease, the cases that occur are few and mild in their character, but in countries having a high irregular temperature the cases are of a rapid and malignant form. The cause is the same, though of so much greater intensity as to conceal in a great degree the resemblance of effects, similar in many respects to the development of a slight catarrh from a moderate degree of cold, and the development of pneumonitis or pleuritis from a high degree.

External heat, or caloric, is the essential agency; the higher the point to which it attains, the greater the sensi-
bility and power of effect on the body, consequent on its removal. Hence, where the temperature of summer ranges about 60°, with considerable irregularities, mild forms of malarious diseases may be anticipated; and where there is a much higher summer range, with great diurnal variations, more malignant forms of malarious diseases are sure to prevail.

The causes of diurnal changes of temperature, particularly in the night, are due chiefly to radiation of caloric from the earth, or to the presence of winds from colder regions. In the internal region of our continent, the former is the chief, if not the sole cause, while on the sea borders, and in the neighborhood of elevated mountains, the latter is more commonly, though often an associated cause with the former. Low, moist, and loamy situations favor in a most marked manner this nocturnal depression of temperature. In fact, all know that frost may be found in such places, while others, differently situated, are considerably above the freezing point. It is for this reason that in these localities dews and fogs are always more common and abundant than elsewhere; caloric is radiated with greater facility and rapidity, causing the air to be diminished in temperature, and its capacity for moisture considerably lowered. But these effects are not observed where there is a breeze to disturb this concentration of action. It is easy to see, with this theory before us, why undisturbed conditions of the atmosphere favor—in the language of standard authors—"the condensation" of the peculiar poison, malaria, and why malarious fevers are much more common in low and marshy countries than elsewhere.

Again, where the circumstances favoring nocturnal radiation are absent, but where a great nightly reduction of temperature ensues from northeast or other cold winds, the same injurious effects follow,—a striking instance of which has already been given in the climate of California.

But besides the greater activity of the cause of malarious fevers at night, we must also consider the condition of the
body being entirely passive during sleep; there is neither an active consciousness to a gradual abstraction of heat, nor a vigorous action in the renovating power. This view receives strength from the immunity obtained by an opposite condition of the system, as in the excitement following stimulating drinks, or the activity of the organic apparatus attendant on the digestion of food. Experience has also shown that soldiers and sailors passing from a cold country to a warmer receive great protection from flannel worn next the skin.

These general and simple reasons why the night time is particularly obnoxious to health, in malarious districts, contrasts strongly with the complicated and conflicting views of the advocates of the peculiar poison hypothesis, that the poison is evolved by the sun, but concentrates itself in certain spots at night; or the dews and fogs suspend, dissolve, or set free the mysterious agent, and give it entire and undiluted to the unsuspecting victim.

Allusion has already been made to the activity of malarious phenomena in certain localities; and, as this constitutes one of its most important features, a more extended notice will be warranted.

It may be stated, as a general rule, that land influences are the chief, if not the sole source of malarious fevers. Cases without number might be quoted of terrible devastations of the inhabitants of the land, while others on the water, not distant perhaps a score of miles, were enjoying good health. The intervention of a narrow stream between two localities has repeatedly been observed to separate health and disease; the most noxious effluvia of a certain spot has seemed incapable of surmounting so narrow a barrier. To suppose that the water may absorb the poison, is all well enough for those who believe that there is one to be absorbed. But to abandon such purely hypothetical views for a moment, it will be found that the effects of water compared with land are, that it moderates the heat of the day and lessens the coolness of the nights. The sea and land breezes sufficiently exemplify the general fact, together with the fogs that occur.
along the course of our rivers; the last are chiefly observed when the air over the water is warmer by contact with it than that of the surrounding land; and the consequence is, that as the former air is chilled by the latter, it no longer has the same capacity for moisture, and water must of necessity be set free in the form of vapor or fog. In this way it will be perceived that the chilly air of the land is neutralized to a certain extent by the warm air of the water. The reason then why bodies of water afford protection from malarious diseases is, that they are not subject to any great change of temperature from the presence or absence of the sun; and when properly situated for those residing near an unhealthy tract of country, they must and will give decided protection. Water in any considerable body acts as a moderator of temperature by the disappearance of sensible caloric through evaporation during the day, and by the slowness of its cooling during the night, thus sustaining the temperature of the ambient air. Experiments to determine the difference of land and water in the cooling process, I have not met with, but the strength of the sea and land breezes in warm maritime countries, sufficiently demonstrates that it is very great.

Certain peculiarities of land affect very materially the range of temperature through the day and night. As has been stated, moisture in a soil favors the rapid radiation of heat; the same is true of the presence of vegetable matter. Davy found that a soil rich in this ingredient enabled it to attain a higher temperature from exposure to the sun, and a lower temperature when in the shade, than a chalk soil similarly exposed. In the former the range was even 30° more than in the latter. Considering that a soil rich in vegetable mould is generally fraught with moisture, there must be a much greater range of the thermometer in one place than another; common facts show that such is the case. The first frosts and the heavy dews are always observed in the sections having the greatest abundance of vegetable matter and moisture conjoined; so there also the first cases of mala-
rious diseases are observed to occur and continue with inexorable persistence. Their violence and malignance, however, generally depend upon the elevation of the temperature, and the length of time it continues. If the vital stimulation of heat be great and long continued, then may be expected disastrous results from its sudden fall, especially when the body is not in a condition to resist the drain upon its supply.

The physician of our rural districts must have observed, in his nocturnal rides, how much warmer the air is in a dense wood than over the open grounds. The absence of dew, as well as the indication of the thermometer, shows that the temperature does not suffer the same variations as in the open country. This is accounted for by the obstacle the sun's rays meet in reaching the earth, and the interception by the foliage of the radiation of caloric at night. The effect of course must be increased by the density of the foliage, and it must tend very materially to maintain an equilibrium between day and night. With this view before the mind, the reason why trees, and especially the pine, afford protection from malaria, is perfectly clear. A heavy vegetation will have the same preservative influence, though to a less degree, as the stratum of air between the foliage and ground is much smaller.

Another important point belonging to location is the distance of the body from the earth. Thus it has repeatedly been observed, that the lodgers on the first floor of a house suffered severely from fever, while those on the floors above entirely escaped. The explanation some of the specific-poison advocates give of this fact is, that it loves the ground. But in the theory here presented it is perfectly clear, that as the air is cooled at night chiefly by radiation, that stratum of air next to the earth must have its temperature most diminished. Experiments on this point have shown, that in the night time the temperature of the second floor of a house is from 6° to 12° higher than on the first floor. Again, it is a familiar fact that cities and towns of considerable size are
comparatively exempt from malarious fevers. In this instance there is but little moisture on the paved streets. The houses retain a portion of the heat of the day; and the warm air of rooms, as well as the numerous fires for culinary purposes, all tend to sustain the temperature during the night, and prevent that marked range of heat that would otherwise take place. Napoleon, in his celebrated campaigns, frequently resorted to artificial heat to protect his troops in some noted malarious district, with complete success.

By this theory of variations of temperature, the concentrated action of malarious fevers can be easily accounted for. If there is an extensive region, favorable to great nightly reduction of temperature of the air, then the winds may waft it some distance before its temperature is raised, and thus may make those suffer who apparently ought, according to received ideas, to suffer the least. But when the causes most favorable to reduction of temperature are confined to some particular spot, then are the effects entirely local and always expected. A very small extent of country may differ very much one year from another, in the circumstances favorable to these changes of temperature. Different winds during the day; a greater abundance of moisture in the soil, combined with undisturbed conditions of the atmosphere at night, will essentially influence the healthfulness of one district more than another in the same year. But a soil rich in vegetable matter, abounding in moisture, and situated in a region having a high summer temperature, with a still atmosphere at night, cannot be otherwise than unhealthy. Let the same region, however, be covered by a dense forest, and its unhealthy character will almost disappear; not because vegetable decomposition does not go on, nor because animals are not developed, but because the forest moderates the heat of the day, and sustains the temperature of the night. In truth, it is a popular fact, that forests are more favorable to vegetable decomposition, and the development of animal life, than the open country of the same region.

Assuming the existence of a poison, whether gaseous or
animalcular, there is a great want of uniformity in its operation to the usual course of nature. Subject twenty men, for instance, of unequal constitutions, to the operation of a poison, either gaseous or animal, and it would be strange if all were not very sensibly affected by it. But in the operation of the poison—malaria—it is known that there are many who are proof against its effects. Such a discrepancy does not exist in the "temperature theory." There could be nothing more natural than that one person, from greater activity of the calorifying power, should escape unharmed, while another, differently constituted, should suffer in a most alarming manner. The question is more one of constitutional power than of ability to resist any aërisiform poison.

It is said, according to Wood's *Practice of Medicine*, that in tropical latitudes the commencement of the rains is rather promotive of disease, partly, perhaps, by bringing down the miasmata from the upper air; partly by promoting "vegetable decomposition." This is scarcely consistent with a sentence or two preceding, in which the waters are said to dissolve the miasm as it is generated, and prevent its escape by retaining it in solution—hence the protection of floods. We will not discuss whether the poison might become exhausted after a few rains or not, but simply recall the fact, that nocturnal radiation is greatly promoted by a moist surface, and remark, that a large amount of caloric must become latent by the evaporation produced by rain falling on an arid and heated surface. This however soon ceases, and the body adapts itself to the change. But, on the reappearance of the summer season, the contrast of temperature between day and night, must be at its height. Hence it is, that at this time malarious diseases rage with great violence.

It is well known that the negro enjoys a freedom from malarious diseases, far beyond the white. This is observed in those who are born in our own latitude. It cannot therefore arise from acclimation. The theory here advocated affords a ready explanation of it. The organization and color of the skin "possesses a very considerable influence in coun-
teracting the heating effects of the sun's rays upon the body, and in carrying off the superabundant calorie.*

Ingenious opinions might be advanced in accordance with this theory of the periodicity which marks many forms of malarious fevers, but I withhold them and simply relate the instructive experiment of M. Brachet, who bathed "for seven successive nights, at midnight, in the river Saone, towards the close of October, when the water was cold. Retiring to bed after each bath, and covering himself warmly, he was affected by considerable reaction, which terminated in perspiration. At the end of the seventh day he omitted the practice, but was nevertheless nightly, about the same hour, attacked with a regular intermittent paroxysm, consisting of a cold, hot, and sweating stage, which returned for about a week, when it ceased spontaneously upon an occurrence which kept him out of his bed at that hour, which excited and warmed him."†

Art. VI.—On the Saccharated Alcoholic Extract of Ipecacuanha.
By A. G. Dunn, late Apothecary to Kings County Hospital, L. I.

The cephaelis ipecacuanha, being a most efficient remedial agent, and at the same time a very safe and mild one, has been and is still most extensively used; but, owing to numerous adulterations, the dose is rendered quite uncertain, whether given in pill, powder, or otherwise. The tincture, wine and syrup, are likewise of unequal strength, being made after many different formulae. The chief objection to the powder, however, is its absolute insolubility, thereby causing an unpleasant mixture when prescribed with liquids.

Taking into consideration these facts, and from reading in the American Journal of Medical Sciences, No. xlv. p. 229, an article on various saccharine forms of medicines, we were led to attempt the preparation of a saccharated alcoholic extract of

* Copeland.  † Wood.
ipecacuanha, which should be of uniform strength, perfectly soluble, and also agreeable to take. The following is the formula: R. Rad. ipecac. §iv, bruise to a coarse powder, and macerate for thirty days in fʃxiv of diluted alcohol, shaking it occasionally, then filter and express. The tincture thus formed is to be evaporated to ʃij, with which mix sacch. albi ʃvij, then triturate in a stone mortar until it is entirely dry.

The extract, as above prepared, has the peculiar odor and taste of ipecac.; it is of a brownish-yellow color, and is soluble in water, alcohol, ether, mucilage of acaciae, &c.; in fact, in all the solutions with which ipecac. is usually combined. The dose required to be exhibited is the same as of the genuine powdered root.

From the more agreeable taste of this article, and its complete solubility in fluids, those physicians who have tried it have given it the decided preference over every other preparation of this valuable drug; and more especially in prescribing for children, for whom its sweet taste adapts it, as an excellent form for combination with other remedies, to be given in powders.

The success attending the administration of this extract, by the physicians of Kings County Hospital (in which institution it was first prepared and brought into notice), and others of the same profession in various parts of said county, has induced us to publish this paper, in order that physicians generally may have an opportunity of testing its great superiority over the common forms of ipecac. at present in use.

455 Third Avenue, N. Y.

Art. VII.—Cases of Membranous Croup treated in the last Stage by the Introduction of Caustic into the Larynx and Trachea.

By Edwin N. Chapman, M. D., Brooklyn, N. Y.

Case I.—I was called Feb. 25th, 1853, to the child of Mrs. B., No. 18, corner of Row and Furman sts., sick for three nights and two days with the croup, for which nothing
had been done, the parents supposing the child had merely a "bad cold." The child was a female, fat, and robust, and two years of age.

I found the following symptoms: Shrivell croupy cough; aphonia nearly complete; high fever; inspiration long, difficult, and whistling. The air appeared to be drawn through a constricted aperture with considerable muscular effort. This obstruction was permanent, and had gradually augmented in intensity since the accession of the disease.

I directed three leeches to the top of the sternum. After which a teaspoonful of the following mixture every ten minutes, till vomiting followed. R. Tart. antim. gr. iij; syr. ipecac., syr. senega, ââ 5 ss. M. This mixture failed to produce any effect. I ordered a warm bath for one hour and teaspoonful doses of syr. senega every ten minutes whilst the child was in the bath. This failed also to vomit it.

In the afternoon three more leeches were applied, and the first prescription given to produce vomiting, but without effect. 6 o'clock, P. M.—Fever much reduced; voice suppressed; inspiration extremely difficult, and with great muscular effort. Ordered R. Tart. ant., gr. i; syr. ipecac. ʒ ss.; syr. senega, ʒij. M. To be given in one-half teaspoonful doses, every half hour. Also R. Hyd. sub. mur., gr. iv; cretae, ppt. gr. viii; ft. chart. No. viij. One to be given every third hour.

Feb. 13, 8, A. M.—Mr. B. came in haste, and stated that the child was dying; it had turned black in the face, and could not recover its breath for some time, I found the child in the last, and usually fatal stage, death evidently not twelve hours distant; the child torpid; with difficulty aroused, and directing all its strength in drawing the air into the lungs. She had been in much the same condition the entire night. I saw that all hopes from ordinary treatment were over. I procured a solution of the nitrate of silver, gr. xxx to water ʒj, and introduced it into the larynx on a bit of sponge attached to a piece of whalebone. The sponge passed beyond the rima glottidis. From the spasm of the larynx it required some little effort to withdraw it. In the after-
noon the caustic was reapplied. The laryngeal symptoms were equally as grave as in the morning, but without any exacerbations. About 1 o'clock that night, the child was extremely restless and oppressed for breath, when after a fit of coughing a substance was heard to come up, which was swallowed, after which the child slept comparatively quiet for several hours.

*Feb. 14th, 8, A. M.*—Found the child slightly improved. Since the relief experienced at 1 o'clock, the oppression had returned, and the caustic was reapplied, the sponge readily penetrating within the larynx. A piece of membrane came away on the sponge, an inch and a half long by a quarter of an inch in width, and of the thickness of a sixpenny piece. From the irritation of the caustic the child began to vomit, which, being favored by salt and water, another piece of membrane, half the size of the first, was vomited, besides an innumerable number of shreds which were floating in a white glairy substance. This was the first appearance of mucus, which was now beginning to take the place of the plastic exudation. The child was much relieved and continued to breathe with less stridula for some hours. In the evening the symptoms were again aggravated; applied a caustic solution, $\frac{3}{10}$ to $\frac{3}{5}$; vomited the child; mucus very tenacious, and adhesion was discharged.

*Feb. 15th.*—The child passed a more comfortable night with similar symptoms, but mitigated; applied caustic, gr. xv to $\frac{3}{5}$; vomited the child, when it brought up a membrane two inches and a half in length; one half of which was flat, the other a solid cylinder, evidently from the bronchial tubes. From this time the membrane disappeared from the matters vomited; its place was supplied by mucus.

I am firmly convinced that the entire mucous membrane, as far as the bronchial tubes, was coated with this false membrane, when I first commenced the application of the caustic. The membrane, doubtless, has a pseudo-vitality; adheres strongly, and is nourished by the inflamed vessels of the mucous membrane. The caustic destroys this pseudo-vital-
Chapman's Cases of Membranous Croup. [March,

removes the inflammation of the mucous membrane. The attachment of the false membrane being destroyed, it is coughed up as easily almost as mucus. The child gradually but perfectly recovered.

Case II.—Feb. 1st, 1851. A child of Mr. O., Prospect-street, lately recovered from bronchitis, was attacked with croup. During the first two nights, the emetics operated with relief to the patient; on the third night they produced no effect; applied caustic as in the first case. No membrane was seen, as no steps were taken to make the child vomit after commencing the caustic. The child recovered completely from all affection of the respiratory organs; but directly as the croup began to disappear; the sublingual glands inflamed and suppurated, which so impeded deglutition, that little or no nourishment was taken. Two weeks after, all croupy symptoms had disappeared, and the child died of marasmus.

Case III.—Aug., 1853. Boy, Sackell-street, 6 years of age, had croup of 36 hours' duration; emetics operated, but produced no discharge of mucus or mitigation of symptoms. Applied caustic as before—cured.

Case IV.—Oct., 1853. Child, Smith-street, 16 months of age, had croup of 48 hours' duration. Emetics failed to operate. Applied caustic as usual. On the third day of my attendance, all croupy symptoms had disappeared; I thought recovery sure. On the fourth day, on going to see my patient, I found it breathing with great rapidity, evidently from trouble in the bronchial tubes, which was doubtless from the exudation of false membrane. The child died in the evening. No post mortem allowed.

Case V.—Nov., 1853. Child, Carroll-street, 18 months of age, croup of three nights and two days' standing; nothing had been done. This case was almost in every respect identical with that of the child of Mr. B. The treatment was the same, the probang being introduced some four inches into the trachea. False membrane was brought up on the sponge, and in the matters vomited. The child recovered perfectly.
I have thus enumerated five cases; embracing all the cases in which I have used caustic in that state, in which tracheotomy is usually considered the only resort; four of these recovered from the croup, and the fifth died from trouble in the bronchial tubes, probably the exudation of false membrane.

ART. VIII.—On the Effects of the Milk of the Menstruating Nurse upon the Nursing Child. By Stephen Smith, M. D.

Case.—Child, four months old, when first attacked with convulsions was well formed, very active and sprightly, in good flesh, and had never suffered from any illness whatever. The father was a stout, healthy man; but the mother was in delicate health, and decidedly phthisical: tuberculous deposits could be detected at the apex of the right lung, and she had frequently expectorated blood.

When first called to the child, it had just recovered from a fit, and to all appearance was perfectly well. I could discover, on the most careful examination, no cause whatever existing in the infant for the sudden and unexpected attack of convulsions from which it was then recovering. I then directed my attention to the mother, but could not learn that she was, or had recently been, suffering any impairment of her general health, or that she had been eating any improper food. At a loss to account for the cause of the child's difficulty, I directed it to be taken from the breast for the present, and prescribed a simple corrective of the bowels. It had several slight attacks during the next twenty-four hours, after which they ceased entirely, and the child was again put to the breast. I saw it several times during the next two or three weeks, and always found it in a good condition.

One month, however, from the first attack, I was again called to see the child, which I found just recovering from a severe convulsion. On examining its condition attentively, and although the fits were more serious than before, I failed to find any reliable cause in the child itself, and charged the mother again with being the cause of her child's sufferings. She denied, however, being in the least indisposed; and the child was once more removed from the breast, and simple remedies prescribed. The severity of the fits at once diminished, and in thirty-six hours they ceased to recur. I advised that she should nurse the child no longer, but procure a wet-nurse, or rear it by hand. Contrary to this advice, after a short interval, she again applied it to her own breast. I saw it
a week or more after its recovery, and found it apparently quite well though not as vigorous as after the previous attack.

About a month after the second attack, I was a third time summoned to visit the child. The convulsions were evidently much more severe than at any previous period; and as they had already continued nearly twelve hours, it was apparent that they would speedily prove fatal. Its general condition still continued good, although, in the interval since its last attack, it had not recovered the lost ground. The usual remedies in such cases were resorted to, but with only temporary relief. It died about twenty-four hours after the onset of the convulsions.

In conversation with the mother, she stated, that since her attention had been called to the fact that some change had taken place in the condition of her system, by which her milk had become injurious to the child, she recollected that the first attack of convulsions came on while she was menstruating for the first time after her confinement, and nearly at the close of the period. Her menstruation was always very painful, and often menorrhagie. The second attack occurred about the middle of the next period, and the third set in when she felt the first slight pains which always preceded for some time the catamenial flow.

Remarks.—There is a difference of opinion among writers as to the influence of menstruation upon the milk of the nurse. Rosen remarks that he has distinctly observed that infants, who nurse during the menstrual period, are more or less unwell. Mauriceau says, a good nurse should not have her menses. Bègin has seen a case where the milk changed its appearance, and the child became sick. Chailly advises that the nurse should not menstruate, on account of the unhealthy influence exerted upon the milk, from which the child suffers colics, &c. Many other writers might be referred to, expressing in a general way the same opinion.

On the contrary, practitioners, placed under the most favorable circumstances for correct observation, deny that menstruation exerts any peculiar influence upon the milk of the nurse. Guillot, although he advises that the menstruating nurse should be rejected, adds, that of the 25 nurses engaged in the Foundling Hospital, Paris, he has known several having their menses at the same time, but the infants in their charge did not suffer. Joux (Schmidt's Jahrbücher) denies positively that the milk of the menstruating nurse has any injurious effect whatever upon the child, and appeals to an experience of twenty years in proof of his assertion.

But popular prejudice, whether formed from observation or otherwise, has long since established the rule, that a good nurse does not
menstruate, or at least that the child should not take the breast during this period. So prevalent is this opinion, that the nurses making application for a situation in the Foundling Hospital, Paris, carefully conceal the fact that their menses have returned. It may therefore be considered a well-settled fact that menstruation does exert some deleterious influence upon the milk of the nurse, rendering it for the time unfit for the child.

But observation here detects the existence of a noxious property in the food of the infant, which both chemistry and the microscope have as yet failed to demonstrate. Bégin, as already stated, has noticed a change in the sensible properties of the milk of the menstruating nurse, and the child fell sick. Donné, in his Treatise upon the Microscope, remarks that he has examined the milk of a nurse while menstruating, but was unable to detect any appreciable modification. In one instance he found some granular bodies. The most recent examination of this subject is by M.M. Vernois and Becquerel, whose investigations are contained in a small volume* recently published, and from which the opinions of different authors, as above quoted, are principally obtained. They analyzed the milk of nurses at three different periods: 1, in the interval of menstruation; 2, on the approach of the menses; and 3, during the catamenial flow. The following table gives the result:

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<tr>
<th>Density</th>
<th>Interval of Menses</th>
<th>Return of Menses</th>
<th>Actual Presence</th>
<th>Normal State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight of Water</td>
<td>1032.24</td>
<td>1031.94</td>
<td>1031.48</td>
<td>1032.67</td>
</tr>
<tr>
<td>Solid Matters</td>
<td>889.51</td>
<td>886.44</td>
<td>881.42</td>
<td>889.08</td>
</tr>
<tr>
<td>Sugar</td>
<td>110.49</td>
<td>113.58</td>
<td>118.58</td>
<td>110.92</td>
</tr>
<tr>
<td>Casein &amp; extractive matters</td>
<td>43.88</td>
<td>41.68</td>
<td>40.49</td>
<td>43.64</td>
</tr>
<tr>
<td>Butter</td>
<td>58.50</td>
<td>43.58</td>
<td>47.49</td>
<td>39.24</td>
</tr>
<tr>
<td>Salts by incineration</td>
<td>26.54</td>
<td>26.98</td>
<td>29.15</td>
<td>26.66</td>
</tr>
</tbody>
</table>

The authors call attention to the remarkable fact of the comparative regularity of the modifications, whether more or less, at these several periods, as exhibited in the table. Thus:

The density, being nearly normal during the interval, diminishes progressively with the approach and return of the flow.

The weight of water diminishes in a more marked yet regular manner, in the same order, from the interval to the actual existence of the catamenial flow.

The weight of the solids increase, in an inverse manner,—a fact deserving of attention, as it contradicts the opinions of authors.

The sugar diminishes progressively.

The casein, on the contrary, increases markedly.

The butter also increases, but in a more limited degree.

The salts diminish on the approach, but rise again, and exceed the normal amount on the return of the flow.

As the greatest change occurs at the period of the actual existence of the menstrual flow, the authors have given, in the following table, the average of the analysis of the milk of three nurses, in the two most distant periods:

<table>
<thead>
<tr>
<th></th>
<th>Interval of Menstruation. Average</th>
<th>Presence of Menses. Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>1032.24</td>
<td>1031.58</td>
</tr>
<tr>
<td>Weight of Water</td>
<td>889.51</td>
<td>881.44</td>
</tr>
<tr>
<td>&quot; Solid matters</td>
<td>110.49</td>
<td>118.56</td>
</tr>
<tr>
<td>&quot; Sugar</td>
<td>43.88</td>
<td>40.49</td>
</tr>
<tr>
<td>&quot; Casein and extractives</td>
<td>38.69</td>
<td>47.49</td>
</tr>
<tr>
<td>&quot; Butter</td>
<td>26.54</td>
<td>29.15</td>
</tr>
<tr>
<td>&quot; Salts by incineration</td>
<td>1.38</td>
<td>1.45</td>
</tr>
</tbody>
</table>

According to this table, the composition of the milk during the catamenial flow is modified as follows:

- Density: diminished.
- Weight of Water: sensibly diminished.
- " Solid matters: markedly increased.
- " Sugar: slightly diminished.
- " Casein: greatly increased.
- " Butter: increased.
- " Salts by incineration: slightly increased.

The important question recurs, are these modifications of the milk of such a nature as to cause the effects observed upon nursing infants? MM. Vernois and Becquerel think that they might in an infant whose digestive organs were very delicate and susceptible to impressions; still they believe that these changes only render the milk less easy of digestion, and give rise to some accidental derangement of the functions of the intestines; and that is all.

To avoid such injurious effects, they advise that the child be allowed the breast less often, and be supplied with some sweetened water, to make up the deficiencies existing in the milk at this period. They conclude that there is only an accidental loss of proportion in the natural elements of the milk, without the introduction of any peculiar body of an injurious nature.

In a discussion which followed the reading of this paper, M. Roger
stated (Med.-Chir. Review) that he had paid considerable attention to this subject while attached to the office of nurses, and had arrived at the following conclusions: "If the menses reappear easily, without pain or derangement of the nurse's health, while her milk is under 12 or 15 months, and the quantity of blood lost is normal and moderate, the quantity of milk does not become diminished, nor its qualities altered, and the child does not suffer from its use. If, however, the menses are too abundant or too frequent, the milk may diminish in quantity, or disappear. The same effect is also produced, though more slowly, in some days or weeks, when the menses are prolonged for a week, so that the loss is considerable. The milk will much more certainly dry up if the menses reappear at an advanced period of lactation; this being then the signal of the imperfection and approaching termination of the secretion. When the milk becomes thus diminished, it rarely exhibits the physical characters of poor milk; but by its density, whiteness, and the excess in number and size of its globules, it more approaches in character and richness cow's milk. When the menstrual epochs reappear with difficulty, and are attended with pain, indigestion, diarrhoea, &c., or are preceded or followed by leucorrhoea, the child may suffer symptoms due to indigestion, induced by the altered characters of the milk; the alteration of the milk chiefly consisting in increase in the number and size of the globules. These influences are, however, only temporary, and the milk soon recovers its normal character. The ailments which the child hence suffers are only temporary, and have been greatly exaggerated."

It is not difficult to perceive the bearing which these observations have upon the explanation of the case above related. The menstruation of the mother had always been irregular, being painful and often menorrhagic. On the occurrence of the first menstrual period subsequent to her confinement, and when at that period of the actual flow in which the greatest change in the quality of the milk takes place, the child, though entirely healthy, yet possessed of a nervous system like its mother, very susceptible to impressions, whether external or internal, after a day or two of indigestion, suddenly falls into convulsions. On being taken from the breast it gradually recovers, but not completely. One month after, it suffers a more severe attack of convulsions, the first of which occurred soon after the catamenial flow had commenced. Again taken from the breast, it recovered, but evidently was not as vigorous as before. Three months after the first attack, and when seven months old, it experienced a return of convulsions on the first accession of the pain preceding the catamenia, which speedily proved fatal.
Art. IX.—A Contribution to our Knowledge of Poisoning by Aconite. (Read before the Society of Statistical Medicine, New-York.) By George H. Tucker, M.D., late Assistant Physician to Kings Co. Hospital, L. I.

Cases of poisoning by aconite, as compared with other substances of the narcotico-acrid class, are of somewhat rare occurrence; nevertheless, we meet with them sufficiently often to render an accurate knowledge of the peculiar effects produced by this article, of considerable importance in a practical point of view. This infrequency may perhaps be accounted for by the fact, that its very deleterious properties are almost unknown among the laity. In proof of this, we find that in nearly every instance it has been administered or taken by mistake.

My attention has been more particularly called to the subject of poisoning by this drug, from a case having recently come under my own observation, which is given in the accompanying tables, and from the slight mention made of it by systematic writers. I was therefore led to collect as many cases of this kind as were to be found recorded in such books and periodicals as were accessible. The results of my researches are arranged in tabular form, this being much more convenient for reference, as well as deduction.

Isolated cases reported in the journals, and brief notices in the various works on poisons and medical jurisprudence, constitute, for the most part, the literature of poisoning by aconite. The only monograph on aconite, as far as I am aware, is that written by Dr. Fleming, of Edinburgh, and published in 1845. Although this work has justly been regarded as authority on the medicinal and toxicological properties of the various species of this plant, yet it by no means enters so fully into the latter as to leave unsettled very many important questions of a medical as well as medico-legal nature. We do not claim, however, in the accompanying tables to supply this desideratum, but only to contribute to this end a collection of facts heretofore widely scattered, and consequently little available, with such deductions as naturally follow their examination.

Aconite, as a poison, seems to have been known to the ancients, as it is supposed to have been mentioned by Theophrastus, and also by Ovid and Pliny. It was at that time considered the most virulent of all poisons, and was used as a State poison in the execution of criminals condemned to death. A species of it has long been known to
the Chinese as a poison. It is a native of most parts of Europe,
growing both in mountainous regions and on the plains. It is also
indigenous in this State,* and is cultivated in gardens as an orna-
mental plant.

Species of the Plant.—Numerous species of the genus aconitum
are described by botanists, the principal of which are the A. napellus,
A. ferox, A. ncomontanum, A. cammarum, A. lycocotonum, and A.
thorana; the first mentioned is generally recognized as the officinal.
Dr. Fleming considers it and the A. ferox as the only ones possessing
any very active properties; the others, no doubt, possess similar qual-
ities, though in a less degree.

Active Principle.—The powers of this plant are due to the presence
of a vegetable alkaloid, named aconitina,1 which is a white pulverulent
substance; it is fusible, not volatile, soluble in alcohol and ether, but
scarcely so in water, even when the temperature is raised to the boil-
ning point.2 It is destitute of smell, and has a bitter and acrid
taste; this acrid taste, however, says Prof. J. B. Beck,3 “does not
belong to the aconitine, inasmuch as it can be separated from it
by combining the base repeatedly with acids, and decomposing the
salts thus formed.”

Tests.—Chemistry thus far has not furnished us with any very
reliable tests for this most subtle poison. On this point, Dr. Christi-
son4 observes, “that if any of the suspected matter be obtained in a
pure state, its best characteristic is its remarkable taste,” to which he
has found nothing exactly similar in the numerous trials he has made
with other narcotic-acrid plants. Dr. Taylor remarks that nitric
acid dissolves it, but the solution is colorless; when sulphuric acid is
used no color is given when cold, but a dark brown tint is evolved
when heat is applied. All the solutions of aconitine are precipitated
by potash, and all its salts are excessively bitter.

Officinal Forms.—These are the common and saturated tinctures,
and the extract. The formula of the common tincture is given in the
U. S. Pharmacopoeia, thus: R. Aconiti siv, spts. vini rect. dilut. Oij,
macerate for fourteen days, express and filter. The tincture recom-
manded by Dr. Fleming is prepared as follows: R. Rad. aconiti napell.

* Prof. CHAS. A. LEE on Medicinal Plants of the State of New-York. New-
York Jour. of Medicine, vol. ix.
† Taylor on Poisons.
‡ Lect. on Mat. Med. and Therapeut., p. 147.
Tucker on Poisoning by Aconite. [March,

3xvi, alcohol f3xvi; macerate for four days, then pack in a percolator and add alcohol until f3xxiv are obtained. The leaves, seeds, and root, were formerly the parts used by pharmacists in preparing the above forms; the root, however, is now preferred, as it is supposed to contain a larger proportion of the active principle, and as being more uniform in strength.

The following analysis of the tabulated cases presents, as accurately as the meagerness of the records will admit, the results of our examination of the subject of poisoning by this plant:

Sex and Age.—Although the sex is not essential in arriving at any useful deductions, yet as it is given in many of the cases, it should not be omitted in these general conclusions. In the majority of cases males were the victims, being nearly 2 1:2 to 1; in males, also, the symptoms were often more violent, and the proportion of deaths to recoveries much greater than in females, being in the proportion of 3 1:2 to 1. It is difficult to account for this fact, as in nearly an equal number of females the dose was as large, and in many where recovery took place even larger, than that taken by males. It cannot at least be explained by a mere difference of sex.

From the too frequent omission of the reporters of cases to record the age of each patient, we shall be able to classify them only as children and adults; of these, the large majority very naturally occurred in adults, owing to the circumstances under which instances of poisoning usually take place, as in eating the leaves of the plant as a salad, and especially in making use of the preparations of the drug as a remedy. In children it occasionally happens that the tincture is given by mistake, as in case 41, which came under my own observation; and also case 49; much more often, however, children have been poisoned by plucking the leaves or flowers, or by chewing the root.

Quantity and Kind taken.—In the majority of instances poisoning was produced by eating the leaves as a salad; this is generally owing to its being gathered by mistake. In one case (14), a female, for the purpose of destroying her husband, purposely boiled the leaves with her greens, of which he ate and was fatally poisoned; a friend happening in, partook of the remainder, and suffered severely, but finally recovered. In another instance (19) a lad died from the effects of eating some of the leaves which had been given him for parsley. An infant ate the leaves and flowers, and died with tetanic convulsions in two and a quarter hours. The quantity of the different preparations taken is very various, depending entirely upon circumstances, while the effects are equally various, depending wholly upon the real strength of the
preparation taken. In this latter respect the marked looseness observed by writers in noting accurately the preparation used, whether the common, or saturated tincture, or the infusion, that it is quite impossible to arrive at anything like accuracy as to the actual amount of the poisonous principle of the drug taken in each individual instance. This will account for the great discrepancy observed in regard to the fatality of different doses; for instance, one man took twenty-five minims of the tincture with twenty minims of the tincture of belladonna, and one dram of the tincture of musk (case 40), and died with symptoms of poisoning by aconitine; another swallowed an ounce and a half of the tincture prepared according to the Parisian codex, and survived. This difference observed in the effects of the various, and often of the same preparation, may be farther explained by the fact stated by Parreira, that the aconitina is so strongly retained in the vegetable tissues after their compression, that a variable quantity of the alkaloid is obtained in the same process. In but one instance was the aconitina taken (37); in this case two and a half grains were swallowed by mistake; and, although not seen by the physician until eight hours subsequently, the patient recovered. He manifested symptoms of hydrophobia, and suffered a complete collapse. A remarkable instance of administering the fresh juice in a hospital to twelve patients (cases 23 to 34 inclusive) afflicted with scorbutis, by mistake for cochlearia, is recorded by Ballardini. Each patient took about two and a half ounces of the juice; nine recovered and three died. The symptoms were very nearly alike in all; two old women, both of whom died, suffered convulsions, and finally paralysis.

Symptoms.—The earliest symptoms occur from the local effect of the poison, viz., tingling, prickling, burning or benumbing sensation in the lips, tongue, and mouth; this often extends immediately to the extremities, and is felt in the skin in different parts of the body, and also along the oesophagus and in the stomach. In case 13 this order seems to have been reversed, the first symptoms commencing in the extremities, and subsequently extending to the tongue and mouth.

Vomiting generally succeeds to the burning in the throat and stomach; it is usually violent, but more often diminishes in severity after the free expulsion of the contents of the stomach, unless promoted by emetics; it may, however, persist until death, and be spasmodic in its character. Vomiting may be absent, and even nausea, in fatal cases; but more often recovery takes place in such instances. This difference of effects upon the stomach seems to depend upon the quantity and form of the preparation taken; where a large quantity of the
tinure was swallowed, the vomiting was violent, and continued, probably, from its local irritant effect; but in other instances, when taken in small and repeated doses (case 46), its first action seems to have been upon the nervous system, causing great prostration, with no symptoms referable to the stomach. The matters ejected are noticed as being green, livid, and bilious; in no instance was sterecoraceous vomiting observed. Dr. Fleming denies that aconite is an irritant poison; but, from the promptness with which vomiting follows the introduction of the alkaloid (case 37) into the stomach, and the congested state of the mucous membrane often found after death in fatal cases of poisoning, we should be disposed to favor its irritant action.

Purging is a common symptom, often severe, and attended with violent, colicky pains, tenderness of the epigastrium and belly, and sense of distension of the abdomen. In some instances purging was probably due to the remedies employed, but in others it seems to have followed as the direct effect of the poison. Occasionally a diarrhea set in, with painful sensations of the bowels.

Nervous System.—Among the early symptoms are those due to the action of the poison on the nervous system; these are tingling in various parts of the body, loss of sensation, tremors, cramps, great muscular debility, prostration, restlessness, sense of swelling of tongue, and constriction of oesophagus, hurried and laborious respiration, and, progressively, convulsions, tetanic and hydrophobic symptoms, &c. In several cases it resulted in general paralysis, and in one in paralysis of the lower extremities. Dr. Christison was led by experiments to conclude "that the symptoms depend in a great measure on gradually increasing paralysis of the muscles, which terminates in immobility of the chest and diaphragm, and consequent asphyxia." This analysis would seem to sustain this opinion. The intellect was generally clear, occasionally vivid; delirium was seldom present, and then noticed as merely incoherent. In two cases (1, 42), however, the patients were described as furious and mad. Orfila regards monskhood as acting peculiarly upon the brain, causing delirium; in this opinion he is not sustained by statistics.

Circulatory System.—The pulse is generally frequent, weak, and often imperceptible when noticed; in a very few cases it was slow and irregular. The impulse of the heart is noticed in several cases as having been weak and fluttering.

Pupil.—The action of aconite was observed in 17 out of 20 cases to cause dilation of the pupil. That this appearance was due to the effects of the poison we must infer from the fact, that it was among
the earliest symptoms noticed. This is contrary to the views of the best authorities. Dimness of vision was occasionally remarked.

Treatment.—Where the patient was seen early, emetics of zinc, ipecacuanha, tartar emetic, &c., were usually administered, with demulcent drinks. These remedies are, as in all cases of poisoning with drugs, of great service in the early stage. The subsequent treatment has usually been stimulants, such as ammonia, alcoholic drinks, artificial heat, sinapisms, &c., owing to the great tendency to collapse. The results of this course have been usually successful, and it must be regarded as the rational method of treatment in the absence of any antidote. Among the departures from this practice, we may notice the internal use of iodine—case 35; but although the patient recovered, it was probably due to the free use of emetics, followed by stimulants in a later stage. In case 37, the patient could not swallow, owing to hydrophobic symptoms, and anodynes and nourishment were accordingly administered by the rectum, with a favorable result. In one case, a strong infusion of huaco (Eupatorium huaco) was administered, which allayed the vomiting, when reaction came on, and the patient recovered.

Results.—In the plurality of instances, poisoning by aconite does not prove fatal. In the fatal cases, death may take place in an hour or be delayed till the sixth day; in the great majority of cases, however, the poison proves fatal within three hours from the time that it was taken.

Post-mortem Appearances.—Of the 25 fatal cases, the results of autopsical examinations, are given in only 11. Of these, general venous congestion was most commonly present. In 5 cases the vessels of the brain were found gorged with dark blood; in all in which the juice was taken, the pia mater was noticed to be highly injected with a great amount of serous effusion under the arachnoid, and at the base of the brain, but none in the ventricles. The lungs were generally congested, and, in cases 2, 3, and 4, they are recorded as being dense, hard, and engorged. The heart is noticed in but one case, and in this the cavities of the right side were filled with dark blood, corresponding with the same condition of the lungs. The mucous membrane of the stomach is generally congested, either universally, or, which is much more often, in patches, the degree varying from mere points to a high inflammatory blush, or even a brown color. It is occasionally found empty, and in 3 cases it was distended with gas. The small intestines were observed to be in the same condition as the stomach when noted. The color is not mentioned. The rectum was found intensely injected in 3 cases, in all of which a similar condition of the oesophagus was observed.
<table>
<thead>
<tr>
<th>Sex</th>
<th>Age</th>
<th>Quantity and kind taken</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.</td>
<td>Ad.</td>
<td>Ate some fresh leaves in a salad.</td>
<td>Reported as dying mad.</td>
</tr>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td>Burning from throat to stomach; colic; tenderness of belly; sense of swelling of tongue and face; vomiting and purging.</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>Tincture of the root.</td>
<td>Experienced most violent pains.</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td>In a few hours became an idiot; face covered with cold sweat; total loss of sensation; spasms; syncope; involuntary stools; spasms; vomiting of livid matter; body swelled.</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td>Immediately felt burning heat in tongue and gums, and soon after in whole body, accompanied with twitchings. Two hours after, eyes and jaws fixed; extremities and forehead bathed in cold sweat; no pulse perceptible; respiration short.</td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td>Slight vomiting came on shortly after eating, with severe pain in abdomen.</td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
<td>In five minutes, prickling and tingling in arms and fingers; painful sensations across wrists; then in tongue and mouth; then in legs and feet; in less than ten minutes, face and throat felt swollen; nausea and retchings; legs failed; almost blind; conscious; eyes fixed and protruded; trunk and extremities cold; wrists pulseless; pupils contracted; countenance livid; jaws and fauces rigid; resp. short, imperfect, and labored; heart fluttered feebly.</td>
</tr>
<tr>
<td>M.</td>
<td>Ad.</td>
<td>Ate small portion of root.</td>
<td>Vomited first the leaves eaten, then bilious matter; face alternately pale and red; tingling of flesh and tongue; restlessness; purging; occasional incoherence; lockjaw; frothing at mouth and nose; clenched hands.</td>
</tr>
</tbody>
</table>
### Progress and Treatment

<table>
<thead>
<tr>
<th></th>
<th>Result</th>
<th>Post-mortem Appearances</th>
<th>Authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recovered.</td>
<td>Recovered.</td>
<td>Recovered.</td>
<td>Ibid.</td>
</tr>
<tr>
<td>Recovered.</td>
<td>Recovered.</td>
<td>Recovered.</td>
<td>Ibid.</td>
</tr>
<tr>
<td>Not seen by a medical man; no treatment.</td>
<td>Died in 3 hours.</td>
<td>24 hours after death; abdomen swollen; stomach empty and covered with yellowish gray mucus; irregular brown patches in mucous membrane of stomach. No other parts examined.</td>
<td></td>
</tr>
</tbody>
</table>

Appropriate means were used.

Became apoplectic.

One pint of ol. olivæ and infusion of card. benedicti given, which induced emesis; also ammonia carb., and again vomiting ensued. With purging; pulse interrupted and irregular.

Emetics and stomach pump.

An emetic was administered, which produced vomiting; convulsions at each attempt to swallow; five hours after taking poison, pulse 58, full and intermitted; pupils larger.

Not seen by a medical man; no treatment.
<table>
<thead>
<tr>
<th>Sex</th>
<th>Age</th>
<th>Quantity and kind taken</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.</td>
<td>Ad.</td>
<td>Ate small portion of the above (case 14).</td>
<td>Two minutes after, pricking, numbness, and burning heat in mouth, throat, and stomach; copious flow of saliva; surface cold and sweating; burning in gullet and stomach; face felt swollen; no sense of constriction about the neck; restlessness; vision dim; stupor and insensibility.</td>
</tr>
<tr>
<td>M.</td>
<td>57.</td>
<td>All ate of the roots in a salad; the man eating one and a half roots, the woman half a root.</td>
<td>Two minutes after eating: burning and numbness of lips, mouth and throat; violent and constant vomiting; extremities cold; chest warm; head cold and sweating; eyes glaring; violent pains in head; excessive trembling; lips blue; mind not disordered; not delirious or sleepy.</td>
</tr>
<tr>
<td>F.</td>
<td>57.</td>
<td>Similarly affected, but more slightly, except evinced slight tendency to sleep; like the other two, it was constantly putting its hands to its throat.</td>
<td></td>
</tr>
<tr>
<td>F.</td>
<td>5.</td>
<td>Similarly affected, but more slightly, except evinced slight tendency to sleep; like the other two, it was constantly putting its hands to its throat.</td>
<td></td>
</tr>
<tr>
<td>M.</td>
<td>14.</td>
<td>Ate leaves in mistake for parsley, (prob. A. neomontanum.)</td>
<td>Two hours after: burning and tingling in mouth, throat, and stomach; very sick, and soon after had a fit.</td>
</tr>
<tr>
<td>M.</td>
<td>Ad.</td>
<td>Five grains of fresh extract.</td>
<td>Quarter hour after: tremors in muscles of thighs and arms; prickling in various parts; great irritation in throat, followed by severe vomiting; convulsions; during their accession became unconscious; when they ceased, speech was restored, but sight confused; surface cold and sweating; pulse slow and irregular; respiration short and hurried; beat of heart interrupted.</td>
</tr>
</tbody>
</table>

22. Ad. Do. Do.
<table>
<thead>
<tr>
<th>Progress and Treatment</th>
<th>Result</th>
<th>Post-mortem Appearances</th>
<th>Authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>One hour after: hands and jaws clenched; speechless; be about and frothing at mouth and nose. At midnight: purging and per- and vomiting; cramps; ten- feely redness of epigastrium; syncope.</td>
<td>Able to recover in five weeks.</td>
<td></td>
<td>Dr. Geohegan.</td>
</tr>
<tr>
<td>Quite conscious till 2 minutes before death; no cramps, fainting spasms, or convulsions; very state of weak, but no loss of control over voluntary muscles; able to stool.</td>
<td>Died in a quite state.</td>
<td></td>
<td>Dr. Pareira.</td>
</tr>
<tr>
<td>No cramps, spasms, or convulsions; sight dim; hearing unaffected; very giddy; face and throat insensible to touch; no delirium or sleepiness; most part conscious; body and extremities cold. Treatment as above; reaction in five hours.</td>
<td>Recovered.</td>
<td></td>
<td>Dr. Pareira.</td>
</tr>
<tr>
<td>His mother gave him a glass of whisky; no other treatment.</td>
<td>Died in 7 hours by asphyxia.</td>
<td>Vessels of brain enormously distended with dark fluid blood; stomach empty, with deep inflammatory blush over whole internal surface; a few patches of darker color also noticed. No further examination.</td>
<td>Mr. Ramsay.</td>
</tr>
<tr>
<td>Heat and sinapisms to extremities; counter irritation hours to spine and precordial region; ammonia in strong decoction of huaco.</td>
<td>Died in 3 hours.</td>
<td></td>
<td>M. M. Pareira and Perrin.</td>
</tr>
<tr>
<td>Do.</td>
<td>Recovered.</td>
<td></td>
<td>Ibid.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ibid.</td>
</tr>
</tbody>
</table>
Symptoms.

23. Ad. Each took about two ounces and six drachms of fresh juice; in mistake for cochlearia. Often imperceptible.

24. Ad. Restlessness; great prostration of physical and mental energies; face pale and expression altered; pupils dilated; distressing headache and vertigo; pain and tension in abdomen; vomited green matter; in a fever; diarrhoea; anxiety and oppression of nails; cramps in legs; pulse small, feeble, and often imperceptible.


26. Ad. Similar symptoms, with dyspnœa, vomiting, and greater anxiety.

27. Ad. Do. Were convulsed; great prostration of strength; and at length paralytic.


30. Ad. Took 40 grains (fijiss) of tinct. prepared of equal parts of plant and alcohol, infused for three months.

31. Ad. Immediately; burning and sense of constriction in throat and along oesophagus; restless; intellect entire; lower limbs in constant motion; in 2 hrs. convulsions; lower limbs drawn backwards; thumb thrown in palm of hand; face cold and sweating; eyes turned up; nearly pulseless; convulsions lasting 3 minutes, when they ceased; the senses were entire except he was totally blind.

32. M. 60. Do.

33. F. 55. Do.

34. F. 55. Do.

35. M. 39. Six fresh plants cut up and boiled in half pint beer to \(\frac{1}{4}\); half of this he swallowed.

36. M. Ate of the root soon felt tingling of lips, extending round neck; by mistake for dimness of vision. Horse-radish.
---|---|---|---
Emetics; stimulants inwardly, and warm spirituous emetics to surface. | All recovered. | Vessels of pia mater highly injected; serous effusion under arachnoid and at base of brain; no effusion in ventricles; lungs congested; stomach distended with gas, and containing some gray-colored liquid; patches of vascular injection in stomach and small intestines; liver and spleen healthy. | M. BALLARDINI. *Annali Univers. di Med.* 1840, Tom. 3, p. 633; and *Med-Chir. Rev.* April, 1841, p. 499.
Do. | Death in a few hours. | Same lesions observed. | M. BALLARDINI.
Do. | Died in 2 hours. | Do. | M. BALLARDINI.
Fifteen centigrammes of tartar emetic with ipecac; this produced vomiting; in 2 hours, to leave another emetic given; frequent convulsions; shiverings; head thrown strongly backwards; resp. stertorous; intellect unimpaired; simpoms used and solut. idodini given; stimuli. | Died in 2 hours. | Do. | M. BALLARDINI.
A teaspoonful of brandy; this revived him; while starch-pump applied. | Died. | 48 hours after death: liver, kidneys, and spleen distended with dark blood; veins generally congested; stomach presented red blush near cardiac extremity; bowels filled with air; pelvic viscera healthy. | M. DEVAY. *Lond. and Edin. Monthly Jour.*, April, 1844, p. 335, quoted from Canstatt's *Jahresbericht.*
Brandy; mustard emetic. | Died. | | Mr. SAYLE. *Med. Times*, Oct. 18, 1854, p. 70.

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**TUCKER on Poisoning by Aconite.** 233
Tucker on Poisoning by Aconite.

<table>
<thead>
<tr>
<th>Sex</th>
<th>Age</th>
<th>Quantity and kind taken</th>
<th>Symptoms</th>
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<tbody>
<tr>
<td>M.</td>
<td>Ad.</td>
<td>Two and half grs. Aconitum</td>
<td>Early and copious vomiting 8 hrs. after; collapse; surface cold and sweating; face pale; pulse hardly felt; pupils acting to light; no paralysis of sensation or motion; intellect perfect and even vivid; repeated violent spasmodic vomiting; hydrophobic symptoms when attempting to swallow.</td>
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<tr>
<td>38.</td>
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<tr>
<td>F.</td>
<td>27.</td>
<td>Fifteen minims of strong tinct. of root</td>
<td>Immediately: numbness in tongue; dysphagia; convulsive twitchings of facial muscles; inability to walk; complete unconsciousness for 2 hours; pupils slightly contracted; symptoms paroxysmal.</td>
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<td>39.</td>
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<td>F.</td>
<td>25.</td>
<td>Tablespoonful of saturated tincture</td>
<td>One hour after: pupils dilated, though sensible to light; pulse frequent, soft and weak; occasionally nearly imperceptible; sense of fullness in limbs; numbness, and prickling in tongue, throat, and over general surface; no nausea; head clear.</td>
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<td>40.</td>
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<tr>
<td>M.</td>
<td>Ad.</td>
<td>Took draught containing Tr. Aconiti mxx, Tr. Belladon. mxx, Tr. Musk f3j.</td>
<td>Walked a mile after taking it; tingling of hands and feet, which were numbed and powerless; in 1½ hrs. vomited freely; speech thick; staggered, as if drunk; no stupor or loss of consciousness; 2 hrs. after taking dose, weakness in arms and legs; no peculiarity in state of pupils; pulse 110; face pale.</td>
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<td>41.</td>
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<tr>
<td>M.</td>
<td>16.</td>
<td>Nearly teaspoooful of saturated tincture</td>
<td>Soon after, tingling, &amp;c., in lips, tongue, extending to throat; syncope soon followed by copious vomiting; restlessness; spasmodic contractions and relaxations of muscles of upper and lower extremities; surface cold and sweating.</td>
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<td>42.</td>
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<tr>
<td>M.</td>
<td>Ad.</td>
<td>One ounce of tincture of root</td>
<td>Sense of burning in throat and stomach; inexpressible anguish; vomiting and purging; tenderness of epigastrium; colic; afterwards delirium, manifested by loud cries and running about in a violent manner.</td>
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<tr>
<td>43.</td>
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<tr>
<td>M.</td>
<td>Ad.</td>
<td>Do.</td>
<td>Soon began to stagger; then was seized with violent vomiting, purging, and acute colic pains.</td>
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<td>44.</td>
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### Progress and Treatment

<table>
<thead>
<tr>
<th>Progress and Treatment</th>
<th>Result</th>
<th>Post-mortem Appearances</th>
<th>Authorities</th>
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</table>
| Hot bath; sinapisms; enema of oil. terebinth; pulse feeble; dysphagia; enemata of beef tea and tinct. opii. | Recovered. | | Dr. G. Bird.  
| Internal and external stimuli used freely; next day had numbness in both arms. | Recovered in 24 hours. | | Dr. Topham.  
London Lancet, July 19, 1851, p. 56. |
| An emetic of zinci sulph. and ipecac., by which 0j of thick fluid was ejected; in 1½ hrs. pulse 120, feeble and irreg. in force; 3 hrs. after, no dil. of pupil, but numbness and tingling remained. | Next day perfectly well. | | Dr. Macready.  
| An emetic given; alcoholic stimuli; vomited again; convulsive movements; face more deadly pale; cold and clammy perspiration. | Died in 3 hours. | Veins of brain much congested; serous effusion in great quantity under arachnoid; lungs gorged with dark blood; right cavities of heart filled with the same; mucous membrane of stomach of dark red color; other viscera healthy. | Dr. Easton.  
| In 1 hr. great prostration of strength, pulse 120, very feeble; countenance pale; pupils much dilated; slight headache; consciousness perfect, but mind occasionally wandered; resp. short and labored; gave brandy, carb. ammonia. &c., sinapisms and artificial heat. | Recovered in 8 hours. | | Dr. Tucker.  
March, 1852. |
| Emetics and emollient drinks. | Recovered in 2 days. | | M. Degland.  
<p>| Do. | Died in 2 hours. | Only appearances of note, were great redness of mucous membrane of stomach and small intestines. | M. Degland. |</p>
<table>
<thead>
<tr>
<th>Sex</th>
<th>Age</th>
<th>Quantity and kind taken.</th>
<th>Symptoms.</th>
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<tbody>
<tr>
<td>F.</td>
<td>Ad.</td>
<td>One ounce of tinct. of root.</td>
<td>Sense of swelling and burning in tongue, extending along oesophagus to stomach; soon after, shivering, swelling of face, vomiting, purging, and violent colic.</td>
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<td>45.</td>
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<tr>
<td>46.</td>
<td>Infant</td>
<td>Ate leaves and flowers of the plant.</td>
<td>Shortly after began to stagger, as if tipsy; then pain in abdomen.</td>
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<tr>
<td>M.</td>
<td>66.</td>
<td>Eighty drops of tincture of root</td>
<td>After using the drug four days, was found with extremities cold; skin cold and sweating; pulse in ten doses 130, quick and feeble; cramps in legs, and spasms of pain in abdomen; head somewhat confused; slight diarrhoea for few days previously.</td>
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<td>47.</td>
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<tr>
<td>48.</td>
<td></td>
<td>Ate of root.</td>
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<td>M.</td>
<td>7.</td>
<td>Do.</td>
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<td>49.</td>
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<tr>
<td>M.</td>
<td>14.</td>
<td>Tablespoonful of tincture of root.</td>
<td>In 5 minutes, uneasy sensation in abdomen; in 20 minutes face pale; pulse 80, regular and full; pupils slightly dilated; intellect clear, and remained so till death; muscular movements impaired; head felt heavy and full; sight and hearing unaffected; frequent retching; no vomiting until after emetic; at first copious, afterwards frequent and violent, but became gradually less; pain in oesophagus and stomach; first after vomiting, great prostration.</td>
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<td>60.</td>
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<tr>
<td>F.</td>
<td>Ad.</td>
<td>Tablespoonful of saturated tincture.</td>
<td>[Had been using the tincture externally for a few days previously for neuralgia.]</td>
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<td>51.</td>
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<tr>
<td>F.</td>
<td>Ad.</td>
<td>Teaspoonful of saturated tincture.</td>
<td>15 minutes, retching and burning pain in stomach; some hours, vomited freely after an emetic; skin cold; pulse 100, feeble and regular; spasms of fingers; frequent convulsions; mind clear all through.</td>
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<tr>
<td>52.</td>
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<tr>
<td>F.</td>
<td>Ad.</td>
<td>3j Fleming's tincture.</td>
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<td>53.</td>
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Emetics and emollient drinks. | Died in 2 1/2 hours. | Only appearances of great redness of mucous membrane of stomach and intestines. | M. Degland.

In 2 hours an emetic given; immediately the eyes became convulsed; trismus; trunk bent rigidly backwards; limbs convulsed. | Death ensued in 2 1/2 hours. | | Jour. de Chem. Méd., 1840, p. 94, quoted by Christison, 4th Edin. ed., p. 875.

Mild aperients; camphor; ammonia; next day torpid, and could scarcely be roused; intellect very clear; no paralysis. | Died in 24 hours after death: blood unusually fluid; no other morbid appearances. | | Prov. Med. and Surg. Jour., Aug. 20, 1843, p. 535.

Had convulsions previous to death. | Died in 1 1/2 hours. | | Dr Geohegan.

Zinci sulph. 5j; ice water douche to head; sinapisms, &c.; pulse 45 and regular; extremities cold; vision very dim; jactitation; no numbness except in head; used stimulii; reaction; in 1 1/2 hours again collapsed; rigidity of muscles of back and neck. | Died in 2 hours. | | Dr Geohegan. Dublin Jour. of Med., July 1, 1851, p. 409.

| Died in 2 No autopsy made. hours. | | Idem.

Ipecac.; frictions to surface; sinapisms, &c.; stimulii; 3 hours after, pain in throat and thorax; constant retching; resp. irregular and spasmodic; pulse 120, feeble and intermittent; pupils dilated; tr. opii often repeated; after this, rapid recovery. | Died in 5 hours. | | Dr. Gray. J. Y. Jour. of Medicine. Nov., 1848, p. 336.


The following is an analytical summary of the fifty-three cases of poisoning by aconite, reported in the preceding table:

Sex.—Males, 24; females, 12; sex not given, 17.
Age.—Adults, 47; children, 6.

Quantity and Kind Taken.—3 iij of root taken by 4, all males, of whom 2 recovered and 2 died; root in substance, one and a half, 1, a male, died; half a root, 1, a female, recovered; very small piece of root, 2, both females, 1 recovered, 1 died; root, quantity not given, 3, both males, died; leaves, quantity not mentioned, 6, all males, 3 recovered, 3 died; leaves and flowers, 1, an infant, died; f§jiss of fresh juice, 12, recovered 9, and 1 male and 2 females died; tablespoonful of saturated tincture, 2, both females, 1 recovered, 1 died; tablespoonful of tincture of root, 1, a male, died; mouthful of tincture, 1, a female, recovered; mxxv of strong tincture, 1, a female, recovered; f§jiss of tincture (Parisian Codex), 1, a male, recovered; f§j of tincture of root, 3, males 2—recovered 1—died 1, female 1, died; mxxv of tincture mxx of tincture belladonna, and f§j tincture of musk, 1, a male, died; teaspoonful of saturated tincture, 2, both recovered; tincture of root, dose not specified, 5, recovered 2, died 3; f§j of decoction, 1, a male, died; grs. v of fresh extract, 3, recovered 2, died 1; grs. ijs of aconitina, 1, a male, recovered; gtt. lxxx of tincture, in ten doses, 1, a male, died, §i Flem's tr. 1, died.

Symptoms.—Appeared immediately in 3, all recovered; shortly after in 10, 5 recovered, 5 died; in quarter hour, 4, 3 recovered, 1 died; in two hours after, in 1, died; no time given in 34; tingling, prickling or burning sensation occurred in 24; not mentioned in 27; vomiting in 38; early in 20; not until emetics were given in 5; no emesis except produced by emetics, 8; vomiting violent in 11; copious in 4; slight in 1; matters ejected were green, livid, and bilious, in 13; no nausea in 1; diarrhœa in a few, purging in 12; pupils dilated in 18—early in 15, late in 3, contracted in 2, both early; natural in 1, its condition not stated in 31; restlessness in 16; surface cold and sweating in 30; respiration short, hurried and labored in 20, stertorous in 1, not noticed in 31; severe pains in abdomen, 19; copious flow of saliva in 1; dysphagia in 3; inability to walk in 3, vision dim in 5, totally blind in 1, almost blind in 1; intellect entire in 12, stupor or unconsciousness in 5, not mentioned in 35; paralysis in 3; no paralysis of sensation or motion in 1, others not stated; idiotic, 1; apoplectic, 1; speechless, 1; difficulty of articulation, 1; speech thick, 1; staggering in 2; convulsions general in 7; trismus in 1; twitchings of facial muscles, 1; excessive
trembling in 1; tremors in 3; cramps in 14; shivering in 2; great weakness in 15; headache and vertigo, 14—slight in 1, violent in 13; delirium in 4, slight in 2, violent in 2; occasional incoherence in 2; no delirium or sleepiness in 2; others not noted; pulse frequent, weak, and often imperceptible in 16, slow and irregular in 4, not mentioned in 32; lips blue in 2; countenance livid in 1; nails livid in 12; foaming at mouth in 2; sense of swelling of tongue or face, 13; of limbs, 1; hands clenched 2; syncope in 3; tenderness of epigastrium in 7; eyes glaring and protruded, 1, fixed in 1.

Result.—Recovered, 27; males, 9; females, 6; sex not given, 12. Died, 25; males, 14; females, 5; sex not stated, 5;—of these there died in one and a quarter hours, 1, a male; in two and a quarter hours, 1; in two and a half hours, 1, a female; in two hours, 8—males, 2, females, 2—sex not given, 4; in three hours, 4, males, 2, females, 1; no sex given, 1; in seven hours, 1, a male; in six days, 1, a male; in a short time, 2—1 male, 1 female; in a few hours, 1, a male; no time specified, 4, all males, five hours, 1, female.

Post-mortem appearances.—Lungs congested in 7; vessels of brain gorged in 5; mucous membrane of stomach red in 6; patches of darker color on its surface in 5; intestines injected in patches or otherwise in 6; rectum and oesophagus very red in 3; vessels of pia mater highly injected in 3; serous effusion under arachnoid in 4; at base of brain in 3; abdomen swollen in 2; bowels filled with air in 2; stomach empty in 2; containing gray-colored liquid in very small quantity in 3; filled with gas in 3; right side of heart filled with dark blood in 1; liver, spleen, and kidneys engorged in 1; healthy in 1; blood unusually fluid in 1.
murmurs do often exist is but too true. But that they always exist where these sounds are heard, or that they are the only cause of such sounds, I do most strenuously deny. In fact I do not believe that in the great majority of these cases there is any structural change in the valves whatever, or any deposits upon their surfaces. I believe the sounds in most of these cases depend entirely upon a change in the circulating fluid itself. We all know that in acute rheumatism, more than in any other disease, the plasticity and density of the blood is increased by the increased quantity of fibrin which it contains. Now this increased density and plasticity of the circulatory fluid must of course produce a decidedly increased friction upon the endocardial surface, and upon the valves, and in this way produce this endocardial murmur, in the same manner that an effusion of lymph, between the pericardium and the surface of the heart, produces the friction sound which we so plainly hear in pericarditis. Both these sounds, in my opinion, are produced in the same way, that is, by friction; one upon the internal surface of the heart, the other on the external. I have been led to adopt these views, in the first place, from noticing the little disturbance which takes place in the circulating system, during the existence of these complaints; and, secondly, from observing how quickly these sounds disappear, when the inflammatory state of the system is subdued, and the blood defibrinated, by proper remedies, which could not possibly be the case if these lesions actually existed. We know that a change of consistency in the circulating fluid does produce anaemic murmurs without any structural changes. Then why not in other diseases? The change in the blood in anæmia, though not identical with that in rheumatism, is, after all, analogous. In one fibrin is actually increased, in the other relatively so. In both cases the blood is more plastic, and the friction greater, and therefore both states of the blood are capable of producing endocardial friction sounds. My object, in this short communication, is to call attention to this view, which others may perhaps already entertain.
PART SECOND.
CRITICAL ANALYSIS.


The transactions of our great national Association augment in interest and value each year. The present volume yields abundant proof of the fact that medical observation and research have been prosecuted with as much vigor and ability during the past as during any former year of our Society's history. It is a professional document of which every American physician may be proud; and we are gratified to learn from two or three sources that this annual issue is becoming better and more generally appreciated, as evidenced by an increased effort on the part of members and of Societies represented in the Association to secure for it a wider distribution.

The first article which we are led to notice is the Address of the retiring President, Dr. Beverly R. Wellford, of Virginia.

He, in the first place, notices the origin of the Association, the necessity for its formation and the objects aimed at in it, and then alludes to the proposed modification in the plan of organization, and urges "great caution in the introduction of material changes."

After alluding to the influence of the Association in exciting Federal and State Legislatures to healthy action on the subject of vital statistics, and of the importation of spurious drugs and medicines, and the direct good yielded to its members by its published transactions, he thus eloquently notices the charge made by some that the Association has as yet accomplished nothing, and has even injured the profession in the estimation of the public by exposing its errors:

Is it also nothing, by unaided, intrinsic moral power, to have bound in one code of medical ethics thousands of men in every section of this wide Union—each one free to act according to his own individual views, but yielding them in cheerful obedience to the
opinions of the Association, with as much deference and submission as if it were armed with the power and the terrors of penal law? Is it nothing, unendowed with compulsory authority of legal enactment or the seductive influence of the mileage and per-diem pay, annually to convoke such an assembly as I now have the honor to address? Such a congress, of such materials, and under such circumstances, presents a spectacle of moral beauty to which the opponents of medical reform cannot be insensible. It must command their respect and admiration, even if it fail to secure their cooperation. I know not, gentlemen, what may be the effect on others of an occasion like this; but, for my single self, when I thus recognize the denizen of the city and the forest—him of the frozen North and of the sunny South—him of the mountains, the rivers, and the prairies of the West, with him from the borders of the broad Atlantic, bringing their various opinions and prejudices, and casting them together as a sacrificial offering on the altar of science and professional patriotism,—when I see them animated by the same honorable and lofty impulse, and in fraternal harmony uniting their efforts to attain the same grand results,—I feel an honest pride in my profession and my country, and an abiding confidence that to such sons the high destinies of both may be safely entrusted.

Some plans for professional improvement and benefit are then indicated, and the Address closes with an eloquent tribute to the memory of Drake and Horner.

Report of the Committee on Medical Education.—This is, in the main, an excellent and able report; yet a few of its conclusions are to be taken with some grains of allowance. After giving a résumé of the opinions of former committees who have reported on the subject, the Chairman, Dr. Z. Pitcher, who is the author of the Report, proceeds to speak of the influence of the Association in elevating the standard of office and college education, and particularly enters into the desired improvements in medical colleges. He is a strong advocate (as by his relations to the University of Michigan we should expect him to be) of "free colleges for the preparatory and professional education of young men." He illustrates the feasibility of the project by giving a synopsis of the organization of the University of Michigan. Of the main features of that plan we approve. We demur strongly, however, to one inducement, which it is proposed to offer to students, and that is, the deduction of one year from the term of medical study of all students who first graduate in the department of the Arts.

It is true that those who have acquired the mental discipline, afforded by the literary course, may be able to receive and digest as much medical knowledge in two years as the undisciplined could in three; yet it must be conceded, by every reflecting member of our
profession, that, even with a good preliminary education, and a diligent pursuit of medical study for three years, the student graduates with only a general comprehension of the leading departments of professional knowledge, while the important and practical details connected with forensic medicine, physical diagnosis, the extensive subject of hygiene, the special investigations of particular classes of disease, as those of the eye, skin, and sexual organs, besides a wide range of other subjects, are yet to be learned.

While, therefore, it may be proper to incite the pupil to suitable disciplinary preparation, we regard the inducement of a shortened term of medical study as mischievous in the extreme. The time is not distant when four or five years will be regarded as a period too short, in which to master the important subjects included in our professional curriculum, whatever may have been the preliminary education.

The author of the report very briefly but ably discusses the importance of a sound preliminary education, and particularly urges attention to the classics, mental philosophy, botany, zoology, meteorology, and geology.

The reporter objects to the sentiments expressed by former committees, by whom it has been proposed not to increase the number of schools so situated, as not to give the pupils the benefit of hospital practice. He would extend the hand of fellowship to all schools who teach the ordinary course, but would restrict them in conferring degrees of a higher grade than Bachelor of Medicine, leaving the advancement of the pupil in higher attainments, and the conferring of higher degrees, to that class of institutions "having their seat in the great commercial cities," contiguous to hospitals.

He discusses with some severity, mingled with not a little justice, the common methods of hospital and clinical instruction. He looks for little improvement except in those who are the private pupils of a hospital, or who observe at the bedside of the patient of the general practitioner.

He would reconstruct our hospital organization, and adapt it to the wants of the time. This could be done by erecting them into schools of practice, with a special faculty, whose plan of instruction should have a direct relation to the cases in their wards, so that each should become an illustration of the text of the professor.

The committee, in closing their report, submit the following resolutions:

1. Resolved, That the Association reaffirm its formerly expressed opinions on the value and importance of a general education to the
Critical Analysis.

student and practitoner of medicine, and that it would gladly enlarge its rule on this subject, so as to include the humanities of the schools, and the natural sciences.

2. Resolved, That, in the opinion of this Association, a familiar knowledge of the elements of medical knowledge should precede clinical instruction.

3. Resolved, That in order to accomplish the latter, the hospitals, when they shall be elevated to the rank of schools of practice, and the intelligent private preceptor, are the most effectual instrumentalities to be employed.

Report of the Committee on Medical Literature, by N. S. Davis, M. D., of Chicago, Illinois. The first portion of this report is devoted to a consideration of the medical periodicals issued during the year under review. The whole number published was 28, viz., 4 quarterlies, 6 bi-monthlies, 15 monthlies, 2 semi-monthlies, and 1 weekly. This is the greatest number issued in any single country except Germany. Prof. Davis is led to believe that a decided improvement has taken place in the original department of our Medical Journals during the last two years, much of which he would attribute to the influence of the Association. Still he finds just reason of complaint that so much is crude and imperfect, serving merely to fill a certain space in journals, and afford the author an opportunity to see his name in print. The review department of our Medical Journals, with but few exceptions, the reporter characterizes as "meagre and unsatisfactory in the extreme." While we admit the truth of this remark, we are hardly disposed to censure the medical journalists of our country—whose readers desire rather a coup-d'oeil of each new book than an elaborate review of the subject—for not giving more than an analytical examination of new works as they appear. It must be reserved to quarterlies, or journals especially devoted to reviews, to enter upon an extended and critical analysis of each new publication, and present the existing state of our knowledge of the subjects on which it treats.

The reporter proceeds to notice some of the leading papers which have appeared in the transactions of State Societies and local organizations; the monographs and books which appeared during the year, with brief notices of their contents and character; and concludes with some very judicious remarks upon "the means that are best calculated to elevate the character and foster the growth of a medical literature truly national or American." The defects in our medical writings are referred to four primary sources, viz.: 1. Deficiency of preliminary education; 2. The absence of a clear and definite percep-
tion of the fundamental principles of physiology and pathology; 3. Defective modes of investigation, and 4. Too much haste in the preparation of matter for the press. The writer proceeds to remark upon these several heads with much force and truth, and concludes that "our great reliance, therefore, must be on the creation of such a sentiment throughout the profession as will not only restrain individual members from encouraging uneducated young men to enter the ranks of the profession, but as will also develop a nobler idea of what a physician should be, and with it an appetite for a purer, more philosophical and comprehensive, professional literature." The means of effecting this desirable reform he believes to be, the faculties of the medical colleges, the conductors of medical periodicals, and the active members of national, State, and local organizations. We cannot too much commend this portion of Prof. Davis' report; it is ably drawn up, and replete with suggestions of the highest interest to our common profession. Appended to the paper is a tabular statement of all the issues of the medical press of this country, for the year included in the report.

On the Agency of the Refrigeration produced by Upward Radiation of Heat, as an Exciting Cause of Disease, by G. Emerson, M. D., of Philadelphia.—The object of this report is to show, that diseases usually attributed to exposure to the night air, the influence of the moon, &c., are due to the reduction of the temperature of the body by the upward radiation of heat. The law on which depends the deposition of dew—the condensation of the moisture of the atmosphere by the refrigeration of terrestrial bodies from upward radiation in the absence of the sun—was first discovered by Dr. Wells, a native of Charleston, S. C. We can recall no series of experiments more beautifully illustrative of the process of inductive reasoning than those prosecuted to so brilliant a termination by this philosopher in his garden in London, where he had taken up his residence. After explaining the nature of terrestrial radiation, and pointing out some of its ordinary effects, Dr. Emerson proceeds to show "how this rapid means of inducing refrigeration may become active in the production of disease." By having a proper covering, armies have been known to encamp in malarious localities without any ill consequences; such facts are to be explained by the known law that the interposition of any substances, even a passing cloud, between the object and the clear night sky, diminishes the upward radiation, and consequently prevents refrigeration. For this reason, an umbrella is a protection from cold by night, quite as much as from the heat of the sun (solar radiation) by day. To
this refrigeration from terrestrial radiation, or some other physical principle, are due all those evil consequences following an exposure to night air, which have from the earliest ages been ascribed to lunar and astral influences. The committee conclude with the hope that the brief exposition of this fruitful source of disease, which they have been able to give, will lead to more general observation upon this subject, and the application of the simple means of protection which suitable covering affords.*

On the Results of Surgical Operations in Malignant Diseases, by S. D. Gross, M. D., of Louisville, Ky.—In entering upon the duties of his appointment, Dr. Gross made great exertions to obtain, from prominent American physicians and surgeons, the results of their experience on the subject of his report; but with a success by no means commensurate with the importance of the question to be considered. Although thus left to his own resources, the author has produced a paper of great value on one of the most difficult and unsettled questions in modern surgery. In regard to the results of the surgical treatment of cancer, it is impossible at present to do more than approximate the truth, and arrive at conclusions susceptible of material modification in the progress of medical science; this approximation Dr. Gross has made, by exhibiting concisely, and with great research, the present state of our knowledge of the subject of his report. The first division of the report is devoted to General Observations. 1. Nature, objects, and difficulties of the inquiry. 2. Origin of malignant disease. 3. Hereditary nature of malignant diseases. 4. Latency of malignant diseases. 5. Circumstances contra-indicating surgical interference. 6. Reproductive tendency of malignant diseases after operation. 7. General rules respecting the manner of conducting excision of malignant diseases. 8. Treatment after operation.

The second division embraces General Observations on Cancer, in relation to the results of surgical operations. 1. Contribution of Dr. J. M. Warren, of Boston, consisting of, 1. Some operations for the removal of cancer, from which the patient still survives. 2. Others in which the disease, having been removed, has returned after a number of years, and again been subjected to the knife with relief. 3. Others which are interesting from their peculiarity. 4. The statistics of cancer, from the Mass. General Hospital. 5. Cases from public and private practice, the details of which are incomplete. II. Contribu-

*See Art. V. of the present number of this Journal for an ingenious examination of refrigeration as a cause of malarious diseases.
ctions of Professor Hamilton, of Buffalo, consisting of 59 cases of operation for the removal of cancer from various portions of the body, all carefully and very accurately arranged in tables. III. Facts and observations contributed by different surgeons, and gleaned from American and European authors.

The third division considers Cancer of particular Organs, in relation to the results of surgical operations. Cancer of the breast contains an elaborate examination of the opinions of authors on the treatment of cancer in this situation, from the time of Hippocrates to the present. In the subsequent sections of this division, the author treats of cancer of the eye, gums and jaws, lips, penis, testicle, uterus, anus and rectum, and bones. In this portion of the report, he enters upon a most laborious examination of the medical literature of different countries, and introduces a mass of medical opinion and statistical tables, derived from various sources, which seem to exhaust the subject. The conclusions of the author have, for the most part, already been published; there are some points of interest which he regards as still unsettled, that have not yet appeared, and which we extract:

First. Excision is of doubtful propriety in all cases in which the disease is of hereditary origin, or where it occurs in several members of the same family.

Second. It is doubtful whether an operation should be performed when the patient is very young, and the disease is of rapid growth. There is reason to believe that surgical interference, in such a case, will only expedite the fatal result, which is generally inevitable.

Third. It is problematical whether an operation should be performed when the disease is attended by suppression of the menses, or by great irregularity of this discharge.

Fourth. Not a few surgeons regard a resort to the knife as of questionable efficacy when there is a quickened state of the pulse, occasioned by the local irritation.

Fifth. There appears to be no general agreement among surgeons as to whether extirpation is proper when there are two or more coexistent and accessible cancerous tumors.

Sixth. It is supposed, but the fact is not established, that excision of carcinomatous tumors only tends to hasten the patient’s death.

Seventh. It is doubtful whether, as has been asserted by different surgeons, the prospect of a permanent cure is greater, all other things being equal, after an operation on an old cancer, than after an operation on a cancer of recent standing.

Eighth. It has been stated by writers of great respectability, among others by Dr. Macfarlane, of Glasgow, that, in robust women of sanguine temperament, the reappearance of cancerous disease, and its subsequent progress, are more rapid after operation than in nervous or lymphatic persons; an assumption demanding verification.

Ninth. It requires to be proved whether excision ought to be per-
formed in the ulcerated stage of malignant disease, as a means of prolonging life, and of procuring comparative relief from suffering.

*Report on the Epidemics of Tennessee and Kentucky*, by W. L. Sutton, M. D.—This was the only Report on Epidemics made to the Association, of the eight committees appointed for this purpose. It is, in some measure, a continuation of the Report made last year. It opens with the topography of certain counties, and the meteorological observations made in different localities; these facts the Committee very properly consider the basis of a correct report. The reporter then proceeds to consider the several diseases which have prevailed in his district. Cholera appeared at Memphis, Tenn., and Paris, Ky.; in the former place it occurred in the early part of summer, and was thought to be due to the miasmatic location of the town. At Paris, cold salt-water was taken internally, and freely applied to the surface with satisfactory results; at Memphis, all methods of treatment failed. Hooping-cough was rife in a few places, and was treated by Dr. McNelley, of Fayetteville, Tenn., in eight cases, with the free use of nitric acid drinks, with marked success. Measles prevailed in several localities, and at Memphis was quite fatal, principally from pneumonic complications. Dr. Ramsey, one of the Committee, concludes from his observations that this disease has no definite period of incubation. The furunculus epidemic occurred at Memphis during the summer of 1851 and 1852. Cholera infantum is common, in certain localities, every summer, while others are almost entirely free from it. The interesting papers on this disease, which appeared in the medical journals of Tennessee, by Dr. W. T. Baskette and Dr. T. M. Woodsen, are analyzed by the Committee. Diarrhoea and dysentery prevailed in many districts during the summer, the latter of which was quite malignant. The different methods adopted in the treatment of these affections are given in detail, and are of much interest. Fevers depending upon malaria prevailed to a considerable extent in the latter months of the year. We shall only notice the account of an *Anomalous fever*, which prevailed at Memphis, Tenn., late in the fall of 1852. It is given by Dr. Grant, who furnished to the Committee a report of the diseases of that city. He says:

The attack in most of the cases was not preceded by any marked indisposition. Chilly sensations, or a well-marked cold stage, of short duration, ushered in the disease. The reaction which followed was attended by intense heat of the surface; eyes more or less injected; circumscribed flushing of the cheeks; pain in the back; headache; pulse ranging in different cases from 90 to 120 beats in the minute, and continuing throughout the entire course of the attack feeble and unresisting;
the tongue at the commencement showed little evidence of departure from a normal appearance, but soon began to exhibit a line of dry and elevated papillae, extending back along its centre, which continued to widen, of a dark brown color, exhibiting a notable contrast with the more or less smooth and red tip and ridges of that organ. The thirst for cold drinks was intense. There was tenderness on pressure over the epigastrium. Nausea and frequent vomiting of pale-green fluids were troublesome symptoms. The bowels were not moved, except by medicine, when the dejections were quite fluid at first, and of a pale-green color. The urinary secretion was small in quantity, and highly colored, giving off a strong ammoniacal odor. Hemorrhage from the nose was common; in a few it occurred both from the nose and bowels; and in one case blood flowed from these, and likewise from the uterus, in considerable quantity, two weeks after the last menstrual period. Sleeplessness and jactitation were absent in no instance. Little or no delirium present; intellect clear. No eruptions discoverable. Great prostration of the vital powers present in all. The duration of the fever was from five to fifteen days, most of the cases being convalescent during the first week. It had, like those called continued, its morning periods of partial remission, but they were not the clearly marked remissions of the paroxysmal fevers prevailing at the time.

The gastro-intestinal mucous membrane, which was exempt from implication in the intermittent fevers, was now the part most seriously involved. The remedy found most serviceable was mercury carried to ptyalism. Quinia answered no useful purpose in controlling the disease. Hemorrhages from the bowels seem to have been common, and also beneficial, as no death occurred in these cases. The reporter adds that no cases of relapse were known. Typhoid fever appeared to be epidemic in some districts, but it presented no unusual symptoms, and seems not to have been very fatal. The report concludes with some remarks upon the mortality by phthisis in Memphis, a malarious district, which proves not only that a southern climate is not protective against consumption, but that this disease is equally fatal in a miasmatic region.

On Acute and Chronic Diseases of the Neck of the Uterus, by C. D. MEIGS, M. D., of Philadelphia.—The report of Dr. Meigs is entirely clinical in its character, and consists of a running commentary on some of the more common forms of the diseases of the cervix uteri. It aims to be practical rather than original, and, with the aid of an extensive series of illustrations, it will serve the practitioner a good purpose by enabling him to comprehend a class of obscure diseases. As this essay is announced as being published in a separate form, we shall reserve any further remark for the present.

An Inquiry into the Nature of Typhoidal Fevers, based upon a con-
sideration of their History and Pathology, by Henry F. Campbell, M. D., of Georgia.—In this inquiry, Dr. Campbell bases his theory upon rational induction and disclaims any reliance upon facts or cases of typhoid or typhus fever observed by himself. He gives as his reason for such a course, that "it is obvious to our own mind that any views of disease founded mainly upon rational induction, would be less liable to fallacy when based on the recorded careful observations of others, than when they are merely the interpretation of our own cases." With this explanation, he enters upon the inquiry in the capacity of an analyst. The first part of the report is devoted to a careful and minute analysis of the symptoms of typhoidal fevers, as observed in the nervous, circulatory, and digestive systems, and examines attentively all our authorities upon this subject. We have not space to follow the talented author in this investigation, and will only remark that, although we differ with him materially in his deductions, yet we regard his paper as one of the best reviews of present authorities on fever with which we are acquainted. The following will give the reader an idea of the author's peculiar views, as the result of this examination:

Starting with what he considered the rational assumption that the pathology of typhoidal fevers is in the ganglionic system of nerves, we have compared their characteristics and phenomena with, first, the normal action of this portion of the nervous system; then, with the known and well-established results of experimental irritation and action of various portions of these nerves, and we have found that the analogy is sufficiently close to admit the legitimate inference that the symptoms and pathological lesions of typhoid and typhus fever are produced by a normal action in certain portions of this system of nerves. First, because no typhoid or typhus phenomenon ever occurs, except in regions supplied by this system; secondly, because the peculiar phenomena of these diseases occur in a more marked degree in those parts more abundantly supplied from this source; and thirdly, because the nature of these symptoms are always found more purely and characteristically typhoid in those portions of the organism supplied exclusively by this kind of innervation. And further, on the one hand we are forced to admit the truth of these impressions, because we have hitherto a legitimate and consonant combination of theories, to our own mind, as competent to the full and rational explanation of all the phenomena of the disease as the one now offered.

However we may dissent from these opinions, the author's practical deductions are worthy of commendation. These are, to avoid all depressing measures, or such as are calculated to exhaust the nervous energies; and, on the contrary, to resort to sustaining treatment. The plan of Dr. Percival of resorting to cold affusions, especially
in children, he would rationally expect to be highly beneficial, from the known effects of cold water thus applied in improving the nervous centres. He would be led also to favor the use of quinia in large doses, as recommended by Dr. Dundas, and also a resort to strychnine in small doses, "with the view of waking up and restoring the diminished energy of innervation, upon which the impaired function depends, in the same manner that we would advise it in other similar cases, where the cerebro-spinal system was implicated."

On Coxalgia, or Hip-Disease, by Alden March, M.D., of Albany, N. Y.—Spontaneous luxation, as an occasional accident in hip-joint disease, is the universal opinion of surgical writers. Although this view is not always based upon post-mortem examinations, but seems to be transmitted from one author to another, yet it does not want the demonstrative evidence of actual dissection. It is true, however, that this accident is very often supposed to exist, when the appearances which lead to such diagnosis are due to other causes; in such instances the precise pathological changes which have taken place in the joint are not appreciated.

Upon the examination of the bony specimens of the hip-joint of persons who had died while laboring under a severe form of hip-disease, Dr. March was brought to the conclusion that all the signs usually relied on during life, as diagnostic of an idiopathic dislocation, could be explained by the organic changes in the form and relations of the head of the femur and acetabulum. Impressed with the importance of this idea, the writer has personally examined about forty pathological museums in this country and Europe, and, with paper and pencil in hand, made records of all the morbid specimens of hip-joint, whether wet or dry, amounting to about two hundred. It is not a little interesting to note the fact, that after this patient and laborious examination, extending over seven or eight years, of the actual condition in which the disease left the hip-joint in such a great number of instances, and a most searching analysis of surgical authorities, Dr. March takes the position "that spontaneous dislocation of the hip (as purely the result of morbid action unaided by superadded violence) seldom or never takes place." We do not perceive that he has made any decided advance upon former writers, for he admits the possibility of the dislocation, and contends only that it is very rare, and is often falsely diagnosed to exist. Much, however, has been gained by this pathological research and sifting of authorities, in making our knowledge of this troublesome disease more exact.
The second part of Dr. March's essay is entirely distinct from the first. In this he discusses the propriety of extension and counter-extension in the treatment of hip-disease, in an advanced stage, when the surfaces of the joint are covered with organized or organizeable matter, a method which he considers peculiar to himself. The great object of this treatment is, by keeping the joint surfaces quiet and in slight apposition, to promote ankylosis. To effect this object, a modification of Physick's long splint is employed, having an opening over the great trochanter to avoid undue pressure at this point. If deformity already exists, Dr. March gives ether, and forcibly brings the limb into its proper position, and at once applies the splint. But two cases are given illustrating this mode of treatment. The method of treating inflamed joints by perfect rest is entirely correct, analogically considered, but we doubt much its practicability when applied to hip-disease. In these cases the disease is not so much local as constitutional, and while rest for the former is of the first importance in its cure, active out-door exercise is the *sine qua non* of the latter. It is very questionable, therefore, if, in his efforts to relieve this formidable symptom of a constitutional disease, the practitioner might not be led to employ the means most directly tending to destroy the general health of the patient, and of course defeat his main object.

*On the Surgical Treatment of Morbid Growths within the Larynx*, by Gurdon Buck, M. D., of New-York.—The basis of this paper is the history of a case of polypus of the larynx which came under the writer's observation. The symptoms were those ordinarily present in this affection, and, as the whole subject was critically examined in a former number of this journal (Vol. viii, N. S., p. 15), we need not pause to detail them. The case derives its chief interest from the several efforts made to remove the morbid growths by external incision, after the plan of Ehrmann, and its final termination in gangrene of the larynx. The first operation revealed to the surgeon the fact that the largest of these growths, instead of being pedicillated, the form most favorable for excision, was sessile. The efforts to remove the latter were unavailing, owing to the deep situation of the larynx, the patient being fleshy, and the height to which the attachments of these growths extended. A few were snipped away, the trachea-tube introduced by removing a portion of the two upper rings of the trachea, and the patient allowed to rest. On the following day the attempt to complete the operation was renewed, but with no better success than on the day before; several portions of the tumor were removed with scissors, and the acid nitrate of mercury applied to the remainder. Fearing
to continue the application of the caustic to surfaces already highly inflamed, the operator determined to make another effort to reach the tumor by extending the incision farther upwards. This operation was, however, postponed indefinitely, owing to the existing swelling and inflammation, and the wound allowed to heal around the tracheal tube. The condition of the patient at first much improved, gradually grew worse, and, in about four months from the first operation, a second was performed in the manner already described, by extending the incision upwards so as to expose the larynx in its whole extent and the os hyoides. It was now discovered that the largest tumor was of a flattened form, closely attached on either side to the ventricles, and spread forward over the base of the epiglottis. The rima was so much contracted by them that the little finger could only be made to enter it from below with considerable pressure, while the forefinger, passed into the mouth, now detected the tumor at the orifice of the larynx. It being found impossible to remove the growth entirely, portions were excised sufficient to allow a free passage through the rima, and the wound closed after properly adjusting the tube. The patient recovered favorably from this operation, but signs of a return of the disease were soon manifested, and in about three months a third operation was undertaken, not however for the purpose of destroying the growths, but to introduce the tube lower in the trachea. From this time the ease steadily progressed to a fatal termination; deglutition became more and more difficult; expectoration of what was supposed to be an arytenoid cartilage occurred; and, finally, a bloody discharge from the throat, which assumed a gangrenous odor. She died six months after the last operation, suffocated from the failure in the attempt to introduce the tube which the patient had removed at night. The autopsy revealed extensive gangrene of the larynx, with contraction of the oesophagus. Examined by the microscope, these growths were found to be epithelial. A colored lithographic illustration of the morbid parts accompanies the paper.

Although this operation failed to give permanent relief to the patient, owing to the nature of the attachments of the morbid growths, yet we cannot consider it less creditable to this skilful surgeon, nor unworthy of the praise awarded to Ehrmann’s more successful case by Stromeyer, who declared it one of the most brilliant achievements of modern surgery. Had the tumor been pedunculated, which is the most usual form, there is little doubt of the entire success of the operation. It is not to be denied that the attempts to treat this disease by external incision have, except in the instance already alluded to, failed in giving
more than temporary relief, but they have generally been undertaken either in entire ignorance of the cause of the dyspnœa, or at the latest and most unfavorable period in the progress of the case.

Dr. Buck advises the insertion of the tracheal tube when suffocative dyspnœa comes on, and if the patient will consent, the subsequent laying open of the cavity of the larynx, with a view to the extirpation of the tumor. If it is found impossible to remove the morbid growth, he would thoroughly cauterize it with the acid nitrate of mercury before closing the wound, and afterwards treat it by the application of the dilute acid nitrate, or a strong solution of nitrate of silver repeated by the mouth.

Appended to this case is a résumé of the subject of polypus of the larynx, and tables in which the published cases, 42 in all, are carefully arranged. Dr. Buck gives to Dr. Green, of this city, the credit of directing the attention of the profession in this country to this subject, by his treatise on the surgical treatment of polypi of the larynx. This is an error, not in letter, but in spirit. The first paper published in this country on polypus of the larynx was by Prof. Parker, of this city, (New York Jour. of Med., N. S., Vol. viii.,) in which two cases, both occurring in his own practice, were reported with figured illustrations, one of which is the first case of true pedunculated polypus of the larynx recorded in our home medical literature. In this paper, also, were reproduced the material portions of Prof. Ehrmann’s monograph, and several other cases were added, of which Dr. Buck has very properly availed himself in the preparation of his valuable tables.

On the Sympathetic Nerve in Reflex Phenomena, by Henry F. Campbell, M. D., of Georgia.—The design of this short article is to establish the precedence of the writer’s enunciation of the doctrine of a reflex relation existing between the cerebro-spinal and ganglionic system of nerves, recently put forth by M. Bernard. The views of Dr. Campbell are contained in a paper on the Influence of Dementia in Producing Disease, published in the Southern Medical and Surgical Journal, in 1850. The author certainly establishes his claim to priority of publication, as far as regards Bernard’s article referred to in the Gazette Médicale; but, if we are not mistaken, similar views have been advanced at a still earlier date. As he does not, however, pretend to priority over all others, but only so far as his information extends, we will not be to the trouble of examining the subject farther.

Prize Essays.—The last two articles in the volume are the prize
essays. For the first time since the organization of the society, two voluntary communications were deemed worthy of its prizes. Without disparagement of preceding efforts of this kind, we may justly rank these essays among the most important contributions to medical science which the prize-awards of the association have yet elicited.

The first of these essays is On the Surgical Treatment of Certain Fibrous Tumors of the Uterus, by Washington L. Atlee, M.D., of Philadelphia. The class of tumors discussed in this paper have hitherto been considered beyond the resources of art, and in its preparation the author has relied entirely upon his own experience. He classifies these growths as follows: 1. Extra-uterine, or surface tumors. 2. Intra-uterine, or cavity tumors. 3. Intra-mural tumors of the uterus. Dr. Atlee gives the diagnostic marks of each of these classes of tumors, and carefully points out the sources of error in diagnosis. In each instance the uterine sound affords much assistance, as with this the relation of the tumor to the cavity and walls of the uterus may be discovered. The author is led from his own experience to believe that these tumors do occasionally undergo the cancerous degeneration; but he admits that the scirrho-cancerous tumors may have been mistaken in their early stages for fibrous tumors. Operations for the relief of these tumors must be undertaken before softening and degeneration takes place. This condition is marked, in the extra-uterine and intra-mural, by the occurrence of paroxysms of acute pain, soreness to the touch, formation of cysts containing liquid on the surface, failure of the general health and strength, emaciation, anasarca and ascites, and the peculiar straw-colored aspect of the skin characteristic of malignant disease. The intra-uterine tumor has, in addition to these symptoms, a sanious fetid discharge; it assumes a brownish, grayish, or black color, and its lower portion softens. Under these circumstances an operation is of doubtful propriety; a fact of considerable importance in the treatment of these tumors in their low degree of vitality, although they may have a highly vascular pedicle and membrane covering them. For this reason, if a section is made through their investing membrane, it may be followed by the death of the whole mass, owing perhaps to the admission of atmospheric air.

Another fact of great importance is contained in the following proposition: "That the excessive hemorrhages which sometimes occur arise not from the uterus itself, but from the vessels of the membrane which cover the tumors." The author supposes these floodings are due to a
rupture of the veins of the covering membrane, which become congested by the growth of the tumor, and the muscular action of the uterus impeding the circulation of the veins, while the arteries still continue their supply. The true method of procedure, and that which has in the author’s experience “invariably arrested hemorrhage instantaneously,” is thus given: “During hemorrhage, to pass the bistoury along the vagina into the cavity of the uterus, and make a very free incision into the most exposed portion of the tumor.” Too much value cannot be attached to this suggestion, if the experience of others shall confirm the correctness of the author’s practice.

Dr. Atlee proceeds to relate minutely the histories of 14 cases, in which he has operated for the removal of the class of fibrous tumors above noticed. The operation consists in introducing the knife into the cavity of the womb, and incising the attachments of the tumor, if intra-uterine, or cutting freely into its substance, if intra-mural, and endeavoring to enucleate it with the finger. To facilitate this operation, ergot is given freely some days previously, in order to bring down the tumor and dilate the os. The result of this operation, in the 14 cases recorded, are, 8 recovered; 5 died; 1 under treatment. Of those which died, 1 had pneumonia; 1 anemia; 1 erysipelas and peritonitis, following gastrotomy, and during a subsequent effort to remove the tumor through the vagina; 1 disease of the heart; 1 peritonitis, the tumor proving to be malignant. In the case under treatment, the author had some doubts as to the nature of the tumor.

The operation of Dr. Atlee is certainly very ingeniously conceived, and seems to have been very dextrously executed; of its practicability, the results thus far given are flattering, especially in the cases of non-malignant, intra-uterine, and intra-mural tumors. In these exceptional cases, where the tumor proves to be malignant, such surgical interference may be productive of great harm. Although, to avoid this contingency, so unfavorable to an operation, Dr. Atlee assumes that the fibrous tumor does not degenerate, yet he is compelled to admit that the scirrho-cancerous tumor may be mistaken for the fibrous, an error into which his own recorded cases show that he has fallen.

The second prize essay is on The Cell; its Physiology, Pathology, and Philosophy, as deduced from Original Investigations; to which is added its History and Criticism, by Waldo J. Burnett, M. D., of Boston. This essay was written in the latter part of 1851, to which time the author has endeavored to trace the physiological, pathological,
and philosophical history of the cell. It is obvious, however, that the history and criticism of a science, undergoing such annual modifications as that of microscopical physiology and pathology, written two years since, must necessarily be very imperfect. This deficiency Dr. Burnett has attempted to supply by inserting new matter as the sheets were going through the press. The essay displays the author's usual research, and is a valuable contribution to our knowledge of the cell. We notice some points open to criticism, but as they are not worthy of notice without a much more critical examination of the whole subject than we are at present inclined to enter upon, we shall defer for the present any further remarks.

C. G.


This is an exceedingly interesting and well-written dissertation upon a subject of very great importance; and it is manifestly the production of a mind well trained to close and scientific observation. The author evidently belongs to that class of physicians who cultivate mental independence as a cardinal excellence; and although we could wish that he had made more extensive and searching investigations, bearing on the special pathological events and relations of the peculiar forms of disease he describes, we are confident that the testimony of all intelligent physicians will confirm the opinion that he has brought forward and elucidated a subject hitherto almost entirely overlooked, yet of the greatest practical importance.

Dr. Buckler modestly presents this little volume as the fruit of gleaning in an old field, from which rich harvests have already been gathered; and we think that the ample results of the gleaning are not particularly flattering to the pretensions of many recent writers on Bronchitis. Though pulmonary engorgement, broncho-pneumonia, and pleuro-pneumonia, have always been recognized as frequent and very grave complications of acute rheumatism, probably few physicians have learned to distinguish the special form of bronchitis described by Dr. Buckler as dependent primarily upon the rheumatic diathesis, and having its election in the fibrous tissues of the pulmonary structures. That such a special variety of inflammation of the fibrous portion of:
the pulmonary tissues may occur, would certainly be a legitimate inference from what is known concerning rheumatic inflammation of the fibrous tissues generally. The occurrence of a severe and dangerous form of general pulmonary inflammation as a frequent event in cases of acute articular rheumatism, has been faithfully observed by Latham,* Taylor,† Fuller,‡ and other recent writers. Dr. Latham remarks that "such forms of pulmonary inflammation are portentous ingredients in the clinical history of acute rheumatism, and give a fearful interest to it." * * * In four instances of bronchitis, he affection was no mere catarrh, but an inflammation largely diffused through both lungs, producing deep oppression and dyspœna." Out of 136 cases of acute rheumatism, at St. Bartholomew's, Dr. Latham reports 24 cases of pulmonary inflammation. Out of 246 cases of acute rheumatism reported by Dr. Fuller, of St. George's Hospital, 41, or exactly 1 in every 6, were complicated by some form of pulmonary inflammation. These figures will probably be found to correspond very nearly with the observations of most physicians on this point. But the question now arises, does rheumatic inflammation of the fibrous structure of the lungs often, or ever occur as an idio-pathic and simple disease dependent solely upon the rheumatic diathesis, yet without any other or general manifestation of rheumatism? Dr. Buckler entertains no doubt upon this point, for in only nine out of twenty-seven of his cases of fibrous bronchitis had the individuals suffered any form of rheumatism previously, while in seventeen of these cases the bronchitis preceded all other manifestations of disease. There was more or less endocardial murmur in eleven cases, pleuritis super-vened in five, and pericarditis was observed in four. Five of the individuals suffered on different occasions with rheumatic inflammation of the sclerotic tunic of the eyes; but only two of these ever labored under articular or general rheumatism. The author remarks, that "it is, therefore, probable that persons prone to rheumatic scleritis, are also peculiarly subject to fibrous inflammation of the bronchi."

In a large proportion of our author's cases, it appears that there was no other manifestation of rheumatic inflammation than the bronchitis; and in but few was there any general manifestation of rheumatism. It

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* Latham's Clinical Medicine.
‡ Dr. Fuller, Rheumatism, Rheumatic Gout, &c., p. 307, et seq.
is stated that most of the cases occurred from exposure of the body to wet or dampness at a low temperature.

The Symptoms.—The following are mentioned as the most important:

"The symptoms most strikingly characteristic of the acute variety of rheumatic bronchitis are, profuse, irregular sweats, inordinate sensibility to cold, transient flushings of the face, and either a constant or a paroxysmal and unproductive cough."

"There is usually no fixed pain or soreness about the chest, but both are sometimes felt during the act of coughing." "The auscultatory signs, with the exception of an occasional sibilant râle, are entirely negative; so that, so far as these are concerned, the disease has to be made out in most cases solely by the method of exclusion. Where, however, pneumonia sets in, it becomes a most important sign of the preëxisting brouchitis, since it can generally be recognized either by the sputa furnished or by the ear. * * * Moreover, rheumatic inflammation has probably a large share in the production of both narrowing and dilatation of the bronchi, * * the fibrous and cartilaginous tissues of which are softened and rendered plastic by preëxisting rheumatic inflammation."

"In acute fibro-bronchitis, the exacerbations of cough occur usually during the night, while in the subacute variety of this affection this symptom is generally most troublesome during the day."

As to frequency of occurrence of fibro-bronchitis, Dr. Buckler believes, "that, as catarrh occurs sporadically, the rheumatic variety will be found in about five out of twelve cases; but that, during epidemics of influenza, the rheumatic element will be recognized in a smaller proportion of cases." And he adds, "It is believed, also, that the cartilaginous and fibrous structures of the bronchi are more frequently the seats of rheumatic inflammation than any other white tissues of the body."

Though the distinctive symptoms of fibro-bronchitis may be of a singularly negative character, and although Dr. Buckler may have erred in considering this form of inflammation necessarily and uniformly dependent upon the rheumatic element or poison, it is certain that the form of disease which he describes is of very frequent occurrence, and every physician's experience will bear testimony to the fact, that it is often very grave in its consequences. The obstinate and painful cough, profuse perspirations, and exacerbations of fever, which characterize
such bronchitis, never yield to the ordinary remedies for common catarrh; while the most dangerous parenchymatous engorgement, and the most obstinate pneumonias, which we are ever called to treat, are connected with this form of disease. Though we do not think that the disease is necessarily rheumatic, because seated in the fibrous tissues, there can be no doubt that plastic inflammation of the fibrous structures of the bronchi is really of frequent occurrence, notwithstanding the silence of most thoracic pathologists upon the subject. To Dr. Buckler belongs the honor of having first described the disease to American physicians; and whatever may be thought of his theory of its etiology, he has certainly presented the subject in an exceedingly clear and practical light, and by such facts and arguments as must command the general attention of our profession.

Dr. Buckler, at the time he wrote, was probably not aware of the investigations of Dr. Black on the Pathology of the Broncho-Pulmonary Mucous Membrane. Indeed, only the First Part of Dr. Black's papers has yet been published. (Edin. Monthly Jour. Med. Sci., Jan., June, 1853.) As the exceeding richness of research which characterizes this elaborate series of papers amply compensates for the poverty of Dr. Buckler's pathological investigations, we may hereafter recur to some of Dr. Black's conclusions.

Dr. Buckler proposes the following simple, but imperfect, classification of bronchitis:

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\begin{align*}
\text{Mucous} & : \text{Frequently both idiopathic and symptomatic.} \\
\text{Fibrous or rheumatic} & : \text{Generally idiopathic; often symptomatic.} \\
\text{Fibrous or gouty} & : \text{Never idiopathic; rarely symptomatic.}
\end{align*}
\]

He justly remarks, that "it is very remarkable that the differential diagnosis between mucous and fibrous inflammation of the bronchi should have remained without elucidation until this time, particularly when it is remembered that the relation which these two tissues bear to each other is so like that of the two similar tunics of the eye, the sclerotic and the conjunctiva. Probably the reason of this neglect is, that fibrous bronchitis is so often complicated with mucous catarrh and pneumonia." He adds, "It does not appear that any medical writer, ancient or modern, has noticed the existence of any such dis-
ease as acute, sub-acute, chronic, idiopathic, or symptomatic fibrous bronchitis, and yet it will be shown that this affection is an entity as well marked as any other in existence, and that it may be recognized by signs as clear and well defined as those which indicate a pleurisy or a pericarditis."

Our author's attention was first called to "the occasionally intractable and fatal character of catarrh, whilst attending in the spring of 1842 a patient who labored under a local bronchitis, confined entirely to the lower lobe of the right lung," which after a month terminated her life. In this case, the autopsy revealed no trace of pneumonia; "each part of every lobe crepitating on pressure. There was partial engorgement of the different lobules of affected lobe, seeming to result from intense injection of the delicate nutritious blood-vessels supplying the terminal air-tubes." Upon section of these terminal tubes of the affected lobe, when separated from the surrounding parenchyma, and washed, they exhibited in their sub-mucous tissues the only evidences found of inflammation in the pulmonary structures.

Here arise the following important questions, which Dr. Buckler proposes to answer:

How is it that one individual recovers without difficulty from a diffused catarrh, in which all the bronchi of both lungs are involved, while another dies of a local bronchitis, involving only the air-tubes of a single lobe? And why is it that one patient may die from two square inches of pneumonic engorgement, while another, treated in the same manner, recovers rapidly from a pneumonia involving one entire lung?

When a man is treated for, and dies of pneumonia, or any other affection, and an autopsy is made, the attending physician is satisfied, because his diagnosis is proved to be correct. And correct it doubtless might be, as far as his observation, and the present state of medical knowledge, enabled him to go; but did he diagnosticate the condition in which the patient died, and provide properly for the dangers which it involved? Hundreds of patients have recovered from pneumonia, involving twice as much of the pulmonary parenchyma as we find in the supposed case, and why, therefore, did this or that individual die of the particular lesion discovered? What were the antecedents, the supervening accidents, or the associated circumstances, which induced the fatal result? Of what morbid condition did the patient die?

Dr. Buckler devotes a chapter to the consideration of the vascular mechanism of the pulmonary circulation, in which he gives a very satisfactory account of the mode in which fibrous bronchitis and pneu-
monia occur, and the nature of the grave pathological events which are thereby induced. In this connection he expresses some opinions in favor of the therapeutic value of bloodletting, which, by many of his readers, may be deemed gratuitous, and unwarranted by experience; but his suggestions on this point are certainly worthy of attentive consideration. In his discussion of the question of the rheumatic element, as connected with fibro-bronchitis, Dr. Buckler makes quotations from the writings of Tissot, Rodamel, Stoll, and Boerhaave, showing that those venerable observers recognized the frequent occurrence of a peculiar and obstinate pulmonary inflammation as an event in the history of rheumatism. But associated as such testimony is with the vague notions of an antiquated humoral pathology, it is valuable only so far as the observation of the events on which it is based is concerned.

By no one class of evidences or arguments does our author succeed in demonstrating the dependence of fibrous bronchitis upon the rheumatic diathesis, but by the *tout ensemble* of events and evidences it is rendered quite probable that the inflammation in question usually depends upon the same idiopathic causes as induce rheumatism in other fibrous tissues of the body. In the analysis of twenty-seven cases of fibro-bronchitis observed by Dr. Buckler, it does not *certainly* appear that even a majority of them were necessarily of rheumatic origin, unless the fact of the sub-mucous bronchial inflammation be taken as evidence, simply upon the ground of its being seated in fibrous tissues. With the light we at present have upon this subject, we cannot admit that fibro-bronchitis is necessarily of rheumatic origin. Indeed, we are prepared to prove, that, in a large proportion of cases, the rheumatic element does not enter into its history. Though it is not definitely known in what the specific element of rheumatism consists, it is known by what laws its manifestations are governed; and judging by these laws, and by what is known concerning the pathological history of bronchitis, we may safely conclude, that a large proportion of those cases, which by our author would be justly termed fibro-bronchitis, are really rheumatic. The eleven illustrative cases given by Dr. Buckler are, perhaps, sufficiently conformable to the rheumatic law to merit the title he applies; but what was the nature of the other sixteen cases which he introduces, does not so certainly appear.

We dwell upon this point, because we believe it to be a matter of primary importance, in the treatment of these cases, clearly to discrim-
inicate such as are of rheumatic origin from those which are of a simple plastic variety. Long before the appearance of Dr. Buckler’s treatise, we had learned to recognize and treat the forms of bronchitis and pneumonia, which are associated with the rheumatic diathesis; and if we have not greatly erred in our observations and study of this subject, we have quite as often met with another class of similar cases in which there existed no evidence of rheumatism.

In this connection, we would refer to some of the results of Dr. Black’s elaborate researches, which are of such a character as to merit the utmost reliance, and which we conceive will do more to advance the scientific pathology of bronchitis than all that has been hitherto written. But our references must be brief, as we have already exceeded the limits we designed for our notice of Dr. Buckler’s interesting essay.

Under the head of Specific Inflammation of the Broncho-Pulmonary Membrane, Dr. Black remarks, that the bronchi are liable to specific inflammations, depending upon the different poisons of scarlatina, etc., and the morbid agents of gout and rheumatism; and that the general pathological conditions of the membrane, and the phenomena arising out of them, are very similar to those of the simple forms of inflammation, though the products of the inflammation are occasionally modified by the particular poison or diathesis which influences the system at the time. Thus the sputa of arthritic and rheumatic inflammation of the membrane Dr. Black frequently found to contain urate of ammonia, and occasionally the urates of soda and of lime.

Under the head of Bronchitis involving the submucous tissue, he says that “all the severe forms of simple bronchitis are referable to this variety”; which he has found to differ from the common epithelial catarrh in the following important particulars:

1. Respective duration. 2. Type. 3. The tissues involved. 4. Nature and composition of the discharge from the affected membrane. 5. Effects, both primary and secondary.

The following are among the many important conclusions at which he has arrived by careful investigations:

Fibro-bronchitis may be either acute or chronic, while epithelial bronchitis is always acute.

In the sputa of fibro-bronchitis there are usually found certain organic and inorganic bodies, in addition to the epithelial scales, etc., seen in the epithelial variety.
The effects of submucous inflammation of the bronchi are, bronchial obstruction, hypertrophy, ulceration, and bronchial abscess, as primary; and emphysema, bronchial dilatation, and collapse and atrophy of the pulmonary tissue, as secondary. The congestion and engorgement of the pulmonary tissues is much more intense than in simple catarrh. The sympathetic fever, or, when the engorgement is excessive, the great prostration arising therefrom, is frequently marked and dangerous.

Aided by the light which Dr. Black's investigations have thrown upon this subject, it is not difficult to make out a clear differential diagnosis in any case of bronchitis or broncho-pneumonia. And although Dr. Buckler has entirely neglected to avail himself of the aids of microscopical anatomy, and though he has even suggested the impossibility of deriving much light from dead-house investigations, Dr. Black, true to the present demands of pathological science, has faithfully interrogated nature in all the morbid conditions in the forms of disease in question, neglecting no anatomical, physiological, chemical, or microscopical research which could be made available.

As instances of the exactness and importance of Dr. Black's demonstrations, we would refer to his conclusions in reference to the pathological events of the second or plastic stage of bronchitis involving the submucous tissue.

1. That "there is invariably exudation into the submucous tissue," and also similar exudation into the basement membrane of the mucous tissue.

2. The coagulated portion of the exudation into the fibrous tissue "forms a nutritive matrix, similar to the basement membrane in the healthy condition and action of that structure; and in it germinal centres arise from molecular aggregation of the fibrin, which possesses an inherent capability of being developed into cells," and these exudation cells undergo rapid development and organization, conformably to the laws of cell-life, producing hypertrophy of the affected tissues, and consequently grave pathological consequences; or at an earlier or later period the exudation cells may undergo transformation into pus, through the agency of oxygen in respiration, the epithelium and its basement membrane of the mucous tissue becoming denuded or destroyed to a greater or less extent, and ulceration resulting.

As it was our design merely to call attention to certain points of
great practical importance, we will here close this examination of these contributions to the pathology of bronchitis, by referring to the bearing which they have upon the most occult and fatal forms of disease to which the pulmonary structures are liable.

**Pulmonary Tuberculosis.**—Though it is undoubtedly true that tuberele is not a product of the degeneration of lymph, it is certain that inflammation of the broncho-pulmonary membrane almost uniformly precedes and accompanies the development of tuberculosis; and Dr. Black has found that an exudation of aplastic lymph is strikingly characteristic of fibro-bronchitis, in individuals of the tubercular diathesis.

**Pneumonia.**—The statistic observations of Grisolle and others exhibit the fact that from 25 to 30 per cent. of all cases of pneumonia are preceded for some days, weeks, or months, by well marked bronchitis; and Dr. Buckler justly asks, “If the bronchitis were suitably treated before the pneumonia sets in, might not the engorgement which complicates these cases so sadly, and adds so materially to their danger, be prevented effectually?”

**Asthma.**—The fact is now well established that all cases of true spasmodic asthma are found to be connected with previous and continual inflammation of the bronchia; and the rigid investigations and recent experiments of Dr. Black have furnished absolute demonstrations of the inflammatory origin of asthma, while they point out the therapy most applicable to its cure or relief.

**Gangrene.**—Speaking of the complication of idiopathic pulmonary engorgement with fibro-bronchitis, Dr. Buckler remarks, that “the congestion surrounding the different pulmonary structures is so absolute, and the circulation in the delicate and tortuous branches of the nutritious arteries is in many places as effectually cut off as though a ligature were tied about them; and death of the lobules thus deprived of nutrition, or gangrenous eschars, are the necessary results.”

On the subject of treatment of fibro-bronchitis, Dr. Buckler makes some pertinent suggestions; among which, he gives especial prominence to blood-letting, which he advises to be resorted to largely in the early stages if pneumonia be present. This he would follow with stimulants and stimulating expectorants, diaphoretics, mild purgatives, and ipeecuanga. Where the nervous system is especially depressed, he considers that “the administration of antimony is little less than murderous”; and he asserts that, “in uncomplicated fibro-bronchitis, antimony is of no value whatever, and its use is to be as little thought
of as in the treatment of articular or any other form of rheumatism." And generally, the main indications are: "1st. To reduce plethora. 2d. To use such catalytic agents as are best calculated to relieve the inflammatory condition of the blood, and by their antiplastic effects prevent the organization of coagulable lymph. 3d. By the use of anodynes, to calm the irritability of the nervous system, quiet the cough, and thereby give partial rest to the inflamed bronchi and engorged parenchyma." And he remarks that "in all cases of this affection, and especially those attended by profuse sweating, it is very indispensable to see that the drinks and the diet of the patient are well supplied with common salt."

We trust that Dr. Buckler's interesting *brochure* will awaken a more lively interest in the observation and study of pulmonary affections; for he has certainly proposed some very interesting and practical topics for professional study, and in a field where any advancement in pathological knowledge will insure inestimable benefits to suffering humanity.

E. H.

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**Art. XIII.**—*The Pathology and Treatment of Pulmonary Tuberculosis; and on the Local Medication of Pharyngeal and Laryngeal Diseases, frequently mistaken for or associated with Phthisis.*

By John Hughes Bennett, M.D., F.R.S.E., Professor of the Institutes of Medicine and of Clinical Medicine in the University of Edinburgh, &c. &c. Edinburgh, 1853. 8vo, pp. 142.

That the indefatigable and accomplished author of the ingenious and learned treatise on Cancerous and Cancroid Growths is fully competent to investigate the occult and complex history of Tuberculosis, his past contributions to science bear ample testimony; and that the inquisitive and studious pathologist, who produced the great work on Leucocythaemia, and who was also the first in Great Britain to propose the use of cod-liver oil for phthisis, as well as the first to publish a plausible theory of its modus medendi, should diligently investigate and attentively study all the pathological events and phenomena of tuberculosis, might have been anticipated.

The elegant little treatise before us shows how faithfully and intelligently these investigations have been pursued, and how successfully the author's studies have resulted in clearing up some of the most
doubtful points and conflicting doctrines hitherto entertained in reference to the history and treatment of pulmonary tuberculosis.

Though some of the statements and deductions contained in this excellent treatise are marked by that unqualified confidence in certain favorite theories, and by that disposition to hasty and fearless generalization to which the author has an acknowledged proclivity, it is characterized by all that accuracy of physiological and pathological research and illustration, that clearness and candor of reasoning, and that directly practical design, which always distinguish the labors of the true medical philosopher.

Dr. Bennett devotes the first half of his treatise to the Pathology of Pulmonary Tuberculosis, which he discusses with characteristic intelligence and independence. In reference to the histology of tubercle, our author entertains no views which are individually peculiar; but he has beautifully illustrated and very lucidly stated the most important facts connected with this subject.

It is in connection with the account of the nature of tubercle, and the causes of its production, that the peculiar views and the bold philosophy of Dr. Bennett are made to appear. But, even upon these topics, we think that few candid and accurate observers will take exceptions to any of Dr. Bennett’s suggestions, though he pushes his inquiries to the discovery of ultimate causes.

Though we do not think that our author has yet fully demonstrated his leading doctrine, that the formation of tubercle depends mainly upon faulty assimilation or dyspepsia, we believe that common observation strongly sustains Dr. Bennett’s opinions and deductions upon this subject. Yet we think that we do Dr. Bennett no injustice by saying that his statements and his mode of argument disclose an overweening anxiety to corroborate his favorite but questionable theory, on the ‘Structural Relation of Oil and Albumen in the Animal Economy,’ proposed by him in 1847. (Edin. Monthly Jour. Med. Sci., Sept., 1847.)

Dr. Bennett’s opinions on the subject of the etiology and the mode of formation of tubercle are already known to many of the profession, as most of the arguments contained in the work before us have already appeared in the Edinburgh Journals and the British Reviews; but we will quote the following statements, which sufficiently exhibit the author’s views:

If, from the histological facts previously stated, we seek to deduce
the nature of tubercle, it can scarcely be doubted that it is an exudation of the liquor sanguinis, but one which presents marked differences from the simple or inflammatory exudation on the one hand, and the cancerous exudation on the other.

We observe, in a tubercular exudation, that it occurs for the most part in young subjects, between the periods of dentition and of adult age; that it may also occur in all tissues, but is by far most common primarily in the lymphatic glands, and afterwards in fibrous or albuminous textures, as the lungs and serous surfaces; that its progress is generally exceedingly slow; that there is no disposition to the formation of perfect cell-formation, but rather to abortive corpuscles, which form slowly, and slowly break down; that there is little tendency to absorption, but great liability to disintegration and ulceration; and finally, that the local changes are almost always preceded by derangement of the prime viæ, and a group of symptoms known under the name of dyspepsia.

Taking, then, the products of simple inflammation as a standard, we cannot fail to remark that while the cell-development of tubercle is below, that of cancer is above, this standard. Of the three kinds of exudation, tubercle is the lowest, and cancer the highest, in the scale.

On what this difference in the formative power of the exudation depends we are ignorant, but every kind of reasoning must lead us to the conclusion, that these different changes and effects depend, not upon the vasular system, which is the mere apparatus for the production of exudation, not upon the nervous system, which conducts impressions to and from this apparatus, and not on the texture, which is the seat of the exudation, as that varies, whilst the cancerous or tubercular formation is the same; but on the inherent composition or constitution of the exudation itself. On this point most pathologists are agreed, and hence the supposed existence of various kinds of dyscrasia, originating in the blood, which, its imagined, explain the different results produced. But here pathologists pause; having once traced these lesions back to the blood, they are content; and they have not sufficiently taken into consideration that the blood itself is dependent for its constitution on the results of the primary digestion in the alimentary canal on the one hand, and the secondary digestion in the tissues on the other. Yet it must be evident to every physiologist that, if it be the constitution of the blood which determines that of exudation, the causes which produce this must be sought in those circumstances which operate on the composition of the former fluid.

Now numerous facts render it probable that, while the blood is normal in simple exudation, it contains an excess of nutritive materials in cancerous, and a deficiency of them in tubercular, exudation.

Of the dependence of tubercle upon a special diathesis, Dr. Bennett entertains no doubt; and of the wide difference between the tubercular
and the cancerous diathesis, our author expresses himself even more positively than Mr. Paget. Considering tuberele, then, as a specific exudation, dependent upon a special constitution of the circulating fluid, Dr. Bennett observes that it transudes in a fluid state through the capillaries, and collects in those places outside the vessels that offer least resistance; and hence the morbid deposit is found to occur principally in the air vesicles during the early stage of tuberculosis; but whether the deposit is in any manner associated with structural changes in the epithelial cells of the vesicles, as described by Virchow and Schroeder, our author does not notice; but from his theory of the strictly humoral origin of the exudation, we infer, that on this point he would not agree with the above-mentioned pathologists.

In reference to the ultimate nature of those pathological and physiological changes in the blood, upon which Dr. Bennett believes that the origin of tuberele depends, he remarks, that "a healthy nutrition of the body cannot proceed without a proper admixture of mineral, albuminous, and oleaginous elements"; and how these elements combine in the primary, and form into tissues in the secondary assimilation, he ingeniously attempts to illustrate, as follows:

The successive changes which occur for the purposes of assimilation in the healthy economy may be shortly enumerated as follows: 1st. Introduction into the stomach and alimentary canal of organic matter. 2d. Its transformation by the process of digestion into albuminous and oily compounds; this process is chemical. 3d. The inhibition of these through the mucous membrane in a fluid state, and their union in the termini of the villi and lacteals, to form elementary molecules; this process is physical. 4th. The transformation of these, first, into chyle corpuscles, and secondly, into those of blood, through the agency of the lymphatic glandular system, which is a vital process. It is from this fluid, still further elaborated in numerous ways, that the nutritive materials of the tissues are derived, so that it must be evident, if the first steps of the process are imperfectly performed, the subsequent ones must also be interfered with. Hence we can readily comprehend how an improper quantity or quality of food, by diminishing the number of the elementary nutritive molecules, must impede nutrition.

The peculiarity of phthisis, however, is, that an excess of acidity exists in the alimentary canal, whereby the albuminous constituents of the food are rendered easily soluble, whilst the alkaline secretions of the saliva and of the pancreatic juice are more than neutralized, and rendered incapable either of transforming the carbonaceous constituents of vegetable food into oil, or of so preparing fatty matters introduced into the system as will render them easily assimilable. Hence an in-
creased amount of albumen enters the blood, and has been found to exist there by all chemical analysts, while the fat is largely supplied by the absorption of the adipose tissues of the body, causing the emaciation which characterizes the disease. In the meanwhile, the lungs become especially liable to local congestions, leading to the exudation of an albuminous kind, which is tubercle. This, in turn, being deficient in the necessary proportion of fatty matter, elementary molecules are not formed so as to constitute nuclei capable of further development into cells; they therefore remain abortive, and constitute tubercle corpuscles. Thus a local disease is added to the constitutional disorder, and that compound affection is induced which we call phthisis pulmonalis,—consisting of symptoms attributable partly to the alimentary canal, and partly to the pulmonary organs.

It will be observed that this elaborate and apparently complete theory of tuberculosis is made to depend, in a very important manner, upon the correctness of certain hypotheses which have yet to be absolutely demonstrated, viz., the structural relation of oil and albumen, and acidity of the alimentary canal.

Upon these questions we will hold no argument with our learned author, but we do request him to furnish more satisfactory proofs of the points in question.

In his chapter on the "Natural Progress of Tubercular Exudation—its Tendency to Ulceration—its Modes of Arrestment," Dr. Bennett states that "at first tubercle is deposited in a fluid state from the capillaries, in the same manner that lymph is. In this condition it insinuates itself into the interstices of the pulmonary parenchyma, passes through the lining membrane of the oil-vesicles, and fills their interior." And he further states that numerous successful injections of pneumonic, tubercular, and cancerous lungs, in his museum, clearly demonstrate that the exudation in all is poured out in the same manner, and occupies the same position in the pulmonary texture. He further remarks:

A miliary tubercle may, in this manner, block up from three to twenty of these air-vesicles. It now coagulates and constitutes a foreign body, which can only be removed by being again broken down and rendered capable of being either absorbed or excreted. * * * * This softening is a disintegration or slow death of the tubercular exudation, constituting true ulceration, which is more or less extensive according to the amount and superficial extent of the morbid deposit. When recent, the pulmonary parenchyma in the immediate neighborhood is more or less coagulated; and when chronic, it is thickened and indurated, often forming a capsule which surrounds the tubercular
deposit. * * * The bronchi are necessarily involved; their terminal extremities are among the first structures affected; and as the tuberculosis proceeds, all the appearances characteristic of chronic bronchitis are produced. As the ulcerative process extends, the lung is more and more destroyed, until at length it can no longer carry on its important functions, and the patient dies, or the fatal result, as it commonly happens, is hastened by disease in other organs.

Dr. Bennett's account of the process of this ulceration, and of the not unfrequent evacuation and cicatrization of the cavities, contains nothing new; though he justly dwells upon the obvious inferences to be deduced from the fact that such cicatrices, as well as encysted calcareous and calcareous degenerations of tubercle, are very often and unexpectedly met with in autopsies. In a series of observations made on this point, Dr. Bennett arrived at the conclusion, "that the spontaneous arrestment of tubercle, in its early stage, occurred in the proportion of from one-fourth to one-third of all individuals who die after the age of forty."

To illustrate this subject, Dr. Bennett introduces the history of several cases, in which the evidences of this tendency to spontaneous cure in cases of tuberculosis have been exhibited, either by post-mortem demonstration or by the history of the living patient; but on this subject our author has offered nothing of special interest.

We must demur at Dr. Bennett's ad captandum style of discussion on some of the nicer and more complex questions, which by the most reliable pathologists are yet held sub judice; e.g., speaking of his conversations and correspondence with distinguished physicians, in reference to the curability of phthisis, he says: "I once made an effort to accumulate the experience of these distinguished men, on this point alone; and had I done so, it would have constituted an unanswerable amount of evidence as to the curability even of the worst cases of phthisis"; and he gravely adds, "want of time, however, prevented them from writing down the facts."

Now it may effectually serve Dr. Bennett's purposes to make such statements; but we believe them to be as unreliable as they are unworthy the connection in which they appear. Living in the goodly city of Edinburgh, and having a reputation for great knowledge and peculiar skill in the treatment of phthisis, it may be a pleasant thing for his patrons to know that Dr. Bennett can cure even the worst cases of phthisis; but such distinctive notoriety we should deem as unenviable as it is professionally dishonorable and unjust.

General Treatment of Tuberculosis.—On this subject Dr. Bennett
Critical Analysis.

[March,

does not seem to have found out anything new or important, though he has much to say about the dyspeptic origin of phthisis; and as a remedy for this state of faulty assimilation, he has unbounded confidence in the analeptic properties of the cod-liver oil. He would base the treatment solely upon the following pathological propositions: 1st. That tubercular diseases will heal of themselves, if we can support the nutrition of the system. 2d. That, with this view, our efforts should be rather directed to the digestive than to the pulmonary system. And, 3d. That the kind of morbid nutrition which exists, is excess of albuminous and deficiency of the fatty element in the chyle.

To illustrate his views of the curability of phthisis by the agencies he has indicated, Dr. Bennett has introduced a tedious history of twenty-five cases; but, unfortunately, they do not establish any of the principles proposed, for the histories of these unfortunate patients are too faithfully represented by "Case 25.—Advanced Pulmonary Tuberculosis; Cod-Liver Oil; Death from want of perseverance in remedial measures."

Dr. Bennett, in common with most physicians, has often seen the progress of tuberculosis arrested in its early stages, and occasionally has seen cases of unquestionable tubercular disintegration and phthisis actually recover. He has witnessed the unquestionably salutary effects of cod-liver oil, and improvement of the patient's hygiene; but we think that he has yet to show that tubercular phthisis is essentially and generally a curable disease, by the means which he has proposed. Not that there exists a doubt of the fact that a certain small proportion of cases are cured spontaneously, or by treatment, but that all is known concerning the history of pulmonary tuberculosis shows it to be a grave constitutional malady, usually hereditary, and in a large majority of cases, tending to a fatal termination.

But there are certain grave forms of inflammatory and ulcerative disease of the bronchi and the larynx, often, and we believe generally, mistaken for tubercular phthisis, and which, though too often fatal, are nevertheless perfectly amenable to curative treatment. These affections of the air-passages may and should be accurately discriminated by physicians; and, with the knowledge which now exists on the subject of physical diagnosis, and aided by such excellent treatises as that of Mr. Ancell on Tuberculosis, and of Dr. Black on the Broncho-Pulmonary Mucous Membrane, no physician can have an apology for permitting this very large and interesting class of patients to become the victims of charlatanry, much less can there be an apology for error or failure in the management of the diseases in question.
Dr. Bennett has very properly devoted the last chapter of his work to "Observations on the Use of Local Applications to the Pharyngeal and Laryngeal Diseases, which are frequently mistaken for, or associated with, Pulmonary Tuberculosis"; to which, singularly enough, even he had paid no attention until some two years ago, when he met with the writings of Dr. Green, of this city, and from these he seems to have acquired his knowledge of this subject; though it is well known to the profession that an excellent treatise on Laryngeal Phthisis, etc., by MM. Trousseau and A. Bello of Paris, published in 1837, first described this class of diseases, and made known the mode of local treatment, which has lately become so popular.

Dr. Bennett attempts no elucidation of the pathology of these local affections, but gives the history of several cases illustrative of the value of the local treatment with the nit. argenti; and from which he draws the following conclusions, 1st, That not unfrequently diseases, entirely seated in the larynx or pharynx, are mistaken for pulmonary tuberculosis; 2d, That even when pulmonary tuberculosis exists, many of the urgent symptoms are not so much owing to disease in the lung, as to the pharyngeal and laryngeal complications; 3d, That local treatment may not only remove or alleviate these complications, but that, in conjunction with general remedies, it tends in a marked manner to induce arrestment of the pulmonary disease.

Though these conclusions are important and true, we regret that Dr. Bennett has not more to offer upon this subject, and that he has not more thoroughly studied the pathology of these local affections, for they not only deserve to be investigated de novo, but we are satisfied that when their pathological history comes to be better understood, the special topical medication will be more intelligently applied, and at the same time assume less importance in the history of cure.

From this examination of Dr. Bennett's work, it will be observed that it cannot lay claim to the dignity of a complete treatise on pulmonary tuberculosis, but that it is rather a hastily-prepared, and imperfect monograph, issued to make known a new theory, and to illustrate the peculiar doctrines of its author. How far it may prove available for practical purposes and the advancement of sound pathological science, remains to be seen.
BIBLIOGRAPHICAL NOTICES.

Art. XIV.—The Elements of Materia Medica and Therapeutics.

It is with mingled feelings of pleasure and pain that we announce to our readers the completion of this exceedingly valuable work—pleasure that a new edition of a work of such great merit is now accessible to the mass of the profession—and of pain when we remember the sudden and unexpected demise of its distinguished author, at the moment when the completion of the work was so near at hand. Many, if not all our readers, are aware of the fact that the last volume of this edition comes to us in part, only, completed by the author. The completeness of this edition in this respect, however, is far greater than that of the last English. In the revision of it, says the author, “the recent publication of new editions of the London and Dublin Pharmacopoeias, rendered necessary a careful revision of the formulae of the British Colleges, and entailed on me no trifling labor. I have embodied all recent discoveries of importance which relate to the subjects treated of in this work,” (Author’s preface to Amer. Edit.)

The labors of the author on the first volume, with especial reference to this American edition, are a gratifying proof of his desire to render it a perfect encyclopedia of Materia Medica, suited to the wants of the American, as well as English practitioner of medicine, while at the same time they have placed the American public in possession of “the last revised work of Dr. Pereira, and the most complete that he published.” From the preface of the English editors to the second volume we learn that “at the time of his decease, the learned author had so far advanced with the present volume as to have completed the description of that important article of the Materia Medica, Cinchona.” The remainder of the volume passed under the revision of Drs. Taylor and Rees, and in the performance of their duties they have not deemed it proper to interfere with the views or opinions of the author, but, when circumstances rendered it necessary they have added such remarks as appeared to them requisite for the further elucidation of the subject.

The work as a whole, we perceive, has assumed an entirely new shape. The mineral substances of the Materia Medica have been placed entirely in the first volume, and the organic in the second, and numerous additions have been made to each department, particularly the organic. “The additions comprise four hundred pages of new matter; and the articles of Materia Medica, of which a complete medical and
scientific history is given, amount to three hundred and sixty.” From this extract it will be seen that the author and editors have each availed themselves of the advantages which the progress of science offered to render complete and useful this edition to the present time; and when we remember that Philology, Natural History, Botany, Chemistry, Physics, and the Microscope, are all brought forward to elucidate the subject, one cannot fail to see that the reader has here a work worthy of the name of an encyclopaedia of Materia Medica. Our own opinion of its merits, is that of its editors, and also that of the whole profession, both of this and foreign countries—namely, “that in copiousness of details, in extent, variety, and accuracy of information, and in lucid explanation of difficult and recondite subjects, it surpasses all other works on Materia Medica hitherto published.” We cannot close this notice without alluding to the special additions of the American editor, which pertain to the prominent vegetable productions of this country, and to the directions of the United States Pharmacopoeia, in connection with all the articles contained in the volume which are referred to by it. The illustrations have been increased, and this edition by Dr. Carson cannot well be regarded in any other light than that of a treasure which should be found in the library of every physician.


The appearance of a new work on venereal diseases, translated from the French, will not create any great surprise, so numerous have been the contributions to this subject from abroad within the last year. But the studious physician will recollect that most of these republications and translations have emanated from the school of Ricord. He is also aware that the doctrines of this great teacher, in regard to the transmissibility of secondary accidents, a virulent blennorrhagia, &c., have been called in question, and raised an opposition which combines the best surgical talents of France, Germany and England. The whole ground has been reviewed, and each subject examined by the contending parties before the Academy of Medicine, Paris, in one of the fiercest discussions which that learned body has ever witnessed. Most prominent among the leaders of the opposition to the received doctrines of syphilis is Ricord’s confrère, in the Hôpital du Midi, M. Vidal, the author of the work before us.

We cannot at this time do more than express a general opinion of the character of this treatise. We have, of course, as the basis of the work, the peculiar views of the author, which are considered at length and with much spirit in opposition to those so long advocated by Ricord. This does not, however, enter into the practical portions of the volume,
which will be more generally sought after, and with which we are much pleased. It is more complete in practical details than any work which the practitioner can ordinarily consult, and for this reason may be especially commended to his attention.

Dr. Blackman has performed his part as translator and editor, in the most satisfactory manner. His personal familiarity with the practice of M. Vidal, whose views he cordially advocates, and also of his great opponent Ricord, as well as an extensive acquaintance with the literature of the subject, peculiarly qualified him for the task. Every subject treated by the author has been prepared by the editor to meet the wants of the American practitioner; and several, too briefly examined by the former, have been enlarged by the latter.

The typographical execution of the work is good, and the illustrations, with colored drawings, are numerous and excellent.

Art. XVI.—Pneumonia: Its Supposed Connection, Pathological and Etiological, with Autumnal Fevers: Including an Inquiry into the existence and Morbid Agency of Malaria. By R. La Roche, M. D., Member of the American Philosophical Society; of the American Medical Association; Fellow of the College of Physicians of Philadelphia, etc., etc. Philadelphia: Blanchard & Lea. 1854. 8vo, pp. 502.

This goodly volume, we are told by the author, has grown to its actual respectable dimensions from very small beginnings. The first step in its production was the writing of a friendly letter of a dozen pages to a valued friend, who holds an important position among the teachers of a distant State, in review of a clever essay by him on pneumonia. The main object in the preparation of the volume has been to point out the erroneous views entertained by respectable writers on certain pathological and etiological subjects; and this not alone in reference to pneumonia, but the whole class of paludal fevers; and also to prove that etiologists, who regard the various forms of autumnal fevers as due to the action of particular poisons floating in the atmosphere of specific localities, have just cause for entertaining that belief. As our space does not permit us to give more than a passing notice of this work, on the present occasion, we will simply add that a more ample, clear, and forcible exposition of the groundless nature and dangerous tendency of certain pathological and etiological heresies, has seldom been presented to our notice.


That the school of Baltimore can justly lay high claims to literary
eminence in dental science does not admit of question; and their un-
tiring zeal and attention to dental education is evidenced in their fre-
quent publications of an elementary character, pertaining to the science
of dentistry. This work of Dr. Handy has evidently been designed
with special reference to the claims of the student and practitioner of
dental surgery; and, to use his own language, his leading object has
been to prepare a work “adapted alike for the dental as well as medici-
cal student—one which directs special attention to the mouth. Show-
ing, step by step, the important anatomical and physiological relations
which it has with each and all the organs and functions of the
general system.” In carrying out this design, the author, after
giving a general outline of organization, divides the work into four
parts.

The first part teaches the alphabet of Anatomy on the elementary
tissues of the body. The second part begins with the head, and
describes its organs, as far as possible, in their functional order
and dependency. This part is the most complete, by showing the
anatomical and physiological relations of the mouth with the dif-
ferent parts of the head. The third part, embracing the trunk, is
examined in the same physiological order, and completed in the same
manner, by demonstrating the relations of the mouth with its several
organs, viscera and functions. The fourth part comprises the extrem-
ities, which do not admit of the same kind of arrangement so readily,
and are demonstrated in the ordinary way. The work is one admira-
ably adapted to the wants of the dental student, and will, we doubt not,
receive from this class a meritorious consideration.

Art. XVIII.—Chemistry and Metallurgy, as applied to the Study
and Practice of Dental Surgery. By A. Snowden Piggot, M. D.,
late Professor of Anatomy and Physiology in the Washington Uni-
versity of Baltimore. With numerous Illustrations. Philadel-
phia: Lindsay & Blakiston, 1854, 8vo., pp. 516.

That a work like the above has, for a long time, been a desideratum
in the practice of dentistry, does not admit of a doubt. To the student
and practitioner of the dental art, a knowledge of scientific chemistry is
absolutely necessary to the successful practice of their profession, and
at the present day no one can lay claims to eminence and respectability
in mechanical dentistry, who depends upon empiricism for the suc-
cessful results of his manipulations in the laboratory. It is not alone
necessary that one should understand the behaviour of metals and
other materials used in the workshop, but a full knowledge of the
chemical principles involved in the organic changes originating in the
mouth, under an almost infinite variety of conditions, is needful to the
successful practice of dentistry.

The work before us, we perceive, has been prepared with reference
alike to the wants of the student and the demands of the advanced
workman in the performance of his daily duty. In the, practical
details of the work we observe precision, while, in those portions rela-
ting to animal chemistry, there is all that fulness of description necessary to a successful knowledge of its important bearings. We commend the work as worthy the attention of the practical dentist.

__ART. XIX.--A Treatise on the Diseases of the Eye. By W. Lawrence, F.R.S., Surgeon to St. Bartholomew's Hospital, etc., etc. A new edition. Edited, with numerous Additions, and Two Hundred and Forty-three Illustrations, by Isaac Hays, M. D., Surgeon to Willis Hospital, etc., etc. Philadelphia: Blanchard & Lea, 1854, 8vo., pp. 948.

This is a new and enlarged edition of Mr. Lawrence's excellent work on the Diseases of the Eye. The editor, Dr. Hays, has made many valuable additions to portions of the work which had fallen into the back ground, from the advances in ophthalmic physiology, pathology, and therapeutics, since the issue of the former editions. It has always been considered a standard work, and may now be regarded as one of our most complete treatises on the diseases of the eye, and fully illustrating the most recent and improved views of authorities at home and abroad.


We have here a new and revised edition of one of the best elementary works on Chemistry, accessible to the American and English student.

__ART. XXI.—The Medical Formulary; being a Collection of Prescriptions derived from the Writings and Practice of many of the most eminent Physicians in America and Europe. By Benjamin Ellis, M. D. Tenth edition, revised and much enlarged. By Robert Thomas, M. D., Professor of Materia Medica and Pharmacy in the Philadelphia College of Pharmacy. Philadelphia: Blanchard & Lea, 1854, 8vo., pp. 296.

The great popularity of this work renders any farther notice of it unnecessary, than the simple announcement of the publication of a new and revised edition.

__ART. XXII.—A Practical Treatise on Inflammation of the Uterus, its Cervix and Appendages, and on its Connection with Uterine Disease. By James Henry Bennet, M. D., Member of the Royal College of Physicians, etc., etc. Fourth American, from the Third London edition. Philadelphia: Blanchard & Lea, 1853, 8vo., pp. 430.

The fourth edition of Dr. Bennet's popular work on the diseases of
the Cervix Uteri has been carefully revised by the author, and improved by the addition of new matter. The former editions have now become so widely diffused by republication and translation into continental languages, that the approbation of the profession may be considered strongly pronounced in favor of the work as a practical treatise on the views which it sets forth.


This is a reprint of the essay, to which was awarded the prize of one hundred guineas in the latter part of the year 1849. The successful essayist proved to be Dr. Carpenter, the distinguished physiologist and writer. The essay is a truthful, candid, and scientific examination of the questions proposed by the donor of the prize; these are given in a former notice. The conclusions of Dr. Carpenter are decidedly against the use of alcoholic liquors except for medical purposes, and the array of facts which he adduces to sustain his positions is truly formidable. He entered upon this investigation unbiased by any preconceived notions, but concludes it a firm and consistent advocate of total abstinence.

**Art. XXIV. — Human Anatomy, Physiology, and Hygiene.** By T. S. Lambert, M. D., Lecturer on Physiology at the Pittsfield Institute (for Young Ladies), Greenleaf's (Brooklyn), Rutger's Institute, (New-York), etc. Illustrated with nearly Three Hundred Woodcut and Lithographic Engravings. Hartford: Brockett, Hutchinson & Co. 1854. 8vo, pp. 456.

The examination of this book for schools has given us much pleasure, and we do not hesitate to pronounce it admirably adapted to the necessities of the advanced pupil who is in the pursuit of that degree of anatomical and physiological science, without which no one can be considered educated. We are especially gratified with the endeavor of the author to give the latest and most approved views in anatomy and physiology, and heartily second the remark of the publishers that, "To use a book which is behind the times, or in any considerable degree inferior to what it may be made, is still worse for both scholar and teacher." Long experience in teaching the elementary principles of anatomy and physiology has peculiarly qualified the author to appreciate the wants of both teacher and pupil. The style is clear and perspicuous, and the arrangement of matter well calculated to give the learner clear views of each subject as it is presented. The work is fully illustrated with engravings, which will greatly facilitate the progress of the student, and aid him in acquiring just ideas of the structure and functions of various organs.
PART THIRD.

FOREIGN MEDICAL RETROSPECT.

PATHOLOGY AND PRACTICAL MEDICINE.

On the Diagnosis of Uræmic Blindness and Dyspnoea, by W. H. Walsh, M. D.—I have recently seen, out of doors, a very striking example of uræmic blindness; one illustrating so plainly the occasional difficulties of its diagnosis, that I will avail myself of the particulars for the discussion of the general question.

Case.—On the 12th of November last, Mr. J. R. Wells brought me a patient of his under the following circumstances:—Mr., aged 29, widower, leading a steady and quiet life, has generally enjoyed good health. Ten years ago, he had a peculiar contraction of the right leg; the tendons feeling stiff in the ham. Three years ago, he was ill for a fortnight with sore throat. He has now been ill for upwards of two months. A fortnight ago, boils commenced to form about his body; one, above the left orbit was followed by great pain on the spot. All of these boils got well; he felt generally ill and depressed, but was improving, when, ten days ago, he found he could not see as usual; the left eye being decidedly the worse of the two. He had no cephalalgia, nor swelling of the face. Nov. 12th. Present State. (a) He looks depressed, somewhat stupid; has slept badly for last two nights, without bad dreams; spirits low; temper of late rather morose; inclined to talk to himself. (b) The skin is pale and sallow; he does not perspire; there is no skin affection of any kind; no distinct swelling about eyelids; he says they are stiff; no swelling of ankles. (c) The legs are weak, about equally so; if any difference, the left is the worse (vide k). (d) Tongue tolerably clean; bowels open from medicine; anorexia. (e) Resonance is good under clavicles; no chest symptoms. (f) Heart’s action is rather too extensively felt; first sound at base and apex rather too clear and full; no murmur at heart (pulse 76); strong venous hum in neck. (g) No swollen lymphatic glands. (h) Urinary organs patient declares to be in good order; three years ago, however, he had haematuria, for which he knew no cause. (k) Moderate headache at vertex; no vertigo; no tinnitus; no peculiar sensations of any kind in head; intellect perfectly clear; some stiffness in joints of upper extremities, shoulders most,
right and left the same; he squeezes awkwardly with left hand, but about as forcibly as with right; no deviation of tongue; articulation quite distinct; no peculiar sensations in limbs. (i) No convulsive movements anywhere. (m) Pupils medium sized, round; contract immediately and gently well under light (merely that of the room); then expand a little; the action is not distinctly different on the two sides; no opacity in either eye; no amaurotic look; no photopsia; no mucus; and no spontaneous pain in the eye-balls; no photophobia, but is pained, he thinks, by continuing the effort to see; he cannot distinguish moderate-sized objects at opposite side of the street; cannot read small print at all; sees better in morning when he gets up, and with strong light; has never had diplopia.

Here, then, was an anaemic person, suffering from boils (which were, as is well known, epidemic at the time), but caring neither for his anaemia, nor his boils, nor the general disturbance of health accompanying these, but solely anxious about the sudden and increasing failure of his sight. Were the eyes themselves diseased? No opacity could be discovered in either; membranes and humours appeared perfectly transparent. That the cornea, chambers, lens, and its capsule, were free from any change sufficient to explain the symptoms, was, in fact, unquestionable. Again, disease of the retina, producing blindness, if acute, would have been attended with local symptoms, weight and fulness in the eyeball, with throbbing pain, photopsia, change of color of the irides, etc., and with fever—conditions all of them wanting here. Chronic retinitis is attended with morbid sensibility to light, which our patient did not complain of. It is so infinitely unlikely that tumours connected with the deep-seated tissues of the eye should form simultaneously in both organs, that the idea of their existence here might, almost without examining the globes themselves, be rejected. Disease of the optic nerves, or their sheaths, enlarges the pupil, paralyses the iris, and very, very rarely attacks both sides simultaneously; it was, therefore, not the cause of the blindness here. Nor could the case be supposed one of idiopathic amaurosis. The eyes had not the amaurotic look nor expression; there was no lustre of their surface, no rolling or unsteady movements of the eyeballs, and none of the peculiar vacant gaze of that affection. This patient, on the contrary, directing the axes of the eyes appropriately, looked as if he could see well.

The least reflection on the condition of the patient's motor and intellectual faculties satisfies us that none of the ordinary affections of the brain could have existed here. Neither meningitis, simple or tuberculous, nor haemorrhage, produces blindness of the type before us; and, though both acute and chronic softening do actually cause impairment of vision on one, or even on both sides, blindness never constitutes the prominent symptom it did here; besides, all other evidences of softening were deficient. But it was not so easy to exclude tumour of the encephalon. For not only has blindness, more or less complete, been a frequent symptom in cases of intra-cranial morbid growth, but actually, next to cephalalgia, their most, or nearly their most, frequent symptom. This is true of tumours of the cerebrum, cerebellum, pons,
and pituitary gland; a circumstance showing, by the bye, the vairness of the attempts to diagnosticate the seat of a cerebral tumour, solely through the perversion of special senses. It is true that there was no cephalalgia of note in this instance, but cephalalgia may be absent from first to last, even in protracted cases; and we might have been at the commencing period of the formation, at which period, there is every reason to believe, if not to be absolutely certain, the head is often free from pain. Intra-cranial tumour was, therefore, by possibility the cause of the failure of vision in this patient. But, again, there are cases on record, tending to show that injuries to the supra-orbital nerve may produce obscurity of vision, nay, complete blindness. It is true that some observers hold that, in all such alleged cases, there has in point of fact been concussion of, or other injury to, the eyeball itself; but the weight of the evidence seems to me decidedly in favor of injury to the branch of the fifth nerve named sufficing to impair vision. Now the patient had had no traumatic mischief done to his eyebrows, it is certain; but he had had a boil there, the source of much pain and irritation; and it seemed an admissible hypothesis that the local inflammation might have acted the part of a wound in the spot. It is alleged that the nerve of one side only being implicated, the eye of the other has suffered by sympathy.

It was certain the patient had not been taking any of the drugs—belladonna,aconite, stramonium, etc.—which injure sight. Besides, the pupils were not dilated. Hæmio or blood-diseases (I use the adjective as more euphonious), are many of them, more or less constantly, attended with perverted vision. Now our patient was anaemic to a high degree; but I could not admit this to be the cause of his blindness; for though impairment and perversion of sight often attend this state, they never, as far as I know, do so to the extent observed here; they never constitute the prominent enduring symptom of the state. But anaemia might here be fairly taxed with increasing the blindness, though essentially otherwise caused. But however plausible it might have appeared to refer the imperfect sight either to encephalic tumour, or to implication of the frontal nerve, examination of the urine, a few days later, furnished a much more satisfactory clue to the symptom. The fluid was highly albuminous. We now ascertained from relatives that the daily amount was small (a fact previously denied by the patient). A few days later, the eyelids were distinctly, though very slightly, œdematous; the ankles remained free from dropsy throughout. The most active measures failed to produce any secretion from the skin, which continued to the last dry and harsh.

Between this period and that of the patient's death, on the 29th of November, one or two circumstances occurred worthy of note. The hydrochloric acid test succeeded strikingly; the expired air gave thick opaque fumes; but in this instance, as in many we have seen in the wards together, the breath was of strongly urinous odour—a state quite as significant of uræmia, as an affirmative result by Freichs's test. For several days before his decease, the patient had uræmic dyspnea, as I would call it—a dyspnea evidently depending on the morbid state of the blood: for there was no pulmonary nor cardiac
affection to explain it; the percussion sound was excellent everywhere; there was no roncus, no serious alteration of the respiration-sound, and no cardiac disease. The pulse-respiration ratio averaged during this time 3:1, both pulse and respiration being, absolutely speaking, very frequent, namely 120 and 40. But there was an amount of breathing distress materially greater than attends a respiration of forty per minute: to this the poisoned blood was the apparent clue. Now, remarkably enough, this patient remained, almost to the last moment, free from the more ordinary effects of uraemic poisoning. The brain and cord gave no sign of suffering; his intellect continued clear; there was neither delirium nor sopor; and convulsions did not occur. This dissection of the effects of the kind of poisoning in question is not uncommon; the brain and vision may alone be affected; or the vision, the functions of the spinal cord, and those of the brain may suffer simultaneously.—Assoc. Med. Jour.

Disorders of the Renal Secretion in Delirium Tremens, and in Injury of the Spinal Cord.—The Montreal Medical Chronicle condenses from the Medical Times and Gazette the following interesting observations of Dr. Bence Jones:

Delirium Tremens, a congestive disease, is occasionally seen here in fearful intensity. Its resemblance to the diseases previously noticed is most apparent in the presence of albumen in the urine, in the state of the kidney and in the tendency to epileptic convulsions. The following cases illustrate my observations on congestion of the kidney in delirium tremens:—

A man of 35, with delirium tremens, had not slept for three nights; two hours after admission, he had an epileptic fit; two days after, the urine had a sp. gr. of 1019.3, a trace of albumen and blood globules; fibrinous casts not clearly determined. After two more days of extreme violence he had two convulsive fits, in the last of which he died. *Post mortem,* both kidneys large; much congested on surfaces and lobular; capsules peeled off easily; on surface a few slight pits, as if from atrophy, but elsewhere quite smooth.

A man of 35, five days ill, with seventh attack of delirium tremens. On admission, passed 6 oz. of urine, deeply red, having traces of blood, albumen and fibrinous casts: sp. gr. 1018. He slowly recovered, urine being 1027.9 and free from albumen.

A man of 40, three days under a third or fourth attack of delirium tremens. After a most excited night, the morning urine was albuminous and abounded in urea and sulphates: sp. gr. 1037.8. Passed, later in the day, the albumen was increased sp. gr. 1041.2. He died next day. The kidneys were congested, the malpighian tufts full of blood; several small cysts in the cortex, but structure otherwise healthy.

Such cases might be mistaken for Bright's disease, and by repetition might induce it, but I have found that when the congestion subsided, the albumen disappeared without any treatment directed to the kid-
neys. When the renal congestion of delirium tremens, cholera and scarlet fever passes into inflammation, pus is rarely found in the urine. But there is another form of congestion—also from acute disease— affecting the ureter and bladder as well as the kidney, where the signs are more perceptible. Severe injury of the upper part of the spinal cord, usually causing death in twenty-one days, is truly an acute disease: laceration from fracture often causes great congestion and purulent urine, the degree, however, varies—the urine may be healthy and the kidneys but slightly congested; the urine simply purulent; urine purulent and alkalenescent; as examples—

Of the first degree—A man of 35 fell across a piece of wood and broke the sixth and seventh cervical vertebra. Completely paralysed below mammae. Urine the day after admission, very acid and 1023.1; on the 3d, 8th, 9th, 16th and 18th days, also acid, and sp. gr. 1018, 1022, 1023, 1011, 1011. On the 21st day he died, the pulse getting slower and weaker and dyspnoea increasing. The cord, for one and a half inches, diluent. Several ruptures, about two lines in depth, on front of right kidney, but no inflammation. Other kidney normal.—A man of 30 fell from a roof forty feet high, where he went when drunk to escape from imaginary thieves; sixth and seventh cervical vertebrae broke and the cord tore across; ten hours afterwards no urine in bladder; nineteen and a quarter hours after some urine drawn off, which was strongly acid and stayed so for seven days; sp. gr. 1012, and contained a few blood globules. He died twenty-two hours after the fall; great congestion of kidneys but none of lining of pelvis or ureters; bladder healthy and full of urine.

Of the second degree—when the urine is purulent and acid throughout. A man of 81 fell out of a cart and broke the first dorsal vertebra. On the fifth day paraplegia was complete and the urine was acid 1014.2. Sixth day urine acid, 1030.2, much urates, some cells like pus, with some blood. Seventh day as last. He died during the night of dyspnoea from pulmonary congestion—the lining of left kidney slightly inflamed, some semi-purulent fluid in the hilus; bladder rather full of urine, which, except slight turbidity, seemed healthy; mucous membrane natural.—A man of 48 fractured sixth and seventh cervical and the second and third dorsal vertebrae: twelve hours after, urine acid, 1019.4. Second day, highly acid, remaining so for seven days in June 1025.3. Third, acid, remaining so at least five days, 1027, deposited crystals of uric acid; had some albumen and pus cells. Fourth, 1024.1, acid, a trace of albumen, pus less distinct. Fifth, acid, 1027.8, some blood, pus doubtful. He died in the afternoon comatose: lining of pelvis of both kidneys very slightly congested; bladder healthy.

The preceding shows that the inflammation of the lining of the kidney precedes that of the bladder, and causes pus in the urine before the alkalescence appears, and the sp. gr. falls. The same sequence attends the cases of the third degree. A glazier, 39, broke the fourth and fifth cervical vertebra: paraplegia complete. Fourth dry, urine acid, 1029.2. Sixth, acid, 1030.2, no pus, but great deposit of urates. Eighth, acid, 1022.0, thick from urates; no pus, no albumen. Ninth,
less acid, 1007.3; a little pus. Tenth, very full of pus, 1010.8; neutral, ropy in sixteen hours. Eleventh, alkaline, much pus, too decomposed to take the sp. gr.: continued so till the 22d day, when he died. For the last six days much diarrhoea. The lining of the ileum for two feet intensely vascular and dark; in its submucous areolar tissue a few small cechymoses; free surface covered by a dark red or almost black tenacious mucus. Intestinal glands healthy. Left kidney very vascular and studded with small abscesses. Infundibula pelvis and beginning of ureter very vascular and distended with pus. Right kidney also vascular, but less than left. Bladder held much pus and highly vascular. In the next case the pus appeared much earlier in the urine. A laborer, 35, broke the eleventh dorsal vertebra, and was completely paralysed. Second day, urine slightly acid, 1029.2. Fifth, acid, and remaining so for four days, 1025.3. Sixth, slightly alkaline, mixed with blood and pus. Seventh, highly ammoniacal, 1022.8, ropy mucus. Thirteenth, extremely foul, 1007.8. He died on the thirty-eighth day. Both kidneys smooth but soft; much congested; lining of calices, infundibula and pelvis of left kidney very much congested, and in several places thickly covered with lymph. No such appearances in left kidney, but urine squeezed from it was puriform and alkaline; some of its mammary eminences much congested. Bladder slightly thickened, and muscular coat fasciculated; mucous membrane slightly congested in patches and highly ulcerated. A false passage between prostatic urethra, and a large and very foul abscess between the bladder and rectum.

It may be concluded, 1st. That injury of the cord does not immediately affect the renal secretion; and 2ndly. That inflammation of the mucous membrane precedes and probably causes ammoniacal urine. The effect of the inflammation upon the density of the urine is instructive, as in Bright's disease the same low density usually occurs. In none of the cases I have seen has the temperature been increased, though this occasionally occurs, as in Sir B. Brodie's case of a man who had a severe spinal accident, and died in twenty-two hours. At last there were but five or six inspirations a minute, and yet his groin was 111°. From Bernard and Budge's experiments, it is probable that there is only increase of heat when the sympathetic nerve is injured, and that when the cord alone is injured the heat falls. Sequard refers the phenomena of injury to the sympathetic, to paralysis or dilatation of the vessels. The blood, finding a larger way than usual, arrives in greater quantity, and hence nutrition is accelerated.

I have but little to say upon treatment. In delirium tremens the congestion may be from the action of alcohol in the blood on the kidneys, or more often from the stimulation of the heart and bloodvessels. I have never cupped, but have allayed the excitement and quieted the circulation by opium, and thus got urine free of its blood. In injury of the cord, congestion results from paralysis of the capillaries. We judge of what goes on from analogous states of the eye that are visible. In paralysis of the ophthalmic nerve, the conjunctiva is often vascular, and gets more or less actively inflamed. So also from section of the pneumogastric, congestion first and inflammation next of the
lining of the bronchi and stomach, results. In injury of the cord there is the same tendency to congestion of the mucous membrane and skin. In one case most marked in the kidneys, in another in the bladder, and in another in the intestines. As the injury is irreparable, so the effects can only be palliated. The putrefying urine must be drawn off at least twice daily, so that its irritation may not add to the cystitis. Injection of warm water is sometimes useful, but sedulously avoid the the slightest mechanical injury which would aggravate the symptoms."

Conclusions drawn from the Results of Re-vaccination of 257 Cases. By W. Bird Herapath, M. D., of Bristol.

The inferences to be deduced from a consideration of these experiments are the following:

i. That three cases re-vaccinated within seven years were not again susceptible to vaccine.

ii. That vaccine, after the interval of from eight to seventeen years, does not prevent the reception of vaccine again, except in 22.174 per cent.

iii. That the distinctness or imperfection of the vaccine cicatrix does not materially alter these results.

iv. That variola does not prevent the formation of the vaccine vesicle, except in about 23.53 per cent.

v. That the occurrence of small-pox subsequently to vaccination does not destroy the susceptibility of the human system to again receive the vaccine poison, except in about 10 per cent.

vi. That in all the previous cases, whenever the secondary vaccine vesicle assumed its perfect form, its subsequent history was the same as if the system had not previously labored under vaccine variola or varioloid.

vii. It is probable that the protective influence of vaccination has diminished in consequence of repeated transmission of the vaccine matter through the human body.

viii. It is desirable that re-vaccination should be extensively followed, as one means of giving additional protection to the masses.

ix. That when possible, the stock of vaccine should be renewed by going back to the original source.—Assoc. Med. Jour.

Treatment of Tetanus.—Dr. Lawrie gives (Glasgow Med. Jour.), the statistics of this disease with the following conclusions as the result of his investigations into the success of different methods of treatment. —"It may be asked if, as the preceding summary would appear to show, no remedy yet tried has done good, and many have done harm, how are we to treat tetanus? I reply, negatively; put the patient into a dark room, keep him absolutely quiet, don't torture him with remedies proven to be useless, give him as much nourishment as he can swallow, and trust the result to the powers of his constitution. If the spasms are severe, alleviate them by chloroform. Still, I do not
despair that a remedy will be found, if not adequate to cure the disease, yet powerful enough to enable us to "fight against death," until the chronic stage is established, and the result can with some confidence be intrusted to nature. Such a remedy I would look for among the anesthetics. The discovery by Mr. Richardson of the virtues of the Lycopodium Proteus, encourages the hope that many substances in the vegetable and mineral worlds will yet be found, possessed of powers analogous to those of chloroform, but so far different as to make them curative in cases in which that wondrous agent is only palliative, if not at times injurious. Unfortunately, chloroform excites tetanic spasms, and interferes with and arrests respiration and circulation. Shall we ever discover a remedy which will relax and never excite spasm, and continuously deaden pain without causing pulmonary or cardiac congestion? When we do, I shall hope that tetanus may be cured.

In the mean time, as an encouragement to lay aside medicine and trust to nature and mild nourishment, I shall shortly relate the following case:—aged 12, October 8th, 1853, was amusing himself with some of his companions shouting at a marriage party. The bridegroom being irritated, threw a collier's boot among his tormentors, the heel of which struck this boy on the face. The skin was not wounded, but the bones of the nose were broken, and on the 13th, there were partially replaced by my friend, Mr. Tindal. On the 22d, fourteen days after the accident, and nine after replacement of the bones, tetanic symptoms appeared. I saw him on the 23d with Mr. Tindal, and found the pulse from 115 to 120, the lower jaw, face, and neck rigid, abdomen tense, with acute diaphragmatic pain. Purgatives, followed by small doses of Dover's powder, had been given. I proposed that the opiate should be omitted, that the violence of the spasms should be met by inhaling chloroform, and that infusion of digitalis should be freely given. The chloroform acted well, but he struggled against it, and did not like it; of the digitalis he had four ounces, and then refused to take more; purgatives would not act. Under these circumstances, at our visit on the 25th, we agreed to lay aside all medicine, to open the bowels by occasional enemata, to keep him quiet and give him as much milk as he chose to swallow. To avoid multiplying details, it is sufficient to say that for eight days the paroxysms recurred with great severity every twelve or sixteen hours, at times almost threatening immediate death: he had a troublesome cough with considerable expectoration, but otherwise he breathed easily, and swallowed well. He constantly kept a small wedge of wood between his teeth, notwithstanding which, the spasms of the lower jaw were so severe as to force out four of the incisors. He drank milk freely and without difficulty through a quill. He is now quite well. Cured by milk!

Change of Sight as Premonitory of Hard Cataract.—Mr. White Cooper (Assoc. Med. Jour.) differs from Mr. Ware and M. Siechel, in the explanation of the recovery of sight in those who have been presbyopic. Mr. Ware attributed the change to absorption of the vitreous
humor, which allows the sides of the sclerotica to be pressed inward by the action of the muscles, the effect being to lengthen the axis of the eye, by which the aberration becomes corrected. M. Sichel believes there is in reality a shortening of the visual focus, caused by the use of too strong convex glasses. Mr. Cooper thus states his conclusion in regard to this interesting phenomenon:—

I have recently had the opportunity of studying four cases of this description, and have quite satisfied myself that, in them at least, the change from presbyopic to myopic sight was premonitory of hard cataract. I have observed that myopic persons, who become affected with cataract, increase the power of their glasses to the very highest numbers, even to No. 14. It is often considered that the need of higher and higher glasses under these circumstances is a delusion, and that the mere fact of the vision becoming more and more imperfect leads the patient to seek increased assistance in stronger glasses; yet, as the highest concave glasses diminish objects to almost microscopic minuteness, it was difficult to believe that they really afforded assistance. Observation has, however, led me to believe that the assistance was not imaginary; and the reason is probably this. In all cases of hard lenticular cataract, the crystalline lens becomes closer and denser in structure, and generally rather flattened in shape; but the flattening is in some cases less in proportion than the increase of density. By this increase of density, the refractive power is altered, and consequently the focal distance is shortened; so that a myopic eye, which formerly derived sufficient assistance from lenses Nos. 6 or 8, needs Nos. 12 or 14 for reading, or seeing moderately distant objects. To an analogous change I refer many of those singular cases in which old persons lay aside their convex presbyopic glasses, being able to do without them, or find themselves under the necessity of using concave or myopic glasses. The increase in density may be sufficient to counteract the changes which had previously diminished the refractive power, and to restore to the eye its natural focal distance; or it may go a little further, and cause the image to be formed in front of the retina as in near-sighted persons. Such a change in the density is not necessarily attended with so much diminution of the transparency of the lens as to materially interfere with vision, though I believe the sight is always a little impaired, which the patient properly sets down to the account of old age; but, in many cases, the change goes on; the lens becomes shrunk and amber colored; and the patient is sooner or later pronounced to have hard cataract.

The characteristics of the cases which I have seen have been these. A person, about the middle period of life, has taken to glasses, which have been increased in power as years rolled on. He has numbered perhaps seventy summers, when he finds the high powers less agreeable than the lower, which are resumed; but, after a time, they too, strain the eyes. Perhaps glasses are altogether laid aside, and the fortunate individual receives the congratulations of his friends on his renewed juvenility. In some cases, the sight is far from clear, and objects are held near the eyes to be discerned; accidentally, perhaps, he looks through a concave glass of low power, and is agreeably surprised
at finding his sight improved. As these symptoms occur in advanced life, the persons may die before other phenomena present themselves, and the true nature of the case may never be discovered. But if the parties live, the sight, sooner or later, becomes little by little obscured, and the characteristic symptoms of hard lenticular cataract are established.

New Method of Administering Sulphate of Quinine.—In the Revue Médico-Chirurgicale, for September, 1853, we find a notice of an article by Dr. Bertella, on a new method of administering sulphate of quinine. This plan consists in combining with the quinine an equal quantity of tartaric acid, which has the effect of not decomposing the salt, but of rendering it more soluble, and of causing absorption to take place more readily. He gives at a dose three grains of disulphate of quinine, and three of tartaric acid. The dose at the commencement is from six to twelve grains of each.—Assoc. Med. Jour.

Fungoid Parasites of the Skin.—C. Meissner has described, in the Archiv fur Phys. Heilk. 12, 193, a new fungus, which he observed in the finger-nails of an old man. The nails were very thick, curved, yellowish white, and streaked; and, on examining them carefully under the microscope, they were found to be full of a rich plexus of variously convoluted filamentary fungi, which in many places formed a thick felt among the cells of the nail-substance. The toe-nails were unaffected.

When asked respecting the nails and the cause of their alteration, the old man stated that about thirty years previously a heavy weight had fallen upon his fingers, in consequence of which the nails were broken, and had come off; that they subsequently grew again, but had gradually become thick and white.

The last number of the British and Foreign Medico-Chirurgical Review contains an interesting review of M. Robin’s Natural History of the Vegetable Parasites which infest the Bodies of Animals, in which mention is made of about two dozen of these organisms as occasionally found on the human body. We think that, for practical purposes, it will be enough to notice the following fungoid denizens of the skin.

1. In the true favus, well known by its yellow crusts, we have the now familiar achorion Schonleinii, the tubes and spores of which are found in the hair follicles surrounding the root of the hair, and passing out on the surface of the skin, where they form the familiar favous crusts of this ‘porrigo scutulata.’

2. In ringworm of the scalp, or trichosis favus scutulata (Wilson) we have the trichophyton tonsurans. The disease is distinguished by the bald patches being rough with the swollen and brittle stumps of the diseased and broken-off hairs; and the fungus, consisting of oval transparent spores and articulated filaments, is seated in the interior of the roots of the hairs. ‘The hairs and fungi simultaneously increase; the
former seem larger than usual, are paler in color, lose their elasticity, softens and breaks off when they have risen some one or two lines above the surface of the scalp; in the short cylinder then left the fungus grows still more rapidly, so that the normal structure of the small stump of hair soon becomes indistinguishable. Sometimes the hair breaks off before emerging from the skin, and the fungus, epidermis, and sebaceous matter, fill the ends of the piliferous conduits, and form the little prominences which can be seen by the naked eye in this disease, and give the skin a rough anserine appearance. The sporules and mycelium of the plant can sometimes be seen in the form of a white powder, on the roots of the broken hairs.

3. In porrigo decalvans, or alopecia circumscripta, is found the microsporon Audouinii, distinguished by its numerous waved filaments, and the extremely small size of its sporules. It is not found, like the Trichophyton, in the interior of the root, but forms round each hair a little tube; the hair then becomes opaque, softens, and breaks off. The alopecia is rapid, the dermis is not congested, and the epidermis is thin and smooth.

4. In mentagra grows a plant resembling the preceding, but possessing larger spores and filaments, yeleped the microsporon metagraphyia. Its seat is between the bulb of the hair and the follicle in which the bulb is seated; and it never extends beyond the surface of the skin.

5. The brown seurf of the disease called pityriasis versicolor, or chloasma, is formed by another cryptogamic plant, the microsporon furfur.

The essential point in the treatment of all these diseases is to destroy the vitality of the parasite, by means which are pretty equally applicable to all of them. If hairs be present, as in most of the maladies above described, they must be removed by extraction, with or without previous application of some of the usual depilatory ointments; and then some 'parasiticide' solution or ointment must be applied and rubbed into the skin, so as to reach the fungi in the recesses of the follicles. A solution of corrosive sublimate, two grains to the ounce; an ointment of acetate of copper, one grain to the ounce; and, above all, the saturated aqueous solution of sulphurous acid gas, diluted with two or three parts of water, may be used for this end. In cases of mentagra, we have found an ointment of sulphate of iron, 3ss to the ounce, completely effectual in curing the disease. There are no doubt many other substances which have a similar good effect; but a caustic such as nitrate of silver, which, by forming a crust on the surface, rather protects the fungus than destroys it, will not succeed.—Assoc. Med. Jour.

Surgery.

Observations on the Excision of Ovarian Tumors. By John Erichsen, Esq., Prof. of Surgery in University College, London.—In considering the subject of ovariotomy, two questions present them-
selves. 1. As to whether the operation is a sound one, and ought to be retained in practice; and 2. If retained, in what class of cases it should be had recourse to?

In answering the first question, we must refer to the course that is taken by ovarian tumors, and to the result of the operation as deduced from published cases.

The course taken by ovarian tumors necessarily varies greatly. In some instances, these growths do not appear to be incompatible with prolonged existence and a fair share of health. In other instances, again, after remaining quiescent for some length of time, they assume considerable activity of development, and interfere so seriously with the other abdominal organs and with the general operations of the economy, that life is attended by great misery and discomfort; and in a third class of cases they rapidly and steadily run their course to an unfavorable termination.

After a time, in the majority of instances, the tumor may be materially lessened in bulk by tapping; but when once this operation has been had recourse to, it will require to be repeated with increased frequency, the intervals between each succeeding tapping being diminished; and then a fatal termination at a comparatively early date may usually be looked for. Mr. S. Lee states that of forty-six patients who were tapped, thirty-seven died, and only nine recovered; and that of the thirty-seven who died, more than one-half did so in four months from the first tapping, twenty-seven out of the thirty-seven in the first twelve months, and of these eighteen were only tapped once.

The objection has been raised against ovariotomy, that the mortality from it was so high as not to justify a surgeon in performing it. Undoubtedly, a very high rate of mortality after an operation would constitute a serious bar to its performance; and the more so, if it could be shown that the disease for which it was practised was not a necessarily fatal or even a very serious one. Thus, Mr. Phillips has collected the particulars of 61 cases in which ovarian tumors were extracted: of these, 35 were successful, and 26 died. Mr. Lee gives 90 cases; of these, 57 recovered, and 33 died; and Dr. Robert Lee, the most recent writer on the subject, has collected 102 cases of ovarian extraction, of which sixty did well, and 42 terminated fatally. From these statistics, it would appear that the mortality after the removal of ovarian tumors, amounted to rather more than one in every three cases. This rate appears to me not to be excessive, when we compare it with the result of operations for various severe surgical injuries or diseases.

The next question that occurs in connection with ovariotomy is as to the class of cases in which it should be practised. Now here we come upon ground in which much difference of opinion must necessarily exist. Ought ovariotomy to be performed in all cases, or even in the majority of instances of ovarian disease, or ought it to be limited to a few and exceptional cases, and practised as a last resource?

The most ardent advocate for this operation will scarcely, I think, advise that an attempt should be made to extract the ovarium from every woman laboring under tumor of this structure; but would rather
recommend the employment of palliative treatment, until the growth had begun to interfere seriously with the comfort of existence, or with the healthy action of the abdominal organs. When these injurious effects of pressure have once fairly begun to manifest themselves, the patient wasting, suffering much discomfort from her size, with difficulty in breathing, repeated vomiting, gastric irritation, etc., then the question of relief by operation will necessarily obtrude itself, and must be discussed dispassionately and without prejudice. Under these circumstances, I confess I see no chance of giving the patient relief, or of prolonging her existence, except by the removal of the tumor. Medical treatment is of no avail in such cases, and tapping only gives temporary relief, and will eventually, and often very speedily, wear out or destroy the patient. Under such circumstances, therefore, we must either leave the patient to her fate, or have recourse to the ablation of the tumor, which, it has already been shown, may be done with the prospect of success in nearly two cases out of every three.

So far then as the strictly surgical aspect of this question is concerned, I should say that as the recoveries after this operation amount to at least 60 per cent., it is proper for the surgeon to propose and to perform it when all other means of relief have failed, and when the patient’s health is giving way under the extension of the disease.

There is one aspect under which we have not as yet considered this matter, and which has a most important bearing on the operation. I mean in its diagnostic point of view. This, which may with justice be termed the medical part of the question, and may be considered as belonging rather to the province of the physician than to that of the surgeon, has to be considered in two of its bearings: 1. As to the existence of such adhesions between the enlarged ovarium and the other abdominal organs, as to render the extraction impossible; and 2. The diagnosis between ovarian and other abdominal tumors.

The existence of such adhesions between the ovarian tumor and the abdominal viscéra, as will prevent the possibility of its extraction, is of frequent occurrence, having been met with in rather more than one third of the whole number of cases operated on; according to Dr. Lee, in 60 out of 162 cases. The frequency of the occurrence of this complication renders its diagnosis one of extreme importance. Its existence may in general be suspected, when it is ascertained that the patient has been the subject of attacks of peritonitis, when the abdominal tumor does not appear to change its position on the patient taking a deep inspiration, and then expiring freely; and when, on the patient’s raising herself into the sitting posture, the sac does not tend to move forward into the space between the recti muscles. So also much light may be thrown upon this important point by ascertaining the existence of a crepitant or crackling sensation between the anterior abdominal wall and the tumor, and more particularly, if, when the tumor is tapped, it draws down over it the abdominal parietes, or sinks into the pelvis without exercising any traction on those parts. The condition also of the pelvic viscéra—viz., the bladder and uterus—as ascertained by examination with the sound, may tend to show whether connexions exist in this quarter or not.
By such examinations as these, the presence of adhesion may doubtless in many cases be suspected; but in other instances, and more particularly when the mass is bound down posteriorly, there is no possibility of determining this point, and then the surgeon may, to his great annoyance, find that after laying open the abdomen, the operation cannot be completed, and the tumor requires to be left. In those cases in which there is any reason to suspect the presence of adhesions, it is, I think, a wise precaution to make a small exploratory incision into the abdomen, through which the fingers or hand may be introduced, and the connexions of the tumor examined. If these are too extensive to admit of removal, the aperture may be closed, and possibly the patient may escape without any very serious consequences ensuing; as in these cases the peritoneum has in a great measure lost its character as a serous membrane, and is not so susceptible of the diffuse and destructive forms of inflammation that would otherwise be likely to occur in it.

The diagnosis of ovarian from other abdominal tumors, falls so entirely in the province of the physician, that I do not feel myself prepared to enter upon it; but would prefer leaving that point to be elucidated by those members of the Society who have paid special attention to this subject.—Assoc. Med. Jour.

On the Reduction of Luxations of the Extremities when complicated with Fracture. By M. Richet. (Bulletin de Therap.)

M. Richet relates, in great detail the case of a man, act. 68, in whom a dislocation of the upper end of the humerus was complicated with fracture of the anatomical neck of the bone. Four days after the occurrence of the accident, he was placed under the influence of chloroform, and the reduction of the dislocation was easily effected by pressing backwards the head of the bone, without any traction being resorted to. The fracture was afterwards adjusted and consolidated; and when the patient was seen a year after, he had recovered the complete use of his limb.

M. Richet reviews the opinions of the classic writers, who agree in pronouncing the impossibility of reducing a dislocation of the humerus or femur, until after the fracture complicating it has become united. He shows the great power chloroform confers upon us, in these cases, by the complete relaxation of the muscular resistance it produces, and the care with which the head of the bone may, by due manipulation, be forced back into its socket. He thinks the passive obstruction offered by the fibrous tissues of the parts has been exaggerated and ill-understood. In numerous autopsies he has made after recent dislocations, produced accidentally or experimentally, he has always found the aperture in the capsule broad and irregular, and in no condition to offer an obstacle to reduction. He does not deny that such obstacles may occasionally be offered by the fibrous structures, independently of the aperture of the capsule; but he maintains, from clinical and experimental observation, that such obstacles are much more easily overcome by pressing the head backwards than by the usual practice of
traction of the limb, which, indeed, only aggravates them. By the aid of chloroform, he believes a dislocation of the humerus into the axilla may thus always be reduced by pressing the head directly backwards. In several experiments that he has made, in which the head of the femur has been dislocated, and the bone then sawn through just below it, so as to simulate dislocation complicated by fracture, the reduction has also been easily effected by direct pressure.—*Monthly Journal.*

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**On the Cause and Treatment of Prolapsus of the Rectum.** By M. Duchaussey. *Archives Générales de Méd.* In a short but interesting memoir, M. Duchaussey reviews the circumstances attending this troublesome complaint, and fixes attention in particular upon the loss of power in the sphincter ani muscle as the chief cause of the descent of the bowel. Moreover, he endeavours to show that Dupuytren’s operation, by excising the radiating folds of skin around the anus, and the operation by four touches with the actual cautery, practised by Guersant, act not by causing any subsequent retraction of the cellular tissue, skin, and mucous membrane, but rather by stimulating the sphincter muscle, so that it regains its contractility, and therefore its retentive character. How else, asks M. Duchaussey, do we explain the fact, that the prolapsus is often cured, or does not return after two days, or even after one day, or not at all, after the operation? He points out the fact, that in cases of this disease in infants, three fingers may sometimes be introduced without causing contraction of the sphincter, before the operation by cautery, whilst afterwards, if one be passed, a powerful contraction of the sphincter immediately ensues. As proof that this recovery of contractile power by the sphincter is the cause of cure, a case is mentioned in which M. Guersant had used the cautery too superficially, the sphincter failed to contract, and the disease returned. A second cauterization was followed, on the contrary, by return of the mucular contractility, and the cure was complete.

According to the author, the cautery acts as a stimulant to the paralyzed muscle, just as it will to the deltoid in a like condition. After pointing out the inconveniences and apparent severity of M. Guersant’s method, M. Duchaussey suggests that a slighter cautery, or some other stimulant to muscular contractility, might act as well, and he suggests strychnine. This, with M. Guersant’s permission, has been tried in the Hôpital des Enfants, in the case of a girl aged eleven years. The prolapsus here arose from obstinate constipation; it had lasted for four years; the bowel protruded at each evacuation about ten centimeters (≈4 inches). During the first month of her admission she was treated by laxatives only, with no other result than that of diminishing the length of the protruded portion of bowel to about four centimeters (1\(\frac{1}{2}\) inches). Strychnia was then employed endermically near the region of the sphincter; the next day there was no evacuation; on the following day the bowels acted once, only a slight bulging of the rectum taking place; on the third day the protrusion was still less after an ordinary evacuation; and during the next thirteen days it did not occur again.
Blisters were made in the cleft between the nates, and on the right thigh close to that cleft; one sixth of a grain of strychnia was applied the first day, one third on the second, and one third on the fourth day. On the fifth day, about half a grain of sulphate of strychnia was used, and this was repeated for the last time on the sixth day. In the case of a boy, it is recommended to be applied between the scrotum and anus, immediately over the anterior interlacement of the sphincter ani fibres. The remedy certainly deserves further trial.

Advantages of the Starched Apparatus in the Treatment of Fractures and Diseased Joints. By J. S. Gamjee, Esq. The following notice of Mr. Gamjee’s essay, for which the Council of University College have awarded the Liston Clinical Medal, we copy from the Brit. & For. Med. Chir. Rev.

This is a practical work, intended to show the beneficial effects of the treatment of fractures by the starched apparatus, as employed by M. Seutin. This apparatus is very simple: splints are made from pasteboard soaked in water, and are then covered, both inside and out, with a thick coating of starch; the limb is bandaged with a roller covered with wet starch, and the splints are then moulded on the limb, all depressions and tuberosities in which are filled or protected with cotton-wool. An outer bandage, also covered with starch, is then applied, any the limb is kept quiet until the whole is dry, which occurs in about 36 hours. When dry, the bandages are slit up in order to see that the application of the splints has been properly performed, and if any swelling of the limb requires a little loosening of the bandage, or if any shrinking of the bandage requires a little tightening. This being done, a bandage starched on the outside is reapplied, and after this has dried, the patient may leave his bed. The great advantages of this plan are, that uniform pressure is applied, reduction is maintained, and confinement to bed for a long period (as common in fractures of the leg, thigh, and femoral neck, treated on other plans) becomes unnecessary. Mr. Gamjee also states that swelling from extravasation of blood, or from inflammation, need not prevent the application of the apparatus if it be judiciously used; and that if the fracture is a compound one, the only difference of treatment is that the wound may be left uncovered by cutting a piece out of the splint. In support of these assertions, 17 cases treated in University College Hospital are related, and some judicious remarks are attached to each. Without going into their analysis, or into the details of the manipulation required for each particular fracture, we may observe that the evidence, as far as it goes, is satisfactory.
PART FOURTH.

AMERICAN MEDICAL RETROSPECT.

PRACTICAL MEDICINE.

Statistics of Yellow Fever in Philadelphia in 1853. By Wilson Jewell, M.D.—The whole number of cases registered from July 19 (when the first case occurred), to October 7, the date of the last case, a period of two months and nineteen days, has reached the total of 170.

An examination of the records of the Board of Health will show that the cases reported were not, in every instance, under the name of yellow fever; the greater part of them have been designated as malignant bilious, malignant, pernicious, typhus icterodes, &c.

The deaths have been 128, equivalent to 1 in every 1.42 hundredths, or 75 per cent. of the whole. A fearful mortality. Had every case that wore the aspect of a malignant type of fever been recorded, the list of cases would have been increased, while the percentage of deaths would have presented a more favorable appearance.

Of the 170 cases, 147 may be traced directly to the infected locality, or its immediate vicinity. Twenty-two are of doubtful or unknown origin; while, in one instance, that of Matthias Pettigrew, the disease was contracted at the Lazaretto station, where he had been at work on board the ship Caledonia Brander, from New-Orleans.*

One hundred and eighteen of all the cases reported were treated in private practice; twenty-four at the Pennsylvania Hospital; eighteen at the Blockley Hospital; seven at the Bush Hill, or City Hospital; and three at St. Joseph's, on Green Hill.

In no instance can it be shown that the disease has spread from those laboring under the fever. At the Pennsylvania Hospital, the yellow fever cases were intermixed in wards with numerous other patients, some ill, and others convalescing from disease, but not an individual, either among the patients, nurses, or visitors, contracted the fever. The like immunity was observed with the cases treated in the Blockley, St. Joseph's, and Bush Hill Hospitals. In private practice, although numerous cases were attended away from the infected portion

* This vessel had yellow fever on board when she arrived.
of the city, we have yet to learn that the disease, in a single instance, was propagated from the sick to the well, although there was an unrestrained intercourse between the patients and their immediate friends.

Ninety of all the cases were accompanied with black vomit; equal to 53 per cent. Of these, all died except four, viz., John Rechil, aged 20; Ellen Parr, aged 20; Mrs. Lindsay, aged 28; and James Sweeney, aged 12. The genuineness of the discharge in Ellen Parr's case has been doubted, as stated in a former communication. As black vomit has generally been considered to be a fatal symptom in yellow fever, we should always have some hesitation in relying upon the evidence of recovery after it has occurred, however high the authority from which the statement comes, unless the matter has been carefully submitted to the field of the microscope, and blood corpuscles found therein.

The sexes suffered nearly alike from the effects of the fever; the preponderance, however, being on the side of the males. Ninety-three of the cases on record were males, and seventy-seven were females.

A large proportion of those attacked were foreigners, viz., 102. Of these, 62 were born in Ireland, 19 in Germany, 18 in England, 1 in Scotland, 1 in France, and 1 in Spain. The remainder (68) were natives of the United States.

The colored population appear to have been specially exempt from the disease. We have not on record a single case, nor could we learn of any black person having had the fever. This supposed immunity of the colored race from attacks of yellow fever has been elsewhere observed; but in the fever of 1793, in this city, Dr. Rush says, "they took the disease in common with the white people."*

The duration of the attack in those who died was from two to twenty-four days. The mean was a fraction less than six days.

But few children appear to have had the disease. Under ten years of age there were only six. One of these, Rudolph Westhold, was but three weeks old. This child survived until the twenty-fourth day. Its father died on the sixth, and its mother on the fourth day of their disease. Another child, aged nine years, of the same family, recovered. William Hawkesworth, aged four months, died after one day's illness. It had nursed its mother until within two days of her death, she having died of the fever, at the Pennsylvania Hospital, on the sixth day of her attack.—Quar. Sum. of Trans. of Col. Phy.

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On some Effects consequent on the Administration of Iodide of Potassium. By John O'Rielly, M. D. (N. Y. Med. Gaz.)—In August, 1850, I was called to visit Mr. H. E., aged twenty-nine, married; has a son two years old; has never had the venereal disease, or never took mercury to his knowledge; has been troubled for some time with chronic rheumatism, and has been ordered to take Hydriodate of Potash for its cure. Having taken the medicine for some days, he was attacked with symptoms of fever, and an eruption soon presented itself.

on his face, and subsequently all over his body. Maculæ first, of a dark red color, came out, which gradually got darker, until the spots resembled purpura; the cuticle next became raised over some of the spots, and was filled with a fluid of a purple color, constituting large bullæ an inch in diameter. On the cuticle giving way, the true skin was found sphacelated underneath; the patient was profusely salivated—his tongue was swollen, his frame was greatly debilitated, and nervous irritation harassed him very much. The case being an anomalous one, myself, the late Dr. Caldwell, and my learned and talented friend, Dr. Power, were requested to see it—and the truth is, it puzzled us. The patient's life seemed to be in imminent danger at the time, and although we were not perfectly satisfied as to the nature of the distemper, yet we adopted the proper treatment. The patient was directed to take strong broths, porter, milk punch, compound infusion of roses, with quinine, camphor, compound combined with opium; and after the expiration of a month, he was convalescent, with the exception of the ulcers, which were healed in the usual way, and the patient was enabled to resume his business.

On the 15th April, 1853, I was called to visit Mr. J. D., aged twenty-three; a clerk; married; has one child eighteen months old; has had syphilis previous to his marriage, for which he had taken mercury; has been addicted to habits of intemperance; has practised masturbation since his marriage; has been subject to attacks of rheumatism, for which he has taken Hydriodate of Potash; in the present attack has had a physician attending to him for nine days, who prescribed Hydriodate of Potash for him; states that in consequence of his medical attendant going to the country, he was obliged to send for me, on account of an eruption which suddenly broke out after a slight attack of fever. The patient at this time presented a most grotesque appearance, looking more like a leopard than a man; he was all mottled over with spots—those on his face were purple, whilst those on the lower extremities were of a dark red color; it will be remembered the spots on the legs came out last. There were two large bullæ on the forehead, one on the lip, two under the left clavicle, two on the inside of the right thigh, one on the side of the prepuce. The patient was profusely salivated, notwithstanding he had taken no mercury lately. After the lapse of a few days, the patient getting worse, and his life being menaced, Professor Mott was called in consultation, who declared, in the whole course of his vast experience, he never saw so bad a case. At this time the prepuce corresponding to the site of the bullæ had sphacelated, and the integuments of the penis, as far as the pubis, were involved in mischief. Mortification had also seized on the lip, and the other parts specified as having bullæ. The patient emitted a most abominable smell from his person; his mind was incoherent, his pulse was quick and small, the vital powers were prostrated to the lowest degree, every moment seemed about to snap the thread of his earthly career. Notwithstanding this terrific state of things, I ventured to predict the patient would survive, having arrived at the conclusion that it was similar to the former case; and fortunately my anticipations proved to be well formed. The
same treatment was fully carried out; the patient rallied, the eruption disappeared—first from the face, and afterwards from the lower extremities. The sphaelated parts were thrown off, including the whole penis, body and integuments, from the pubis, not leaving a vestige of it behind for any useful or sinister purpose. The patient is now in excellent health and spirits, fully contented, and not fretted at the loss he incurred.

Formula for Styptic Balsam. By James Warren, M. D.—It is nearly thirty years since I commenced the use of this balsam as a styptic, in the various forms of hemorrhage which are within the domain of medical pathology, and with uniform success. I am satisfied that no remedy now known exerts a more specific power and more speedy relief, especially in hemoptisis, hematemesis, epistaxis, and menorrhagia. It acts both by its sedative power, in diminishing the force of the eireulation, and by its astringent qualities, in contact with the bleeding vessels. In the treatment of hemorrhage, neither blood-letting, confinement to the room, suppression of the voice, relaxation from business, nor other precautions are necessary; nor is any auxiliary treatment required, except, perhaps, a dose of Epsom salts, where there is evidence that blood has been swallowed.

Ordinary exercise in the open air is decidedly preferable to inaction; and wherever there are premonitory symptoms of a return of hemorrhage, it has always exerted a prophylactic power when promptly used; and by this early resort to the remedy, many radical cures have been effected.

The following is the formula and the method of using it:

Re

Acid. Sulphuric. (by weight), 3 v.
Spts. Terebenth.
Spts. Vin. Rect. a a f 5ij.

Place the acid in a Wedgewood mortar, and add the turpentine slowly, stirring it constantly with the pestle; then add the alcohol in the same manner, and continue stirring it until no more fumes arise, when it may be bottled, and should be stopped with a ground stopper. It should be prepared from the purest materials; and when done, it should exhibit a dark but clear red color, like dark blood; but if it be a pale, dirty red, it will be unfit for use. The dose is 40 drops, and the method of using it is as follows:—Put a teaspoonful of brown sugar in a common sized tea-cup, and rub in 40 drops of the balsam until it is thoroughly incorporated, and then slowly stir in water until the cup is nearly full, when it should be immediately swallowed. This dose may be repeated at intervals of an hour, until three or four doses are taken, if necessary; and its use should be discontinued when fresh blood ceases to flow. After standing a few days, a pellicle forms upon the surface of the balsam, which should be broken, and the liquid below it used. It does not deteriorate by age, if tightly stopped.—N. Y. Med. Times.
Case of Pulsating Encephaloid Tumor of the Occiput. By John Neill, M. D., Surgeon to Pennsylvania Hospital.—In the February, 1854, number of the Medical Examiner, Dr. N. reports the particulars of a very unique case. The patient, a man aged 70 years, had, for many years, a small, hard tumor upon the right of the back part of the head, which never pulsated or gave him any pain until ten months before death. The tumor was sixteen inches in circumference around the base. The skin over the tumor was stretched and reddened, but not hot or tender, and could be moved freely upon the parts beneath. There was no pain or uneasiness in the tumor, except a sense of tension.

It had a pulsation distinctly perceptible both to the eye and touch, accompanied by a marked aneurismal bruit. The pulsation was not a simple rising and falling of the tumor, but an expansion in all directions.

The right occipital artery could be felt beating strongly and with a distinct thrill. Pressure upon it sensibly diminished the pulsation of the tumor, and pressure upon both occipitals almost entirely destroyed pulsation.

There was no swelling of the glands in the vicinity, and no other tumor about the body. The pulse was regular—the radials were not ossified—and the sounds of the heart were natural.

He died at the Almshouse, and after the post-mortem had been made I had an opportunity of examining a section of the head containing the tumor; it had encroached upon the cavity of the cranium, through an opening with rough and jagged edges, of about three inches in diameter.

The dura mater was pushed into the cranium, and was closely connected by its external surface with the tumor. The internal surface of the dura mater seemed perfectly healthy.

Upon cutting into the tumor, it presented the appearance of encephaloid cancer. The larger part of the section was of that white kind which so much resembles medullary matter, and the remainder had a pinkish grey tint, indicative of greater vascularity. The interior of the tumor was intersected with numerous dense bands, and in the intervals were several small cysts containing fluid.

About one inch and a half from the tumor there had been disease and absorption of a portion of the parietal bone. The opening in the bone was one inch in diameter, and seemed to be so regularly circular on one side that it appeared to have been made with a trephine. The pericranium and the dura mater did not seem to be diseased, but between the two there was a reddish material, so soft that it was almost semifluid.

The microscopic examination of these products showed their true cancerous nature.

When the material of the tumor was first examined, the cancer cell was much obscured by oil globules, which were so numerous as to suggest the idea that the growth was undergoing fatty degeneration. The cells were pale, large, irregular in form, and frequently folded and wrinkled. The nucleus was very large.
Remarks.—The reader will probably be surprised at the manner in which the foregoing case terminated. There was certainly a great want of correspondence in the physical characters of the disease, and those revealed by the post-mortem examination. Here was a pulsating tumor, with perfect aneurismal pulsation and bruit; pressure on the occipitals interrupted the pulsation, and the ligature subsequently destroyed the pulsation and bruit completely. The impression that it was an aneurysm was irresistible, and I thought that it was a diffused aneurism. Subsequently, however, to the operation the pulsation returned, and doubts began to arise as to its aneurismal nature, still there was no reasonable grounds for such suspicions. Under such circumstances, the attention of any one would naturally be directed to the possibility of its being a disease of the brain or dura-mater, which had worn an opening in the skull, and that the pulsation was dependant upon that of the brain; but, if such had been the case, the pulsation would not have ceased upon the application of a ligature to the artery. And, moreover, such extensive disease of the brain or its membranes could hardly have existed so long without producing some functional disturbance.

Then, again, the subject of pulsating tumors in bone and osteo-aneurism would be brought to mind, but yet the position and characters of this tumor would not allow it to be included under this class of diseases.

The probability of its being cancer often occurred to me, but of course there could be no suspicion of its being a hard cancer or an osteo-sarcoma; and when, by feeling the tumor, the idea of a soft or medullary cancer was suggested, its pulsation, and the fact that that pulsation was once controlled by pressure upon an artery, at once counteracted the conclusion.

In fact, the case is a rare one. There is no record that I have yet seen of a Pulsating encephaloid tumor of the occiput, and on this account I have deemed the publication of this case as justifiable and useful.

Case of Tracheotomy, in Croup. By Prof. W. H. Van Buren, M. D.—The N. Y. Med. Times for Jan. 1854, contains a report of the proceedings of the N. Y. Medical and Surgical Society, in which we find that Dr. Van Buren reported recently to that Society "a case of croup, in which he performed tracheotomy, ten days before, and with very satisfactory results. The patient was a child five years old, and had been suffering with croupy symptoms about six days, before Dr. V. B. saw it. The obstruction to the respiration had been gradually increasing, and the breathing had at last become quite difficult, and paroxysms of suffocative cough were frequent. There had been, however, but little fever. At the second visit, the doctor found the pulse had arisen to 130, and the condition of the child threatening immediate death by strangulation. He accordingly opened the trachea, and inserted a tube thus giving immediate relief. Four hours after, the rapidity of the pulse had very much diminished, several pieces of false membrane had
been discharged through the tube, and the breathing was comparatively easy. The case had steadily improved, and on the tenth day after the operation, the child was able to speak through the larynx. No medicine had been given since the operation. A single tube was first introduced, and afterwards a double one, with an opening in the convexity of the outer.

_On the Internal Use of Chloroform._ By Henry Hartshorne, M. D.—The object of this article is chiefly to make some remarks upon its dose and mode of administration. Many practitioners within the writer’s knowledge hesitate, from their recollection of its power as an anæsthetic, to give it in doses of more than a few drops; and as the drop is exceedingly small, such doses are really often insignificant. The writer can assert, from positive experience, that a fluidrachm of chloroform, taken by the stomach, is not more than equal, in soporific effect, to 30 or 35 drops of laudanum. In doses of 50 to 75 drops (about 15 minims), I have given it every half hour for several hours together. It differs from the opiate preparations in the promptness of its hypnotic action, the much shorter period of its duration, a less degree of cerebral oppression, and the absence of all stimulus to the circulation. It might be called a “diffusible narcotic,” comparing in this respect with opium as ammonia does with alcohol. To produce much effect with it, repeated doses, at short intervals, will be necessary. The advantages which the above peculiarities afford in many instances of disease will suggest themselves to every physician. We may leave them to do so, proceeding to remark briefly upon its mode of administration.

The pungent property, already alluded to, causes it to require plentiful dilution, which is, of course, facilitated by the addition of some demulcent. Perhaps the _orgeat syrup_ is the best. Every fluidrachm of chloroform should have at least two fluidounces of water with it when taken; and it will need, if in ordinary gum mucilage, considerable agitation to resuspend the particles immediately before swallowing. When taken in aqueous mixture alone, however, unless in very small doses, it produces nausea with some persous. This is entirely prevented by the addition of a strong aromatic, or, still better, by giving the chloroform in aromatic _tincture_. From the ready solution and kindred action of camphor with chloroform, their combination has become a very common one. For many purposes, however, a still better preparation is a sort of chloroform paregoric, or compound _tincture_ of chloroform, e. g.: R. Chloroform _f5ij_; sp. camph. et _tinct._ _opii_, _aā _f5iss_; Ol. _cinnamonum_. _gtt._ _viij_; _alcohol_ _f3iiij_. M. et _fiat_ _tinctura_. Dose, from 5 to 30 minims, or more, as required.

The most admirable effects have been witnessed from the administration of chloroform, as above combined, in malignant cholera. In the summer of 1849, my attention was first called to it while attending a very severe case of cholera with the late Prof. W. E. Horner. The prompt and signal restoration accomplished in that case, from a state of collapse, was evidently due to the exhibition by Prof. Horner, every
five minutes, of a few drops of a combination of chloroform, oil of camphor, and laudanum, with ice, and warm frictions externally.—The writer's conviction was very strong that the short interval between the doses was an important item in the treatment; and in pursuing the same plan in a number of subsequent cases, several of which were of the most alarming violence, an extremely gratifying success was obtained. The opinion has thus been formed, that no other plan of treatment gives so much promise in the management of malignant cholera as a combination of powerful yet mild antispasmodics, such as above described, with ice, internally, and persisting external stimulation. It may be mentioned that the writer has added, with apparent advantage in a number of cases, sp. ammon., and occasionally creasote, in minute doses, to the preparation above designated as a compound tincture of chloroform. A formula of a very similar character is now quite extensively used as a gentle carminative and anodyne, or antispasmodic, and may be often substituted with benefit for the common paregorie.—Am. Jour. Med. Sci.

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**DISEASES OF FEMALES.**

*On the use of Sponge Pessaries.* By Prof. A. P. Merrill, M.D. of Memphis.—The following remarks on the use of the Sponge Pessary we extract from the *Memphis Medical Recorder* for January, 1854. After citing cases, successfully treated by this pessary, Dr. Merrill says—"I have tried various plans of applying the sponge, all of which have been successful; but it may be that I have not yet fallen upon the best. The coarse and cheap sponge, cut into a globular form, of an inch and a half diameter, is sometimes used; sometimes pieces of a similar breadth, without regard to their shape; but, commonly, the patient is advised to provide some five or six fine sponges of a proper size, to be used in their natural state, without cutting. After clearing them of sand, and washing them in hot water, with soap, or in an alkaline solution, to soften them, each sponge is provided with a piece of twine, to facilitate its removal. This is passed through the sponge with a needle, so as to keep the smaller end downward. Before introduction, it is charged with thick lather of castile soap, or with elm mucilage, but it may sometimes be used without either. The frequency of renewal must depend upon the character and quantity of the vaginal discharge. If this is either profused or fetid, and during menstruation, the renewals should take place every two to four hours; otherwise, twice a day is sufficient. Under good management the relief afforded is striking and complete, and so little inconvenience does the sponge give, that the patient is rarely ever aware, from any sensation attending its use, even of its presence in the vagina. Any error that may be committed in the commencement, in the size of the sponges, will be likely to be corrected by the patient herself; but, in general, as the cure progresses the size may be reduced, and as this is done the sponge will recede higher up, and the walls of the vagina close beneath it with a healthy tonic contraction, which sometimes even increases the
resistance in its removal. When this is the case, and the tone of the parts is well restored, with no greater amount of secretions than in health, a renewal of the application once in every twenty-four hours will answer every useful purpose."

Analysis of Sixty-seven Cases of Inversio Uteri. By S. B. Hunt, M. D.—The total number of cases which I find on record is sixty-seven. Of these, twenty-one were reduced and recovered; thirty-three became chronic; and thirteen died.

The number of the labor is mentioned in twenty-three cases: Nine occurred in the first labor; seven in the second labor; six are mentioned as multiparous; and one occurred after abortion, at the fourth month.

The degree of inversion is mentioned in forty-one cases: Thirty-five were cases of complete inversion; and six were mentioned as partially inverted.

The time at which the accident occurred is noticed in forty-five cases: Nineteen of these happened immediately on the delivery of the child; eight on attempting to remove the placenta.

The remaining eighteen cases occurred: One, after removing the placenta by the hand in the uterus; one, simultaneously with the first after pain, seventeen minutes after the expulsion of the child; three, half an hour after the delivery of the child; one, eighteen hours after labor; three, three days after parturition; one, on the eighth day; one, on the twelfth day; one, on the fifteenth day; one, on the tenth day; four are mentioned as occurring at unknown periods; and one, nine days after abortion at the fourth month.

The condition of the placenta is mentioned in thirty-seven cases: In eighteen of these it is mentioned as adherent; in nineteen it was removed either before the occurrence of inversion, or without recognizing the difficulty; in ten cases the placenta was intentionally detached when adherent.

The records as to hemorrhage are very imperfect.

In only six cases is the degree of hemorrhage before removing an adherent placenta mentioned: In one of these it was slight—this case was fatal; in five it was large in amount—one of these was fatal.

The degree of hemorrhage, after detaching an adherent placenta, is mentioned in ten cases: In eight of these it is mentioned as slight; in two it was dangerous—one of these was fatal.

Hemorrhage is noticed after removing the placenta as usual, or before the accident in five cases.

In eight cases it is spoken of in general terms.

Of two cases where the placenta was returned with the uterus in the operation of reposition: one had fatal hemorrhage; while in the other it was slight.

In five cases no hemorrhage occurred.

Convulsions occurred in three cases; all of which were fatal.

Syncope in twelve cases.

Syncope, without hemorrhage, in one case.
There were thirty-two irreducible cases. Of these, five terminated by spontaneous reposition; five by strangulation and gangrene, followed by recovery; four are recorded as successful cases of ligation; six are mentioned as "extirpated" successfully; and four cases of ligation were fatal.

It will be seen that one in three and a half of the cases operated upon, died. Of the eight cases remaining, there is no record except of the two already quoted as in comfortable health years after the accident. I shall quote somewhat largely from the histories of these operations.

Of the four successful cases of ligation, two were tied, supposing them to be polypi. These, of course, are to be considered merely as fortunate terminations of unfortunate blunders.

The third of these cases is reported by Dr. Usher Parsons, of Rhode Island, in the Boston Medical and Surgical Journal, vol. xiv, p. 511. It was a partial inversion of four years' standing. There had been great suffering from alarming hemorrhage, leucorrhoea, nervousness, and uterine pain. The tumor was ligated just below the point of stricture, at the os tinece. Four days after, the operation was completed by the knife and scissors. It resulted in a cure.

Of the fourth and last case of successful ligation, I have no record beyond the mere fact of the operation.

Of the six successful cases of "extirpation," it is not stated whether the knife or ligature was used. One of these was extirpated on the fourteenth day after labor, by an English surgeon—a most unjustifiable and ignorant proceeding.

Of the four cases of unsuccessful ligation, one was ligated immediately after delivery, the uterus being mistaken for a tumour in which the placenta was implanted. On the eighteenth day after, she was admitted into Boyer's ward, at La Charité. Seven days after, the ligated portion came away, and she died a few days later.

Another case was also ligated by mistake, six months after inversion. She died five days after the operation. The two remaining cases died of peritonitis occurring after the operation.

Thus of fourteen cases in which surgical interference took place, ten recovered and four died. Of the four who died, the operation was performed in ignorance of the true condition of the parts in two cases—a fact which would have more weight were it not that two of the successful operations were also in the same category of surgical blunders.—Buffalo Med. Jour.

MISCELLANEA.

Annual Meeting of the American Medical Association.—The seventh annual meeting of the American Medical Association will be held in the city of St. Louis, Mo., on Tuesday, May 2d, 1854.

The secretaries of all societies and of all other bodies entitled to representation in the Association, are requested to forward to the undersigned, correct lists of their respective delegations as soon as they may be appointed,—and it is earnestly desired by the com-
mittee of arrangements that the appointments be made at as early a period as possible.

The following are extracts from article 2d of the constitution:

"Each local society shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half of this number. The faculty of every regularly constituted medical college or chartered school of medicine, shall have the privilege of sending two delegates. The professional staff of every chartered or municipal hospital containing a hundred inmates or more, shall have the privilege of sending two delegates; and every other permanently organized medical institution of good standing shall have the privilege of sending one delegate."

"Delegates representing the medical staffs of the United States Army and Navy, shall be appointed by the chiefs of the army and navy medical bureau. The number of delegates so appointed shall be four from the army medical officers, and an equal number from the navy medical officers."

The latter clause, in relation to delegates from the army and navy, was adopted as an amendment to article 2d of the constitution, at the last meeting of the Association held in New-York, in May, 1858.

E. S. Lemoine, M.D.,
One of the Secretaries, St. Louis.

Prof. John C. Dalton.—We have received from the class of the College of Physicians and Surgeons of this city a series of resolutions highly complimentary of this gentleman, which were passed at the conclusion of his recent course of Lectures on Experimental Physiology in that College, and tendering him a silver box, containing a "roll of double eagles," as a token of their appreciation of his efforts to instruct them in this abstruse science by means of experiment. Complimentary as are these resolutions, and valuable as was the gift, they are by no means unworthily bestowed. In the attempt to introduce the method of teaching physiology, so successfully pursued by Bernard, into our medical schools and colleges, Prof. Dalton deserves great credit, and we are gratified to receive this testimonial of favor emanating from his class. In his note of reply he makes the following just observations:—"The time is past when the student of medicine could be required to accept scientific doctrines unsupported by evidence, or to repose a blind confidence in the ex cathedra statements of his teacher. The instruction communicated to him must be of such a kind as to satisfy the intelligence, and not merely to fill the memory with second-hand opinions. He must not only learn the facts of medical science, but must know also how they have been ascertained. Neither can the medical profession of the United States continue to be dependent, for the means of scientific progress, on the assistance of foreign countries. Independent investigation, if properly conducted,
will accomplish here as much as it has done elsewhere; and the credit of the American name is to be sustained and exalted, not by depreciating the labors of foreign observers, but by emulating them."

*Medical Journals.* A new monthly medical periodical began its existence in this city with the present year, entitled the "American Medical Monthly." It is to be conducted by Profs. Horace Green, E. H. Davis, B. Fordyce Barker, R. O. Doremus, J. M. Carnochan, E. R. Peaslee, and E. H. Parker, and is under the editorial management of E. H. Parker, M. D., late of the New-Hampshire Journal. Much care is evinced in the preparation of its original, review, and editorial departments. This is the third monthly medical periodical which now represents the profession of this city, and we wish it all success in its high and honorable vocation.

As announced at the close of the second volume, the New-York Journal of Pharmacy has passed from the authority of the College of Pharmacy, and, at the commencement of its third volume, assumes an independent and individual existence. It is to be edited by Thomas Antisell, M. D., aided by Prof. Torrey, E. A. Kent, Dr. Enderlin, and B. Canavan.

We have regularly received the Medical Reporter, a quarterly journal, published under the direction of Chester County Medical Societies, Penn. The first number was issued July 1st, 1853.

Drs. F. G. Smith and J. B. Biddle have retired from the Medical Examiner, and Dr. S. L. Hollingsworth has succeeded to the editorial chair thus vacated.

The Stethoscope for January appears as the property and organ of the Medical Society of Virginia, edited by an association of physicians.

*Medicinal Extract Works.*—Our readers will observe that they are presented in this number with an illustration on steel of Messrs. Tilden & Co.'s. laboratory and gardens for the production of medicinal extracts. There are probably but few physicians in extensive practice who have not already become somewhat familiar with the quality and kind of these valuable auxiliaries to the successful practice of medicine. Since 1849, this establishment has been in successful operation, and produces annually from 10 to 15 thousand pounds. We are informed that there are under cultivation for the growth of material about forty acres, and that about thirty persons are constantly employed in the garden and factory. The products of this establishment, we are pleased to say, have fulfilled our most sanguine expectations; they have proved to be of uniform strength, and fully sustain the character which we gave them in our first notice in the 3d volume of the New Series of this Journal. That Messrs. Tilden & Co. have thus far been directly beneficial to the medical interests of the country, we have abundant evidence to believe, and we are pleased to see that, in addition to what they have already done, they announce that they are now prepared to furnish *fluid extracts* of a superior quality, and also blue mass of official strength.
State Medical Society.—Annual Meeting.—We regret that our crowded space does not allow of our presenting a particular account of the proceedings of this society at its annual convocation held in Albany on the 7th of February last. The session was one of unusual interest, and was characterized by much harmony and zeal for the great interests of medical science in this State.

OBITUARY.

Death of Dr. Hester.—Died at his residence, in New-Orleans, on the 1st of December, 1853, Abner Hester, M. D., Editor of the New-Orleans Medical and Surgical Journal, aged about 40 years, of Cholera Asiatica.

It is with feelings of sorrow, that we perform the melancholy task of recording the sudden demise of one of our confreres. Death has invaded our ranks, and taken from us one who was in the ascendent—an ardent lover of medical science and literature. Dr. Hester, we learn, from an obituary notice, written by his most intimate friend Dr. Fenner, was born in Mecklenburgh County, Virginia, but had removed with his parents in early life, to Montgomery County, Tennessee, where he was brought up on a farm. At an early age, he displayed talents and ambition which induced his parents to bestow upon him what assistance they could in the way of a good education. At about sixteen years of age, he was sent to Cumberland College in Princeton, Ky., where he displayed all the requisites of a good student—was very generally esteemed, and prided himself on being well prepared for his recitations. After graduating at this college, he entered the office of Dr. Walter H. Drane, of Clarksville, Tenn., as a student of medicine. His preceptor at that time was considered one of the ablest physicians in the state, and commanded a large and extensive practice. After the usual preliminary course of reading, Dr. Hester attended two courses of lectures in the University of Penn. and graduated in the spring of 1837, having selected as his theme for a thesis “Emetics.” Soon after graduating, he settled at Holly Springs, in North Mississippi, where he practised his profession with much credit, until the fall of 1839, when finding his field too circumscribed for his ambition, he settled in 1841-2 at New-Orleans. It was here that he formed the acquaintance of Dr. Fenner. In 1843, almost discouraged by his slow progress in practice, he thought seriously of again changing his residence. Happening to attend, professionally, a sea captain, he was persuaded by him to go to Merida, in Central America, and had actually packed up his clothes ready for starting. He was disappointed; the captain did not call, and he was forced to renew his efforts for a living in New-Orleans.

In January, 1844, Dr. Hester, with his friend Dr. Fenner, both then in rather desperate circumstances, embarked in the enterprise of starting a medical journal. The success of this journal has been almost unparalleled in the history of periodical medical literature. In the spring of 1846 he was appointed surgeon to one of the three regiments raised by Louisiana for the Mexican war. From this time
is dated the commencement of his rise as a practitioner. For seven years he had persevered in his efforts to get into practice, but had only succeeded so far as to make a bare support. Soon after his return from a three months' service in the war, he was elected Secretary to the Board of Health. In 1848 he was appointed, by the governor, a member of the Board of Medical Examiners for the Eastern District of Louisiana. He was appointed on several occasions Visiting Physician to the Charity Hospital. He was one of the Vice-Presidents of the Louisiana State Medical Society; and, at the time of his death, Port Physician of New-Orleans. As before stated, he was editor of the New-Orleans Medical and Surgical Journal, which still remains a monument to his untiring zeal and literary ambition. His sudden death in the meridian of his usefulness has caused a deep sensation among the members of the medical profession. That he was much esteemed by the public, is evidenced by the fact that he left an independent fortune to his widow.

Death of Dr. Cooke.—John Esten Cooke, M. D., died at his residence in Trimble County, Ky., on the 20th of Oct., 1853, in the seventieth year of his age. From the Western Journal of Medicine and Surgery we have gleaned in part the following particulars of the life of this original, and, in many respects, remarkable physician. Dr. Cooke's father having been a physician, his mind at a very early period was turned to the profession of medicine, in which, after having obtained a thorough collegiate education, he was carefully and thoroughly educated. At the age of 22, after complying with the requisites for graduation in 1805, he received the degree of Doctor of Medicine from the University of Pennsylvania. His thesis was entitled, "An Inaugural Essay, being an account of the Inflammatory Bilious Fever which prevailed in the Summer and Fall of 1804, in the County of Loudon, Virginia." During the twenty years succeeding graduation, Dr. Cooke acquired an enviable reputation as a writer and practitioner of medicine. And so much attention had his writings attracted that, in 1825, he was elected president of the Med. Society of the Valley of Virginia, and in 1827 he was called to succeed Dr. Drake, who had retired from the Chair of Theory and Practice of Medicine in the medical department of Transylvania University. At this time he had made considerable progress in the organization of a medical school at Winchester, Va., where he resided, and where he had just published the first volume of "A Treatise on Pathology and Therapeutics," of which, in 1828, a second volume was published at Lexington. From Prof. Yandall we learn that his first course of lectures was one of the most remarkable ever listened to by a class of medical students. Discarding all systems of nosology, Dr. Cooke presented a classification of his own. He had a theory which he believed explained the phenomena of almost every disease, and his lectures were taken up with an explanation of his theory and the practice founded upon it. The theory was a very simple one, and his practice as simple—that disease depends upon venous congestion, and is to be cured by remedies which act upon the liver. This is a statement of his views of
the pathology, not only of fevers, cholera, dysentery, &c., but menorrhagia, dysmenorrhea, and most of the complaints of females. A view of pathology so simple could not fail to be attractive to his pupils, and it is safe to say that few teachers have exerted a greater sway over medical theory and practice than was exercised by Dr. Cooke for many years in the valley of the Mississippi. In February, 1828, Dr. Cooke, in connection with Dr. Short, commenced the publication of the Transylvania Journal of Medicine and the Associate Sciences. In 1837, having left Lexington, he was appointed to the chair of Theory and Practice of Medicine in the Medical Institute of Louisville. In the spring of 1844, having previously retired to a farm on the banks of the Ohio, near Louisville, he vacated his chair in the faculty of the Medical Institute, and retired from the turmoils of a public to the enjoyments of a private life. Few men have ever entertained so undoubted a faith in the certainty of medicine. Simplicity and candor were ruling traits in his character. Honesty, perfect ingenuousness and unswerving integrity, marked his conduct on all occasions, and singled him out among men. He contributed largely to sustain our periodical medical literature.

Death of Prof. Chamberlayne.—Died at his residence near the city of Richmond, Va., Lewis H. Chamberlayne, M.D., on the 28th of January last, aged — years. For sixteen years Dr. C. had occupied the chair of Materia Medica and Therapeutics, in the Medical Department of Hampden Sidney College, Richmond Va. He was one of the organizing members of the school. He was a graduate of the University of Pennsylvania of the class of 1817, having presented a thesis on "Intermittent Fever." He devoted himself with great ardor to his profession throughout a long and useful life. His lectures were characterized by much originality of thought, and his death is lamented by his numerous professional friends and the public.

Death of Dr. McClellan.—Samuel McClellan, M.D., died at his residence in the city of Philadelphia, on the 4th of January last, in the 54th year of his age. Dr. McClellan was the brother of the late distinguished Surgeon, Dr. George McClellan. He was for several years Professor of Midwifery in the Jefferson Medical College, and labored with great zeal and devotion, in the inception of this school, to sustain its interest. Laterly he had been wholly engaged in the discharge of the arduous duties of a general practitioner.
TO READERS AND CORRESPONDENTS.

With this number is brought to a successful close the twenty-second volume, and the eleventh year of the publication of the New York Journal of Medicine; and on this occasion we take pleasure in noticing the progress of the work in the favor of the profession—the many assurances which have reached us of the approbation of the profession upon our humble efforts. To boast of that progress and approbation is not our object, and it would ill become us, for we feel assured that it is owing more to the indulgence of a generous public, than to the merits of the work; still we would fain hope that this volume will be found not inferior to any of its predecessors. Of the fact that the means of enhancing the practical value of the forthcoming volume will daily augment, we can safely venture to predict, as we have the assurance of aid from sources hitherto not within our reach. But it is with indefatigable industry made manifest in every department of the work, that we hope to render this Journal still worthy of the flattering patronage with which it has recently been honored; and it is by performance, not promises, that we hope to maintain the confidence of our professional brethren and contribute our mite to the onward progress of the noble art of healing.

We claim the indulgence of several of our contributors; their papers, which are on file, shall receive an early insertion.

The Diseases of the Heart and the Aorta. By William Stokes, Regius Professor of Physic in the University of Dublin; author of "The Treatment and Diagnosis of the Diseases of the Chest," &c. Philadelphia: Lindsay & Blakiston, 1854. 8vo, pp. 689. (From the Publishers.)


Elements of Human Anatomy; General, Descriptive, and Practical. By T. G. Richardson, M.D., Demonstrator of Anatomy in the Medical Department of the University of Louisville, &c., &c. Philadelphia: Lippincott, Grambo & Co. 1854. 8vo, pp. 734. (From the Publishers.)

Lectures on the Diseases of Infancy and Childhood. By Charles West
M.D., Fellow of the Royal College of Physicians; Physician to the Hospital for Sick Children, &c., &c. Philadelphia: Blanchard & Lea. 1854. 8vo., pp. 487. (From the Publishers.)

History of the Epidemic Yellow Fever at New-Orleans, La.; in 1853. By E. D. Fenner, M.D., President of the Louisiana State Medical Society; one of the Visiting Physicians of the New-Orleans Charity Hospital, &c., &c. New-York: Hall, Clayton & Co., Printers. 1854. 8vo, pp. 84. (From the Author.)

Tableau of the Yellow Fever of 1853, with Topographical, Chronological, and Historical Sketches of the Epidemics of New-Orleans since their Origin in 1796, illustrative of the Quarantine Question. By BENNET DOWLER, M.D., Corresponding Member of the Academy of Natural Science of Philadelphia, &c., &c. (From the Author.)

A Report to the Indiana State Medical Society on Asiatic Cholera, as it prevailed within the State of Indiana during the Years 1849, 1850, 1851 and 1852. With Observations on the Laws which govern its Progress. By GEORGE SUTTON, M.D. Indianapolis: Elder & Harkness, Printers. 1854. 8vo, pp. 67. (From the Author.)

A Report on the Health and Mortality of the City of Memphis, for the Year 1843. By CHARLES T. QUINTARD, A.M., M.D., Professor of Physiology and Pathological Anatomy in the Memphis Medical College. (Published by order of the City Council.) Memphis, 1854. 8vo, pp. 32. (From the Author.)

Constitution and By-laws of the Medical Association of Texas. Incorporated Jan. 17th, 1853. Incorporated by the fifth Legislature, 1853-54. Proceedings of the last Annual Meeting, together with the Anniversary Address, delivered by GEORGE CUPPLES, M.D., November, 1853. Austin: Jo. Walker, Printer. 1854. 8vo, pp. 30. (From Dr. Cupples.)

The following Journals have been received in exchange:


The American Journal of the Medical Sciences; edited by ISAAC HAYS, M.D.; for April. (Quarterly. Philadelphia.)

The American Journal of Insanity; edited by the Officers of the N. Y. State Lunatic Asylum; for April. (Quarterly. Utica.)

The American Journal of Pharmacy; edited by JOSEPH PARRISH, M.D., and WM. PROCTOR, M.D.; for March. (Bi-monthly. Philadelphia.)


The Medical Examiner and Record of Medical Science; edited by F. G. SMITH, M.D.; and JOHN B. BIDDLE, M.D.; for March and April. (Monthly. Philadelphia.)
To Readers and Correspondents.

The Charleston Medical Journal and Review; edited by D. J. Cain, M.D., and F. P. Porcher, M.D.; for March. (Bi-monthly. Charleston.)

The New-Orleans Medical and Surgical Journal, devoted to Medicine and the Collateral Sciences; edited by B. Dowler, M.D.; for March. (Bi-monthly. New-Orleans.)

Southern Medical and Surgical Journal; edited by L. A. Dugas, M.D.; for March and April. (Monthly. Augusta.)


The North-Western Medical and Surgical Journal; edited by W. B. Herrick, M.D., and H. A. Johnson, M.D.; for March. (Monthly. Chicago and Indianapolis.)

Kentucky Medical Recorder; edited by H. M. Bullitt, M.D., and R. J. Breckenridge, M.D.; for March. (Monthly. Louisville.)


The Memphis Medical Recorder; edited by Prof. A. P. Merrill, M.D., and Prof. C. T. Quintard, M.D.; for March. (Bi-monthly. Memphis, Tenn.)

The Medical Reporter; a Quarterly Journal, published under the direction of the Chester and Delaware County Medical Society; for April. (Quarterly. West Chester, Pa.)

Iowa Medical Journal, conducted by the Faculty of the Medical Department of Iowa University; for March. (Monthly. Keokuk, Iowa.)


The Boston Medical and Surgical Journal; edited by J. V. C. Smith, M.D.; March and April numbers received. (Weekly. Boston.)

The Western Journal of Medicine and Surgery; edited by L. P. Yandell, M.D., and T. S. Bell, M.D.; for March. (Monthly. Louisville.)

The Ohio Medical and Surgical Journal; edited by John Dawson, M.D.; for September. (Bi-monthly. Columbus.)

The Stethoscope and Virginia Medical Gazette; edited by ——; for March and April. (Monthly. Richmond, Va.)


The New-Orleans Medical News and Hospital Gazette; edited by ——; for March and April. (Bi-weekly. New-Orleans.)
To Readers and Correspondents.


American Medical Monthly; edited by E. H. Parker, M.D.; for March. (Monthly. New-York.)


The Western Medico-Chirurgical Journal; edited by J. F. Sandford, M.D.; for March. (Bi-monthly. Keokuk, Iowa.)


Dublin Quarterly Journal of Medical Science; edited by ——; for February. (Quarterly. Dublin, Ireland.)

August, 1853, number not received.

Dublin Medical Press; edited by ——; for March and April. (Weekly. Dublin.)


The Upper Canada Journal of Medical, Surgical, and Physical Science; edited by ——; for March. (Monthly. Toronto.)


Communications intended for publication, and Books for Review, should be sent, free of expense, directed to Drs. Purple and Smith, Editors of the New-York Journal of Medicine, 183 Hudson-street, New-York. Persons at a distance may direct parcels, or exchanges (paid), as above, under cover, to M. J. B. Bailliere, Rue Hautefeuille, Paris; or H. Bailliere, 219 Regent-street, London; or Lindsay & Blakiston, Philadelphia; or Wm. B. Ticknor & Co., Boston. The attention of Correspondents is respectfully requested to the above, as the Publishers are frequently subjected to unnecessary expense for postage and carriage.

All remittances of money and letters on the business of the Journal should be directed to the Proprietors.

Particular attention is requested to the above, as parcels, communications and exchanges have failed to reach us, owing to inadvertence, or want of attention to these notices.
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About the first of May, 1850, a child of Mr. P., of Newburgh, was placed under our care, for the treatment of chronic hydrocephalus. This child was six months of age; its body and extremities were well formed, but the appearance of its head is well represented in Fig. 1st. The circumference of the head was about thirty inches, and, when held between the eye and the light, it was perfectly transparent. The integuments were highly vascular at various points; and at its anterior and posterior portions there were bag-like protuberances, appearing as if about to burst from the pressure of the enormous quantity of fluid within. The health of the child was good, nutrition well performed, and, with the exception of the threatened rupture of the cranial coverings, there were no indications of immediate danger to life. The head began to enlarge very soon after birth, and continued to increase,
until, when about four months old, during the night, the cranial cavity became suddenly nearly empty, whilst the integuments covering the entire body were distended as in anasarca. In the course of a few days, the latter completely disappeared, and the head regained its accustomed extraordinary size. In this condition we first saw it, and, as it would have been but folly to have held out an idea of cure, we proposed, by puncture, gradually to diminish the distention of the scalp, and to save the parents from the shock of witnessing the sudden death of their child, by the spontaneous opening which seemed not far distant. With a narrow bistoury an opening was made through the thin and distended coverings of the cranium, and about six or eight ounces of fluid were allowed to escape before the puncture was closed with collodion. The first tapping was done on the 6th of May, and, as no unpleasant immediate effects followed, another opening was made some two or three days afterwards, and, in the course of ten days, about two quarts had been evacuated. On the 18th of May, after a few hours of suffering, with symptoms of restlessness, vomiting, &c., the child died. After death, the scalp was freely laid open, and the fluid emptied from the cranial cavity, filling an ordinary-sized washbowl. There were no traces of cerebral substance to

Fig. 1.
be found, but at the base of the brain the pons varolii and medulla oblongata existed of their natural size and shape.

Shortly after the period above mentioned, I drew up a more detailed account of this case, which was presented to the Orange County Medical Society, but, having lost this report, we have been compelled to furnish the above history from memory.

Dr. Glover has reported, in the *Philadelphia Journ. Med. & Phys. Sciences*, vol. ii., p. 159, a case of congenital hydrocephalus, in which he performed repeated punctures, and drew off in all eighteen ounces of fluid. The child died 110 days after the first operation, and eight after the last. In this case, the brain was nearly all absorbed; the portion remaining was not larger than a hen's egg.

Dr. Delafield communicated to the *Amer. Med. Recorder*, July, 1821, the particulars of a case in which Dr. Wetmore withdrew, in the course of eight days, 116 ounces of fluid. The child died on the ninth day after the first puncture, and it was found that the whole upper part of the brain had disappeared; at the base, there remained what appeared to be the pons varolii.

Dr. Remmett has recorded a case in the *Edin. Med. Commentaries*, vol. vi., part iv., in which the child died three months, nine days, after the first, and thirty-one days after the last puncture. Scarcely any brain could be found after death, but its enormous cavity was filled with clear water. The medulla oblongata, and a small portion of cerebral substance behind the orbits, were all that remained.

In the *Philosophical Transactions*, vol. xliii., there is the report of a case by Dr. Baster, in which a child affected with hydrocephalus died at the age of two and a half years. The cranial cavity contained 107 ozs. fluid, and there was no appearance of brain, but only a strong membrane, thicker in some places, and thinner in others. The ventricles together formed one huge cavity. While the child lived, the vital and natural actions were performed, but it seemed incapable of any animal action. It was constantly quiet and drowsy,
Blackman on Paracentesis in [May

without crying, was deaf, and died without any convulsion or apparent struggle.

These are all the cases we have been able to find, corresponding with our own, as to the almost complete disappearance of the cerebral substance. It certainly is remarkable, that with such extensive disorganization the child should be able to see, hear, taste, feel, &c., and yet this was true not only in my own case but in that of Dr. Wetmore. Transparency of the head, we believe, is not a common feature in this disease, though it has been observed by Butcher (Gazette Médicale, 1843), as well as in the patient which came under our care.

The sudden and spontaneous disappearance of the fluid after diarrhoea, copious perspiration, cutaneous eruption, and other salutary crises, has been noticed by M. Nelaton (Elem. de Path. Chirurg., vol. ii., p. 642). Dr. J. W. Hubbell has reported in the New-York Journal of Medicine, May, 1850, p. 396, an interesting case of hydrocephalus terminating spontaneously in recovery, after the appearance of an eruption on the side of the head, which gradually spread over the whole scalp, and kept up a constant and free discharge for the space of two months. The head constantly diminished, while the body increased in size. In two months, the bones of the cranium had approached each other, but not united. In three months, the sutures had united, and the eruption disappeared. The child was fat, and in every respect healthy.—No medication was used at any time. Frank mentions a case which disappeared on the invasion of a scrofulous affection in another part of the body; and both he and Gölis have seen very favorable effects from the appearance of eruptions. In our patient the fluid was transferred to the cellular tissue, covering the whole body.

We have alluded to the perfect manner in which nutrition was performed; and instances are on record in which patients thus affected have reached upwards of thirty years of age. Prof. Vrolik has represented, in his magnificent Tabulae Embryogenesin Hominis, &c. (plate 38), the skull taken from a
man, aet. 32, who died affected with internal hydrocephalus. This man "a prima infantia hydrocephalo laboravit, et cum eo ad satis provectam, quam dixi, actatem pervenit, columna dorsalem habebat curvatam. Inferioris corporis artus vix superioris pondus sustentare valebant. Ceteroquin crat sanus et nequaquam mente imbecillus." From the uniform and equal distention of the ventricles, this man's head appeared like that of a giant.

Rokitansky states (Path. Anatomy, Syd. Ed. vol. iii., p. 366) that, as a general rule, hydrocephalus is a symmetrical disease; and that its chief seat, in all its forms, is the lateral ventricles. When it is found in the arachnoid cavity, according to MM. Rilliet and Barthez (Traité des Maladies des Enfants), it is always the result of a hemorrhage from this serous membrane into its cavity; for it is in this variety that the fluid is generally found bloody.

The authors of the Compendium de Chirurgie Pratique, &c., Tome Deuxième, p. 537, remark that it is in these cases we sometimes meet with transparency; but, when seated in the ventricles, the latter, as in the cases related in connection with our own, and likewise by Ruppius, in Meissner's Forschungen, vol. iii., p. 240, may together form one huge cavity; and the cerebral mass around the ventricles, especially towards the top of the head, may, as stated by Rokitansky, and as observed in our own case, be so attenuated as scarcely to measure a line in thickness.

The substance of the brain is often compressed and atrophied, and occasionally it is lacerated at various points. Sometimes it becomes so expanded and so attenuated as to be with difficulty recognized. In some cases, doubtless, there is a close alliance between congenital hydrocephalus and hemicephalus, there being a decided arrest of development in the organum. "I believe," says Rokitansky, "that the really essential part of congenital hydrocephalus—that which arrests the development of the brain—is the affection of the ependyma; that, in proportion to the degree to which the hydrocephalus has advanced, and according to the period
of foetal life at which it commenced, it does, in various manner, and to different extent, arrest the development of the brain, and occasion monstrosity of it, and so far contains the ground of its alliance with hemicephalus, hydrencephalocele, singleness of the cerebrum (cyclopia), &c. (Op. cit., p. 363.)

The diagnosis of hydrocephalus, though generally, is not always, unattended with difficulties. For example, in some cases the dimensions of the head, as in the cases observed by Gall, Gölis, Breschet, and Baron, are sometimes less than natural; and then, if the cranium be of unusual size, the latter may be owing to an hypertrophy of the brain. If paracentesis is ever justifiable in cases of hydrocephalus, in hypertrophy of the brain, it can only be productive of mischievous results.* Fig. 2 represents the head of a child some

* Dean Swift, to use his own words,

"Gave the little wealth he had
To build a house for fools and mad," &c.
And in this same "house" in Dublin, about a century since, several insane
5 years of age, in which case we were consulted as to the propriety of an operation. From the history of the case, we learned that the head had commenced to grow rapidly shortly after birth, and that the child had never been able to sit or stand erect. Every portion of the cranium was of stony hardness, and with no amount of pressure with the fingers could we produce the slightest indentation. The patient was frequently affected with convulsions and other symptoms of cerebral disturbance, though nutrition was perfect, and the child fat and hearty. He constantly remained in the horizontal position with his head thrown back. Believing the case to be one of hypertrophy, not only of the brain, but of the bones of the cranium, we declined any interference.

In the Brit. For. Med. Chir. Review, April, 1846, we find the following attempt by M. Mauthnier to establish the differential diagnosis of hypertrophy of the brain and chronic hydrocephalus:

**HYPERTROPHY OF THE BRAIN.**

1. The posterior part of the skull first presents an unnatural prominence.

2. Children lie horizontally, or throw the head back.

3. Face puffy, eyes insipid or staring, mouth half open.

4. Functional disturbance comes on gradually, not before the period of dentition or weaning, and consists at first in affection of the respiratory apparatus.

5. Patient fat and leuco-phlegmatic.

**CHRONIC HYDROCEPHALUS.**

1. The forehead is the first part to present an unnatural prominence; the altered direction of the eyes, and the great width of the sutures, are also characteristic.

2. Children lie on the belly, with the head lower than the body, and buried in the pillow.

3. Countenance etiolated, with an expression of premature old age.

4. Functional disturbance begins early, and involves the cerebrum from the beginning.

5. Patient ill nourished, subject to rickets and tabes.

patients were trephined, on the supposition that their insanity was produced by the brain having become too large for the cranium!
In both affections the skull is commonly enlarged, but to the touch the sensation produced by pressure is widely different; in the one giving the idea of a solid, unyielding case, in the other of a wide separation of the bones, which in many cases are but imperfectly ossified. True, even in hypertrophy, where the progress of the disease has been very rapid, the sutures of the skull, in hypertrophy, may become loose and separate, particularly at the upper part of the head, but these cases are rare. Mr. Paget, in his Lectures on Surgical Pathology, Am. Ed., p. 64, remarks that it is very rarely that the due thickness of the skull is attained while its bones are engaged in the extension of their superficial area. "Hence, the weight of an hydrocephalic skull is not much, if at all, greater than that of the healthy one; a large parietal bone (No. 2 in the College Museum), measuring nine inches diagonally, weighs only four ounces, while the weight of an ordinary parietal bone is about three ounces." The extent of the skull, he asserts, is in a measure made up in some of these cases by the symmetrical placing of the wormian bones, thus showing "how the formative process, though thus thrown into straits and difficulties, yet conforms, both in growth and development, with the law of symmetry." This condition of the wormian bones existed in our own patient." Dr. Todd (Cyclop. Anat. and Physiology) observes that it is uncertain what the precise change is which the brain undergoes in hypertrophy, but it is probable that in this perverted nutrition, a new material is deposited between or in the proper anatomical elements of the brain, and that there is evidence of a similar condition of the cranial walls, the bones of the skull being preternaturally thick. The substance of the brain is universally firm, and cuts somewhat like cartilage.

To add to the difficulty connected with the differential diagnosis of chronic hydrocephalus and hypertrophy of the brain, these affections are found sometimes to coexist. Otto, indeed, asserted that hydrocephalus is occasionally cured by the supervention of hypertrophy of the brain, but
upon this point Rokitansky observes (op. cit., p. 359),—"I believe, further, that the hydrocephalus (the hydrocephalic process) may itself sometimes give the first impulse to hypertrophy of the brain; but that any compensation for or cure of hydrocephalus is effected by hypertrophy, appears to be altogether problematical. Such an opinion is founded upon the fact, that in some large skulls of hydrocephalic shape, the brain exceeds the normal size and weight. But I believe that these are cases in which the hypertrophy, having taken place in childhood, has continued ever since; and that belief is confirmed by the resemblance, in shape, which subsists between the skull in hypertrophy and the hydrocephalic skull, as well as by the difficulty which the similarity in the symptoms of hypertrophy and hydrocephalus imposes, upon our determining positively what disease of the brain did exist in childhood. So far as I am aware, the morbid increase in the volume of the brain in hydrocephalus, as well as its normal growth, takes place always in the neighborhood of the enlarged ventricles; it is a peripheral deposition around them; and the skull goes on increasing in size to whatever extent its closure may be prevented by the hydrocephalus."

The skull of Sir Walter Scott was found much thinner than natural after death, and this was supposed to have been caused by cerebral hypertrophy, although the immediate cause of his death was ramollissement of the corpus striatum, producing hemiplegia.

Dr. Forry, the original editor of the New-York Journal of Medicine, died Nov. 24th, 1844, from hypertrophy and induration of the brain. For some months before his death he suffered from epilepsy and other severe cerebral disturbance. The anterior and posterior portions of the skull, corresponding to the hypertrophied cerebral substance, were evidently thinned. Long-continued vascular excitement may lead both to hypertrophy and effusion. Dean Swift, who lived like a madman, and expired "a driveller and a fool," is said to have been temperate in early life, yet, by his
intemperance in after years, he produced the hypertrophy of the brain and the effusion within the cranial cavity which, even at the age of 78, caused his death. Up to 1742, when he was 75 years of age, he showed no symptoms whatever of mental disease, beyond the ordinary decay of nature, nor did he have anything like epileptic attacks or general convulsions until some 36 hours before his death, yet we are informed (Works of Swift, Dub., Faulkner, 1763, vol. ii., p. 261) that Mr. Whiteway, who examined the body, “found much water in the brain.” The frontal region of the cranium was thickened, flattened, unusually smooth and hard in some places, whilst in others it was thinned and roughened. At some points in the occipital fossae, the supraorbital plates, &c., the skull was so thin as to be transparent. (Vide Mr. Wilde’s Report, &c., Dub. Journ. Med. Science, May and August, 1847.)

Hydrocephalus, therefore, is not a disease confined to any particular age, as is proved by the case reported by Prof. Vrolik, and that of the Dean, just mentioned. Besides these cases, Dr. West refers to another, in which the patient lived to 29 years of age; Dr. Baillie to one of 56 years, whilst Gölis mentions three in which it came on in old age, two of these patients having been upwards of 70 years old. Of course the changes produced upon the skull by chronic hydrocephalus, and hypertrophy of the brain, must vary according to the period of life at which these affections commence. In early life, as in Fig. 2, the cranial bones partake of the hypertrophied action of the brain, and becomes thickened as it expands. In adult life, the effect is different, the bones becoming thinner from the pressure, as seen in the skulls of Sir Walter Scott, Dean Swift, and Dr. Forry. But we have neither time nor space to dwell longer upon this part of the subject, nor could we do so with profit to the reader; for, from among all the writers to which we have been able to refer, we have not succeeded in collecting the elements by which an absolute differential diagnosis in all these cases can be established.
It is not our purpose to discuss the various methods of treatment which have been adopted in chronic hydrocephalus, but shall confine our remarks to puncture of the cranium. The Rev. Mr. Stevens has the credit of being the first to propose trepanning the cranium for hydrocephalus, and this was in the case of Dean Swift, who died in 1745. From Mr. Wilde’s report of the Dean’s case, to which we have already alluded, we learn that up to 1742, three years before the Dean’s death, there were no symptoms of mental disease; and it was not until some 36 hours before his death, that he suffered from epileptic attacks and general convulsions. Consequently we may assume that it was in 1845 that the Rev. Mr. Stephens proposed this operation. Dionis, is his Cours d’Opérations de Chirurgie, 3d ed., 1736, has the following observations:

“Toutes les espèces d’hydrocéphale demandent la main du chirurgien pour donner issue aux eaux qui font la maladie. Les anciens appliquoient deux cautères potentiels, l’un sur le commencement de la suture sagittale, et l’autre sur la pointe de la suture lambdoïde ; les escarres étant tombées, ils laissent sortir la lymphe par ces deux ouvertures, etc. Je suis plutôt pour les scarifications aux parties déclives de la tête, par où les eaux, dont elle est abreuvee, peuvent suivre,” etc.

He then refers to a case of congenital hydrocephalus, which he cured by this method of treatment. In the Philosophical Transactions, vol. xlvii., there is the report of a case in which Le Cat punctured the head for hydrocephalus. The operation was performed on the 23d October, 1744. A trocar with a canula much shorter than ordinary was used. On the upper part of the canula were two circles, each fastened to a different piece, so made as to screw on each other. The circles were somewhat concave on their surfaces, so as reciprocally to correspond, their circumferences touching while there remained a tolerable vacuity towards their centre. A circular piece of plaster, with a hole in its centre, was then applied to the lower circle, the screw of which
passed through the hole of the plaster. The object of this arrangement was to prevent the trocar from penetrating too deeply. The trocar and canula were thrust up to the circles and plaster, which was made adherent to the scalp, after which the trocar was withdrawn, when 4 or 5 ounces of serosity, of a brownish white, "or the color of pale white wine," and somewhat foul, was allowed to issue. This was on the 23d October. On the 24th, he unstopped the canula, and drew off the same quantity. On the 25th, "the infant was ill," for which reason he was not disturbed on that day. On the 26th, he was better, and 5 ounces more were withdrawn. Tuesday he was suffered to rest. Whenever the fluid was withdrawn, the head was bound with a strong bandage. The child died on the night of the 27th. The brain was thin, expanded, in contact with the dura mater, forming a kind of thin sack filled with water. Both lateral ventricles were excessively dilated, and but slight traces of the pineal gland, choroid plexus, remained.

Dr. Remmet, of Plymouth, E., operated in 1778, and 80 ounces of fluid were discharged at five different operations. The child died on the seventeenth day.

In Van Swieten's Commentaries, vol. xii., p. 248, we find that Petit expressed his regret that all the patients who had been subjected to this operation died. He believed that if a large quantity of water should be drawn off, the patient must die in four or five hours after the discharge; and even if less should be removed, they would still die, though not so speedily, surviving, perhaps, the operation some forty hours, but never longer than this period.

The operation was condemned by Heister, Boerhaave, De la Motte, Paré, Portal, Richter, Gölis, Breschet, Boyer, Dupuytren, Physick. Among the modern opponents of this proceeding we have found none more decided than Dr. Battersby. In his very elaborate paper published in the Edinburgh Medical and Surgical Journal, July, 1850, he has most thoroughly entered into the examination of the pathology of this disease, and he declares that all the evidence
thus far derived from morbid anatomy, as well as from the statistics collected upon the subject, goes to prove that puncture in chronic hydrocephalus is a useless and unjustifiable operation. In abdominal dropies, as well as in hydrocele of the tunica vaginalis testis, he asserts, the simple withdrawal of the fluid is seldom sufficient to effect a cure; and if, in cases like these, he adds, where the containing parts naturally return to their proper position after the fluid is evacuated, it would be absurd to expect that dropsy of the brain, where the parts cannot reassume their normal position, should be cured by paracentesis of the head. The operation he regards as attended with danger, the cases reported showing that puncture is sometimes followed by an almost immediate aggravation of the cerebral symptoms, and by death. Another objection urged by him is that the fluid soon collects again, and even if relief be afforded by the first operation, it is less marked in the second, the quantity of fluid even increasing with its repetition. With this increase in the dimensions of the head, the body becomes emaciated; and death takes place from exhaustion, coma, or convulsions. The number of cases in which the operation has been performed is sufficient to settle the question of its value as a curative agent; and, while the statistics bear unfavorably upon it in this light, there can be no question that, as a palliative measure, the surgeon may not unfrequently be justified in resorting to it. Dr. Charles West published in the London Medical Gazette, April, 1842, "An Inquiry into the Results of Puncture of the Head, in cases of Chronic Hydrocephalus," and so completely has he exhausted the subject up to that time, that we are compelled to avail ourselves of his labors. His Table comprises 56 cases, and we have added such as we have been able to find reported since the date of his publication, a period of twelve years.
<table>
<thead>
<tr>
<th>No.</th>
<th>Sex</th>
<th>Age.</th>
<th>Duration of disease</th>
<th>Symptoms before Puncture</th>
<th>Size of the Head</th>
<th>Number and date of Punctures</th>
<th>Quantity of Fluid in lbs. &amp; ounces.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F</td>
<td>b'tween 11 &amp; 12 years</td>
<td>—</td>
<td>Came on in consequence of a fall; head enlarged to a third beyond natural size, and parietal bones opened so as to allow fluctuation to be felt. These symptoms came on three months after the fall.</td>
<td>A third larger than natural</td>
<td>1</td>
<td>11-2 = 21 oz.</td>
</tr>
<tr>
<td>2</td>
<td>F</td>
<td>4 m. began in 11 days 6th week.</td>
<td>—</td>
<td>Began with fits and enlargement of head. Bowels torpid; strabismus; child had an idiotic look.</td>
<td>Apparent-ly double.</td>
<td>1</td>
<td>11-2 = 21 oz.</td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>12 wks. began a few days after birth.</td>
<td>—</td>
<td>General health good, but bowels irregular; strabismus, rolling of the eyes.</td>
<td>23 inches in circumference.</td>
<td>1</td>
<td>11-2 = 21 oz.</td>
</tr>
<tr>
<td>4</td>
<td>M</td>
<td>4 mths. head large at birth</td>
<td>—</td>
<td>Child healthy, cheerful, not emaciated. The fluid was supposed to be external to the ventricles.</td>
<td>18 1-2 inches in circumference.</td>
<td>1</td>
<td>11-2 = 21 oz.</td>
</tr>
<tr>
<td>5</td>
<td>—</td>
<td>14 m.</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>11-2 = 21 oz.</td>
</tr>
<tr>
<td>6</td>
<td>—</td>
<td>10 m. excited from birth</td>
<td>—</td>
<td>Child very ill; pupils dilated. States that inflammation of the brain and its membranes existed, but does not mention a single symptom.</td>
<td>—</td>
<td>1</td>
<td>11-2 = 21 oz.</td>
</tr>
<tr>
<td>7</td>
<td>F</td>
<td>20 m. began in 14th month</td>
<td>—</td>
<td>Head had been gradually enlarging for half a year.</td>
<td>—</td>
<td>1</td>
<td>11-2 = 21 oz.</td>
</tr>
<tr>
<td>8</td>
<td>M</td>
<td>5 mths. congenital</td>
<td>—</td>
<td>Hiccough and vomiting; eyes heavy, somewhat convulsed.</td>
<td>Head of enormous size from birth.</td>
<td>1</td>
<td>11-2 = 21 oz.</td>
</tr>
<tr>
<td>9</td>
<td>F</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>11-2 = 21 oz.</td>
</tr>
<tr>
<td>10</td>
<td>F</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>11-2 = 21 oz.</td>
</tr>
<tr>
<td>11</td>
<td>F</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>11-2 = 21 oz.</td>
</tr>
<tr>
<td>12</td>
<td>F</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>11-2 = 21 oz.</td>
</tr>
<tr>
<td>13</td>
<td>M</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>11-2 = 21 oz.</td>
</tr>
<tr>
<td>14</td>
<td>F</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>11-2 = 21 oz.</td>
</tr>
<tr>
<td>15</td>
<td>M</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>11-2 = 21 oz.</td>
</tr>
<tr>
<td>16</td>
<td>M</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>11-2 = 21 oz.</td>
</tr>
</tbody>
</table>
### Subsequent Progress.

<table>
<thead>
<tr>
<th>Subsequent Progress</th>
<th>Date of Report</th>
<th>Authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Patent was saved.”</td>
<td>Ninety days after first puncture, day of last puncture. Case then going on favorably.</td>
<td>Monroe on Hydrocephalus, p. 146, quotes the case from Prof. Rossi.</td>
</tr>
<tr>
<td>Fluid removed was clear first, but, on the 6th and 9th punctures, was of a darker color and thicker consistence, but regained its transparency at subsequent operations. The immediate effects of the puncture were never serious. Slight febrile symptoms, and occasional vomiting, and fretfulness occurred at different periods, but fits only once, just before the sixth operation. The ossification of the head proceeded so that the situation of the first puncture became ossified.</td>
<td>Four months after last puncture, then stout, healthy, and very large of her age. Head ossified, except anterior fontanelle, and four inches less in circumference.</td>
<td>Mr. Lizards, Ed. Medical and Surg. Journal, vol. xvii. p. 243.</td>
</tr>
<tr>
<td>Fluid was serous, on the second time was turbid and mixed with flakes of lump. Slight fever after first, not after others. Ossification advanced; head diminished; child went on well; obscure fluctuation remained three weeks after last puncture. Calomel was then given, so as to affect the mouth. After each operation there was great faintness, pallor, and failing of the heart’s action during several hours. Great restlessness followed for a night or two after each operation.</td>
<td>Seventeen months after last puncture, child was healthy and head measured 18 3-4 inches in circumference.</td>
<td>Mr. Russell, Ed. Medical and Surg. Journal, vol. xxxviii. p. 43.</td>
</tr>
<tr>
<td>Great improvement followed the first puncture, but others left the child in a very satisfactory state.</td>
<td>Died of pneumonia more than a year afterwards.</td>
<td>Graef, Graef and Walther’s Journal, Bd. xv. S. 348.</td>
</tr>
<tr>
<td>Ointment of potassium ointment employed; calomel and mild aperients given. “Though the little sufferer was for some time in a precarious state, he did recover, and is now a very fine boy, never having had the slightest return of the complaint.” Convulsion followed the puncture, and afterwards other symptoms of meningial irritation.</td>
<td>Two and a half years afterwards health and intellect good.</td>
<td>Dr. Fourcade, Lancette Francaise, vol. iv. No. 47, p. 188, reports from recollection, case operated on by Dr. Bédor. Mr. Marsh, Medical Gazette, vol. xvii. p. 985.</td>
</tr>
<tr>
<td>Fluid was removed weekly during the day of puncture, but more lively than before, and for some time after the intensity of all the former symptoms diminished. A month after it was found necessary to repeat the puncture.</td>
<td>Nearly eight years after, head then too large, but not larger than before the operation. Health good.</td>
<td>Dr. Conquest, Lancet, March 17, 1838; and Med. Gaz., vol. xxi. p. 967.</td>
</tr>
<tr>
<td></td>
<td>Five years after, head 22 inches round; ossification complete, except posterior fontanelle, and two openings in coronal suture. Health good, remarkably shrewd.</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Sex</td>
<td>Age</td>
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</tr>
<tr>
<td>1</td>
<td>M</td>
<td>9 m</td>
</tr>
<tr>
<td>2</td>
<td>M</td>
<td>3 m</td>
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<tr>
<td>3</td>
<td>—</td>
<td>3 m</td>
</tr>
<tr>
<td>4</td>
<td>—</td>
<td>2 m</td>
</tr>
<tr>
<td>5</td>
<td>M</td>
<td>2 y</td>
</tr>
<tr>
<td>6</td>
<td>F</td>
<td>5 m</td>
</tr>
<tr>
<td>7</td>
<td>M</td>
<td>9 m</td>
</tr>
<tr>
<td>8</td>
<td>M</td>
<td>9 m</td>
</tr>
<tr>
<td>9</td>
<td>F</td>
<td>4 m</td>
</tr>
<tr>
<td>10</td>
<td>—</td>
<td>6 m</td>
</tr>
</tbody>
</table>
WHICH PARACENTESIS WAS UNSUCCESSFULLY PERFORMED.

<table>
<thead>
<tr>
<th>Subsequent Progress</th>
<th>Date of Death</th>
<th>Condition of the Brain after Death</th>
<th>Authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child sank.</td>
<td>36 hours after the puncture.</td>
<td>-</td>
<td>Fabricius Hildanus, Observ. Chirurg. cent. iii. obs. 17.</td>
</tr>
<tr>
<td>Well for two days, then taken ill: died on evening of 4th day.</td>
<td>4 hours after 1st, 36 after last puncture.</td>
<td>Excessive dilatation of ventricle; atrophy of pineal gland; very little trace of choroid plexuses.</td>
<td>Le Cat, Philosoph. Trans. v xlvi. p. 257.</td>
</tr>
<tr>
<td>After third puncture, head reduced to natural size; after 1st week, head swelled again. Exhaustion came on 3 weeks after 5th puncture; death in ten days.</td>
<td>3 mths 9 days after 1st, 31 days after last puncture.</td>
<td>Cavity of brain full of enormous quantity of clear water; scarcely any brain found, but only medulla oblongata, and a small quantity of brain behind the orbits.</td>
<td>La Motte, Traité complet de Chirurgie, tome i. obs. 115.</td>
</tr>
<tr>
<td>Fore lively; convulsions; and hemiplegia affecting right side, on third day after first puncture, ceasing in course of one day. Diarrhoea for some days. Coma before second and third punctures: relieved by the operation. Seemed better on day of sixth puncture; fits on following day; tranquil death soon after. Light improvement followed each puncture. Continued well, except erysipelas of face, till day of last puncture; then, convulsions returning frequently, child castigating till death.</td>
<td>16 hours after puncture.</td>
<td>Two pounds of clear fluid contained in brain, in cysts, with vascular coats; cerebellum around fourth ventricle hard; cura cerebri ulcerated. Two pounds of sero-sanguineous fluid in ventricles; walls of ventricles very thin; brain soft; coagulum size of a hazel-nut in posterior corner of left lateral ventricle.</td>
<td>Dr. Remmet, Edin. Med. Comment. vol. vi. part 4.</td>
</tr>
<tr>
<td>Health good for a few days; considerable exhaustion after 1st puncture. On 5th puncture, 6 weeks after 1st, situation of original puncture ossified. Two convulsions before 4th puncture, again after 8th. Seemed going on well, though fluid re-collected; head greatly diminished in size. Sutures, which had been 3 inches across, came into apposition. On the 9th day convulsions, coma, death.</td>
<td>84 days after 1st puncture, 11 after last puncture.</td>
<td>Dura mater thickened; pia mater inflamed; cerebral substance very thin, lined by false membrane; no trace of corpus striatum, callosnm, etc.; bag of cerebrum divided into cells by membranous bands, contained 35 ozs. of fluid; cerebellum firm.</td>
<td>Dr. A. Monroe, Morbid Anatomy of the Brain, vol. i. p. 11.</td>
</tr>
<tr>
<td>Fluid between dura and pia mater; the former thickened, but with no signs of acute inflammation; brain nearly all absorbed, not larger than a hen's egg, soft, and parts not distinguishable. Membranes gangrenous for several inches round puncture, contained 4 pounds of turbid, fetid fluid; whole upper part of brain disappeared; some at base, like pons varolii.</td>
<td>30 days after 1st puncture, 9 after last.</td>
<td>-</td>
<td>Mr. R. Brown, Med. and Phys. Journal, vol. ii. p. 102.</td>
</tr>
<tr>
<td>110 days after 1st, 8 after last puncture.</td>
<td>9th day from the puncture.</td>
<td>-</td>
<td>Mr. Money, Med. and Phys. Journ., vol. iii. p. 462.</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Dr. Whitmore, American Me. Recorder, July, 1821.</td>
</tr>
<tr>
<td>No.</td>
<td>Sex</td>
<td>Age</td>
<td>Duration of Disease</td>
</tr>
<tr>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>---------------------</td>
</tr>
<tr>
<td>11</td>
<td>M</td>
<td>7 m</td>
<td>Began about a month after birth</td>
</tr>
<tr>
<td>12</td>
<td>M</td>
<td>8 m</td>
<td>Began in 3d month</td>
</tr>
<tr>
<td>13</td>
<td>M</td>
<td>11 w</td>
<td>Began in 6th week</td>
</tr>
<tr>
<td>14</td>
<td>M</td>
<td>5 m</td>
<td>Began at 2 months</td>
</tr>
<tr>
<td>15</td>
<td>-</td>
<td>5 w</td>
<td>-</td>
</tr>
<tr>
<td>16</td>
<td>M</td>
<td>64 m</td>
<td>Began in Well nourished; general symptoms very slight.</td>
</tr>
<tr>
<td>17</td>
<td>F</td>
<td>16 m</td>
<td>Began at end of 3d month</td>
</tr>
<tr>
<td>18</td>
<td>F</td>
<td>16 m</td>
<td>Began at 4th m'th.</td>
</tr>
<tr>
<td>19</td>
<td>F</td>
<td>6 m</td>
<td>Began at 3 w. 5th m'th.</td>
</tr>
<tr>
<td>Subsequent Progress.</td>
<td>Date of Death.</td>
<td>Condition of the Brain after Death.</td>
<td>Authorities.</td>
</tr>
<tr>
<td>----------------------</td>
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</tr>
<tr>
<td>First night restless; next night better; screaming 58 hours after, followed by fits; and death, in fit, 14 hours after.</td>
<td>72 hours after puncture.</td>
<td>No trace of inflammation; brain very soft; two transparent sacs in left ventricle, one in right communicating with third and fourth; they were smooth and tough, attached to brain at under, unconnected at upper surface; nates and testes formed a tumor, containing one drachm of pus; lower parts of brain healthy.</td>
<td>Mr. Hood, Ed. Med. Surg. Jour., vol. xvii. p. 510, Oct. 1821.</td>
</tr>
<tr>
<td>Slight convulsions on night after 1st puncture; improvement, less strabismus, increased ossification; cried, much after 4th convulsions, and death 3 days after 5th.</td>
<td>51 days after 1st puncture, 3 after last.</td>
<td>No sign of inflammation; fluid in ventricles; brain greatly expanded; cerebellum healthy.</td>
<td>Dr. Freckelton, Ed. Med. Surg. Jour., vol. xvii. p. 240.</td>
</tr>
<tr>
<td>Relief after each puncture; a fortnight after last, water ceased to accumulate. No ossification of skull. Went on well till 3d day, head being 2¼ inches smaller. On 3d day great restlessness, vomiting, rigidity of one arm, convulsions; death on 4th day.</td>
<td>11 weeks after 1st puncture, 3 after last.</td>
<td>No sign of recent inflammation; 24 lbs. of fluid in sac of arachnoid; atrophy of cerebrum which was not larger than a bean. No inflammation of brain or its membranes; ventricles contained yellowish white fluid, like seropurulent fluid and water, with albuminous flakes; some softening of ventricles.</td>
<td>Mr. J. Sym. Ed. Med. Surg. Jour., vol. xxiv. p. 295.</td>
</tr>
<tr>
<td>Pretty well, but somewhat excited 1st day; head filled again between 3d and 6th day; on 7th, a gush of fluid from situation of 1st puncture, followed by convulsions and involuntary discharge of urine and feces. A little improved 1st night, pretty well till third day; then violent convulsions and death.</td>
<td>87 hours after the puncture.</td>
<td>Brain bloodless; 2 pounds of fluid in ventricles; great thinning of their walls, of right especially, which formed a mere membranous bag, and was in parts of consistence of cream; parts at floor of left ventricle barely recognizable; at floor of right distinguishable; cerebrum and base of brain healthy.</td>
<td>Dr. J. Alison, Ed. Med. Surg. Jour., vol. xliii. p. 359.</td>
</tr>
<tr>
<td>Slight fever for a few days, then seemed better. In 10 days water began to accumulate. In 1 month and 3 days symptoms of nervous debility, in 3 days more painless death. Vomiting on 2d and 3d day, fever on 4th, coma on 5th, convulsions on 6th.</td>
<td>16 weeks after 1st, 5 weeks after last operation.</td>
<td>Brain bloodless; 2 pounds of fluid in ventricles; great thinning of their walls, of right especially, which formed a mere membranous bag, and was in parts of consistence of cream; parts at floor of left ventricle barely recognizable; at floor of right distinguishable; cerebrum and base of brain healthy.</td>
<td>Mr. Callaway, as reported by Oppenheim, Rust's Mag., v. xxiv. p. 77.</td>
</tr>
<tr>
<td></td>
<td>4th day after the puncture.</td>
<td>No trace of inflammation; great accumulation of fluid in the ventricles.</td>
<td>Dr. Roechling, Hufeland's Jour., Aug. 1826, p. 114.</td>
</tr>
<tr>
<td></td>
<td>5 weeks after the puncture.</td>
<td>One pound of fluid in cranium; puncture had not penetrated the brain; dura mater adherent to skull; brain soft and very vascular; great distention of lateral ventricles with fluid; no inflammation about puncture.</td>
<td>Dr. S. Hall, Med. Gaz., vol. vi. p. 334.</td>
</tr>
<tr>
<td></td>
<td>6 days after puncture.</td>
<td>No trace of inflammation; great accumulation of fluid in the ventricles.</td>
<td>Mr. Marsden, Lancet, Feb. 12, 1831. p. 648.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Oppenheim, Rust's Mag. v. xxiv p. 89.</td>
</tr>
<tr>
<td>No.</td>
<td>Sex</td>
<td>Age</td>
<td>Duration of Disease</td>
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<tr>
<td>-----</td>
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<tr>
<td>20</td>
<td></td>
<td>15w.</td>
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<td>21</td>
<td></td>
<td>9 m.</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>M</td>
<td>4 m.</td>
<td>Began at 1 month.</td>
</tr>
<tr>
<td>24</td>
<td></td>
<td>3 m.</td>
<td>Began at 1 month.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>M</td>
<td>7 m.</td>
<td>Began at 12 d.</td>
</tr>
<tr>
<td>26</td>
<td>F</td>
<td>10 d.</td>
<td>Congenital.</td>
</tr>
<tr>
<td>27</td>
<td>M</td>
<td>8 m.</td>
<td>Began at end of 10th m'th.</td>
</tr>
</tbody>
</table>

**TABULAR VIEW OF CASES OF INTERNAL HYDROCEPHALUS IN**
<table>
<thead>
<tr>
<th>Subsequent Progress</th>
<th>Date of Death</th>
<th>Condition of the Brain after Death</th>
<th>Authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>All the ventricles formed but one</td>
<td>Ruppius, in</td>
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<tr>
<td></td>
<td></td>
<td>large cavity, covered by but very</td>
<td>Meissner’s</td>
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<td></td>
<td></td>
<td>little brain.</td>
<td>Forschungen,</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>vol. iii. p.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>240.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exhalat’ n of sense of hearing.</td>
<td>Meissner,Die</td>
</tr>
<tr>
<td></td>
<td></td>
<td>then improvement for 2 or 3 days;</td>
<td>Kinderkrank-</td>
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<tr>
<td></td>
<td></td>
<td>re-accumulation of fluid in a</td>
<td>heiten, vol.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>fortnight, gradual sinking after 2</td>
<td>ii. p. 187.</td>
</tr>
<tr>
<td>Convulsions ceased a</td>
<td>1st puncture,</td>
<td>Great vascularity of the membranes;</td>
<td>Mr. F. Cooper,</td>
</tr>
<tr>
<td>few hours after 1st</td>
<td>1 week after</td>
<td>softening of the brain; accumula-</td>
<td>Lancet, June</td>
</tr>
<tr>
<td>puncture: returned</td>
<td>last.</td>
<td>tion of fluid in the ventricles.</td>
<td>27, 1835, p.</td>
</tr>
<tr>
<td>slightly before 3d</td>
<td></td>
<td>Membranés pale, bloodless; septum</td>
<td>405.</td>
</tr>
<tr>
<td>and 5th. Health</td>
<td></td>
<td>lucidum torn; lateral ventricles</td>
<td></td>
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<tr>
<td>good till day</td>
<td></td>
<td>formed one large sac, lined by thick</td>
<td></td>
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<tr>
<td>before last</td>
<td></td>
<td>flakes of matter, like pus or mucus</td>
<td></td>
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<tr>
<td>puncture, then</td>
<td></td>
<td>Fluid in ventricles; great thinning</td>
<td></td>
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<tr>
<td>stupor; relieved</td>
<td></td>
<td>of the brain; hole through falx</td>
<td></td>
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<tr>
<td>for a time by</td>
<td></td>
<td>and tentorium; cerebellum healthy.</td>
<td></td>
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<tr>
<td>puncture; 2 days</td>
<td></td>
<td>Improvement for 2 months,</td>
<td></td>
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<tr>
<td>after, quiet death.</td>
<td></td>
<td>and progressing ossification;</td>
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<tr>
<td>Convulsions on 5th</td>
<td></td>
<td>then improvement ceased.</td>
<td></td>
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<tr>
<td>puncture; continued</td>
<td></td>
<td>and head became quite as large as</td>
<td></td>
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<tr>
<td>enlargement of head</td>
<td></td>
<td>ever. Convulsions came on, but</td>
<td></td>
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<tr>
<td>after each puncture;</td>
<td></td>
<td>ceased some weeks, till day</td>
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<tr>
<td>occasional convulsions,</td>
<td></td>
<td>before death, and child died</td>
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<td>followed at length</td>
<td></td>
<td>in a ft.</td>
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<td>by coma and death.</td>
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<td>After 1st puncture, seemed</td>
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<td></td>
<td></td>
<td>improved; water re-accumulated at</td>
<td>Dr. J. B. With-</td>
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<td></td>
<td></td>
<td>end of a week; after 2d, no</td>
<td>ridge, Am. Jour.</td>
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<td></td>
<td></td>
<td>improvement; at end of a</td>
<td>of Med. Sciences,</td>
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<td></td>
<td></td>
<td>fortnight after, head as large as</td>
<td>vol. xx. p. 538.</td>
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<td></td>
<td></td>
<td>before. Parents would not permit</td>
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<td></td>
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<td>its repetition. Child wasted; died</td>
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<td></td>
<td>convulsed.</td>
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<td></td>
<td>Occasional vomiting; slight</td>
<td>Dr. J. R. Smyth,</td>
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<td></td>
<td></td>
<td>convulsions; head rapidly</td>
<td>Med. Gaz. vol.</td>
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<tr>
<td></td>
<td></td>
<td>regained its size. 14 days after</td>
<td>xxv. p. 83.</td>
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<td></td>
<td></td>
<td>last puncture, moaning, crying,</td>
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<td></td>
<td>contractions of limbs, faintness,</td>
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<td>and difficult breathing came on.</td>
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<td>After 1st puncture, seemed</td>
<td>Mr. Armstrong,</td>
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<td></td>
<td></td>
<td>improved; water re-accumulated at</td>
<td>Med. Gaz. v. xxvi.</td>
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<td></td>
<td></td>
<td>end of a week; after 2d, no</td>
<td>p. 226.</td>
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<td></td>
<td></td>
<td>improvement; at end of a</td>
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<td>fortnight after, head as large as</td>
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<td>before. Parents would not permit</td>
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<td>its repetition. Child wasted; died</td>
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<td>convulsed.</td>
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<td>Occasional vomiting; slight</td>
<td>Dr. Kilgour, Ed.</td>
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<td>convulsions; head rapidly</td>
<td>Med. Surg. Jour.,</td>
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<td></td>
<td></td>
<td>regained its size. 14 days after</td>
<td>vol. iii. p. 365.</td>
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<td>last puncture, moaning, crying,</td>
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<td>contractions of limbs, faintness,</td>
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<td></td>
<td>and difficult breathing came on.</td>
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<tr>
<td>No.</td>
<td>Sex</td>
<td>Age</td>
<td>Duration of Disease</td>
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<tr>
<td>28</td>
<td>F</td>
<td>9 m</td>
<td>Began in 3d month</td>
</tr>
<tr>
<td>29</td>
<td></td>
<td>8 m</td>
<td>Began at 4th m'th</td>
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<tr>
<td>30</td>
<td></td>
<td>7 m</td>
<td>Began at 2d month</td>
</tr>
<tr>
<td>31</td>
<td>F</td>
<td>12 w</td>
<td>Began in 3d week</td>
</tr>
<tr>
<td>32</td>
<td>M</td>
<td></td>
<td>—</td>
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<td>33</td>
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<td>38</td>
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<td>39</td>
<td>F</td>
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<tr>
<td>40</td>
<td>M</td>
<td>15 m</td>
<td>Began at 5th m'th</td>
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<tr>
<td>41</td>
<td></td>
<td>6 m</td>
<td>—</td>
</tr>
<tr>
<td>42</td>
<td>M</td>
<td>17 m</td>
<td>15 m.</td>
</tr>
<tr>
<td>Subsequent Progress</td>
<td>Date of Death</td>
<td>Condition of the Brain after Death</td>
<td>Authorities</td>
</tr>
<tr>
<td>---------------------</td>
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<tr>
<td>On day after the escape of the fluid, slight convulsions, eyes less distorted, but child began to sink, whined, then threw its arms about.</td>
<td>6th day after puncture.</td>
<td>Some congestion of membranes; near puncture; brain quite white, very soft; ventricles immensely distended; cerebral substance seemed macerated, infiltrated with water; parts in ventricles undistinguishable; nerves at base soft; cerebellum large, soft; cavity in its centre; no trace of arbor vitae.</td>
<td>Dr. Schaeffer, Casper's Wochenschrift, Aug. 19, 1837.</td>
</tr>
<tr>
<td>On evening of 4th day after first tapping, child grew dull; respiration hurried, and death took place before midnight.</td>
<td>4th day after 1st, 3d after 2d puncture.</td>
<td>-</td>
<td>Dr. Watson in Tweedie's Lib. of Med. p. 147.</td>
</tr>
<tr>
<td>After 2d puncture, cerebral symptoms came on, head being smaller. Head regained size in 10 days after 1st puncture.</td>
<td>24 days after 1st, 24 after 2d puncture.</td>
<td>-</td>
<td>Malgaigne, l'Expérience, Nov. 19, 1840.</td>
</tr>
<tr>
<td>Occasional fits for ten days after 2d puncture; then frequent screaming, and increasing weakness, without fits, till 2 days before death, when they returned frequently.</td>
<td>15 weeks after 1st puncture, 5 weeks after last.</td>
<td>Twenty-nine ounces of clear fluid in ventricles, which were lined by a brownish mucus; septum lucidum thickened; small tubercle at decusation of optic nerves.</td>
<td>Dr. Coldstream, Edin. Monthly Journ. of Med. Sci. April, 1841.</td>
</tr>
<tr>
<td>Daily fits for 4 days, with more sluggish condition than before. In 7 days, head as large as before the puncture, to the repetition of which parents would not consent; refused food; diarrhoea for 7 days; emaciation, increased weakness; death.</td>
<td>17 days after puncture.</td>
<td>Seventy-five ounces of fluid in the ventricles, and infiltrated into brain, which was split up into layers forming several distinct pouches; the walls of these pouches were not formed by false membrane, but were all continuous with the corpus callosum, into which their fibres might be traced; cerebral substance at base had a jelly-like appearance; optic nerves much spread out; fluid infiltrated between fibres of cerebellum.</td>
<td>The writer.</td>
</tr>
<tr>
<td>Strapped head with adhesive plaster, fluid rapidly regenerated, no change of symptoms. Fluid continued to flow from wound; on 4th day was more restless; spasmodic closure of hands; head more tense.</td>
<td>5 weeks after 1st. soon after last operation.</td>
<td>Convolution flattened; cerebral substance half an inch thick; pint of clear fluid in ventricles; no signs of inflammation from operation. Hemispheres mere sacs, the parieties being an inch thick; convolutions obliterated; 4 pints turbid serum in ventricles; cortical and medullary matter lost where most listened; cerebellum, pons varolii and medulla oblongata natural.</td>
<td>Dr. Parkman, Am. Journ. Med. Sci. Oct. 1848.</td>
</tr>
<tr>
<td>No.</td>
<td>Sex</td>
<td>Age</td>
<td>Duration of Disease</td>
</tr>
<tr>
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<tr>
<td>43</td>
<td></td>
<td>8 y.</td>
<td>—</td>
</tr>
<tr>
<td>44</td>
<td></td>
<td>3 m</td>
<td>3 m.</td>
</tr>
<tr>
<td>45</td>
<td></td>
<td>5 m</td>
<td>Congenital.</td>
</tr>
<tr>
<td>46</td>
<td>F.</td>
<td>4 m</td>
<td>Congenital.</td>
</tr>
<tr>
<td>47</td>
<td></td>
<td>—</td>
<td>Congenital.</td>
</tr>
<tr>
<td>48</td>
<td></td>
<td>12 y</td>
<td>—</td>
</tr>
<tr>
<td>49</td>
<td>F.</td>
<td>9 w</td>
<td>7 w.</td>
</tr>
<tr>
<td>50</td>
<td>M.</td>
<td>9 m</td>
<td>8 m.</td>
</tr>
</tbody>
</table>
### Subsequent Progress.

<table>
<thead>
<tr>
<th>Date of Death</th>
<th>Condition of the Brain after Death</th>
<th>Authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>36 hours after operation.</td>
<td>No injury to any part.</td>
<td>Mr. Taylor, Lon. Med. Gaz. 1850,</td>
</tr>
<tr>
<td>53 days after first puncture; 20 after last.</td>
<td>Strong marks of inflammation of meninges; brain a mere pulpy sac; with scarcely a trace remaining of parts usually found in cerebral dissections; cerebellum unaltered.</td>
<td>Dr. C. A. Lee, N. Y. Med. and Phys. Journ., vol. vi.</td>
</tr>
<tr>
<td>9 days after operation.</td>
<td>Fontanelles sunk; head 22$\frac{1}{4}$ inches round, 15$\frac{1}{4}$ over vertex; no signs of inflammation; cerebrum spread out like a sac, being $\frac{4}{9}$ of an inch thick, but of natural consistence; no convolutions; corpus callosum or septum lucidum found; base of brain normal.</td>
<td>Mr. Totlow, Lancet, p. 100, 1839.</td>
</tr>
<tr>
<td>4 months after first operation.</td>
<td>No marks of inflammation about wound.</td>
<td>Dr. Smyth, Miscel. Contrib. to Path. and Therap., 1844.</td>
</tr>
<tr>
<td>9 m'ths 1 w'k after 1st operation.</td>
<td>Lat. ventricles formed one cavity; absence of fornix, septum lucidum, corpus callosum and choroid plexus; corpora striata and optic thalami flattened; cerebellum soft; nerves all perfect.</td>
<td>Battersby,</td>
</tr>
<tr>
<td>6 days after operation.</td>
<td>Convolutions on upper surface obliterated; brain formed a large bag; central white parts absent, as well as corpus callosum, fornix, septum lucidum, fifth ventricle, and choroid plexus; optic thalami and corpora striata flattened, and of unnatural appearance; medulla oblongata, cerebellum, pons varolii, and crura cerebri, healthy and hard.</td>
<td>Battersby, Ed. Med. and Surg. Journ., vol. ii. 1850.</td>
</tr>
</tbody>
</table>
In relation to the first 16 cases in this table which are reported as successful, (and the same remarks are applicable to the three cases which we have added,) Dr. West very properly observes that chronic hydrocephalus is a disease usually slow in its progress, and intermittent in its advances, occasionally pausing for months, or even years, and then increasing without any evident cause; consequently, before any case be admitted as cured, it must be shown that a considerable time has elapsed since the operation, and that during this period the health of the patient has been perfectly good. The cases which he has collected he regards as affording but little encouragement to resort to it, as might be expected from the appearance frequently presented after death, as in many cases there exists serious organic disease or malformation of the brain itself, “though no symptom during life had betrayed the existence of a condition which mechanical interference could only aggravate.”

Dr. Watson, on the other hand, employs very different language in reference to this operation. In his Lectures, p. 284, Am. Ed., he remarks: “He must have been a bold physician who first proposed to decant the water from the brain, by means of a perforation, made with a trocar, through the membrane of the fontanelle, through the membranes of the brain, and through even the expanded cerebral substance itself. But the success of the project has amply vindicated

<table>
<thead>
<tr>
<th>No.</th>
<th>Sex.</th>
<th>Age</th>
<th>Duration of Disease.</th>
<th>Symptoms before Punctures.</th>
<th>Size of the Head.</th>
<th>No. and Date of Punctures</th>
<th>Quantity of Fluid in lbs and ounces.</th>
</tr>
</thead>
<tbody>
<tr>
<td>51</td>
<td>M.</td>
<td>8 m</td>
<td>6 m.</td>
<td>Fretful and irritable; diarrhoea and constiveness alternately; finally squinting and convulsions.</td>
<td>—</td>
<td>One</td>
<td>⅙vij of a reddish fluid.</td>
</tr>
<tr>
<td>52</td>
<td>M.</td>
<td>14 m</td>
<td>6 m.</td>
<td>Tendency to coma; tremulous eyelids; slow pulse; stertorous breathing; strabismus.</td>
<td>—</td>
<td>1, April 6.</td>
<td>⅝vi of limpid.</td>
</tr>
<tr>
<td>53</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>Blindness; partial paralyses; face contorted; extremities placid.</td>
<td>23 inches round, 14 vertical.</td>
<td>Three</td>
<td>12 + 8 +</td>
</tr>
</tbody>
</table>
**WHICH PARACENTESIS WAS SUCCESSFULLY PERFORMED.**

<table>
<thead>
<tr>
<th>Subsequent Progress.</th>
<th>Date of Report.</th>
<th>Authorities.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paralysis disappeared; countenance natural; head diminished; sight returned; strabismus ceased; regained her natural playfulness.</td>
<td>Several months after operation died of typhoid fever.</td>
<td>Dr. Howard, <em>Trans. Med. Journ.</em>, 1852.</td>
</tr>
</tbody>
</table>

this happy audacity. Though denounced as useless and cruel by some high continental authorities, by Gölis and Richter especially, it furnishes one of the best of the few chances of safety to the patient. Of course, I mean ultimate safety, for the operation itself is attended with the present risk of accelerating the patient's death. We have to consider that, by performing the operation, we incur the danger of abbreviating the existence of a being whose life without it could scarcely be long continued, or capable of enjoyment, but then we afford some chance of a perfect cure. A speedy death, or an uncertain life of mental and bodily imbecility, or complete restoration—these are the three events to be looked at. Had I to decide the painful question in reference to one of my own children, I would accept the alternative of probable speedy death on the one hand, or possible complete recovery on the other.”

Malgaigne, after examining a great number of facts bearing upon this question, comes to the conclusion: 1st, that the operation may be tried when the patient is from three to four months old, and the disease appears to be stationary; 2d, after this period, when the disease is evidently increasing and threatens the life of the patient. (*Bull de Thérapeutique*, 1840.)

Dr. Copland observes, “While, therefore, I so far agree
with those who argue for the operation, as to advise it to be tried after the measures I have detailed above have failed, yet I would not recommend its performance early in the disease: 1st, because medical treatment has then sometimes effected a cure, especially when the head has not been very greatly enlarged; and 2dly, because, when the fluid is in the ventricles, as it generally is in cases commencing after birth, a greater depth of brain must be penetrated to reach it at an early than at a later period.” (Dictionary of Practical Medicine, vol. i., Am. Ed., p. 779.)

Dr. Charles A. Lee has advised a resort to puncture of the ventricles, even when to effect this object it is necessary to pass the instrument to a great depth. A puncture of the ventricles in cases like our own is not a matter of difficulty, as the distended ventricles formed together one vast cavity.

Dr. Joy, in the Cyclopedia of Practical Medicine, vol. ii., Lon. Ed., p. 478, thus expresses his opinion on the subject: “There are a few cases on record where it has appeared to effect a cure, and several where it has palliated the symptoms. In cautious hands, and where only a moderate quantity of water is drawn off at a time, it has rarely been attended with any danger. In cases where all other kinds of treatment have been tried without benefit, this is, perhaps, not altogether to be rejected.”

Rilliet and Barthez, Barrier and Legendre sanction the operation only in cases of hydrocephalus arising from sanguineous effusion into the arachnoid cavity, a form of the disease by all authorities admitted to be rare. In cases of acquired chronic hydrocephalus, resulting from a cerebral tumor, or a profound alteration of the brain, they would not recommend it.

Mr. Fergusson regards the operation as worthy of trial, and relates several instances in which it has been performed by himself and his friends. He states that, although his own experience does not enable him to be very sanguine of great success from this proceeding, yet that which has been ob-
tained by others is, in his opinion, a sufficient sanction for a continuance of the practice in all "favorable-looking cases." (Practical Surgery, 3d Lon. Ed., p. 556.)

Dieffenbach is strongly opposed to the operation, having, during the earlier part of his professional career, had three unsuccessful cases. Although success may in some few cases have followed it, yet on the whole he is disposed to consider them as fortunate escapes, like those which have been recorded in which a sailor recovered after a ship's anchor had passed through his abdomen, or the shaft of a cabriolet had pierced the thorax of a coachman, &c., &c., upon which cures a surgeon has no right to calculate. (Operative Chirurgie, Zweiter Band, Leipzig. 1848, p. 9.)

Dr. Battersby states that he is acquainted with ten cases in which the operation has been unsuccessfully tried in Dublin, and there can be no doubt that a large number of fatal cases remain, and will ever remain unknown. We have been informed by Prof. Stevens Parker, Dr. Watson, and others in this city, of several cases in which the operation has not averted a fatal termination. Still, we feel persuaded that, in cases similar to our own, and for the end proposed in this case, a surgeon would be justified in resorting to it.

Having thus noticed the sentiments of some of the most prominent authorities as to the propriety of resorting to puncture in chronic hydrocephalus, we would remark, in connection with the cases collected by ourselves and appended to the table of Dr. West, that they do not materially affect the conclusions to which this distinguished physician had arrived. In our own case, the operation was not performed with the expectation of effecting a cure. The very idea of the thing would have been perfectly absurd.

One word as to the proper instrument to be employed in this operation. Dr. Watson states, op. cit., p. 286, that he once requested a surgeon to perform it upon a child, and, to their horror, when the trocar was withdrawn from the canula, "instead of clear serosity, a fine stream of purple blood spouted forth. We naturally thought it was all over with
the child, which presently became deadly pale and faint. A verdict of *infanticide by misadventure* stared us in the face. But under the use of stimulants the child revived again; no hemorrhage went on internally, as we apprehended it would; but the child, after a day or two, seemed very much the better for the loss of the blood." The trocar "was not so delicate as it might have been," and it is probable, he thinks, that one of the larger superficial veins had been pierced; the opening having been made at a considerable distance from the longitudinal sinus. The trocar, therefore, in these cases, should be small, and should be entered perpendicularly to the surface; and, in order to avoid the longitudinal sinus and the larger veins emptying into it, it is advised to introduce it at the edge of the anterior fontanelle.

Dr. Conquest, who boasts of most extraordinary success in this operation, (Lond. Med. Gazette, March, 1835,) used a small trocar, introducing it through the coronal suture below the anterior fontanelle. In nineteen cases reported by him, ten are put down as successful! But, we think, if Dr. West's test of success, to which we have already alluded, were applied to these cases, many of them would be found wanting.

The punctures should not be made too frequently, nor should too large a quantity of fluid be withdrawn at once. As the cranial cavity becomes diminished in size, gentle support must be made with straps of adhesive plaster and bandages, and, if the child sink rapidly, resort must be had to stimulants.

Although it is not our purpose in this article to examine other methods of treatment in detail, such as compression, internal remedies, &c., we may in conclusion remark, that it is generally admitted by our best authorities that the plan pursued by Gölis, in cases not congenital or occurring shortly after birth, of administering calomel for a long time, and of the application of mercurial ointment to the head, which is kept constantly covered with a woolen cap, is quite as effectual as anything that has been proposed in the way of
medication. To these means must be added the daily use of stimulating baths. In very obstinate cases he employed issues, blisters, or tartar emetic ointment to the head, and, under particular circumstances, leeches or cupping. A nutritious diet, mild diuretics, and diaphoretics are important adjuvants. Even when resort is had to the operation, these measures should still be continued, and, conjoined with compression, the patient will be likely to derive far greater benefit than if either method be trusted to alone.


The subject of the present article is replete with interest to the medical inquirer, and of vast importance to the well-being of society. Its importance is at once manifest, when the startling announcement is made, that for the year ending March 1st, 1854, nine hundred and twenty-nine deaths occurred in the city of New-York, from a disease that is confessedly more under the control of man than any other of equal gravity; five hundred and fifty-two of which occurred during the last third of the year.* It is therefore a question for serious investigation, which I hope to conduct in a spirit of candor, and with an earnest desire to arrive at truth, What are the causes that have operated to produce the recent extensive prevalence of small-pox in our midst? If this can be satisfactorily determined, we may be enabled, to some extent at least, by removing the source, to obviate the evil in future. That it is not due to the want of the anti-variolous power claimed for vaccination, we have the most indubitable evidence, for there is no subject in the vast range of medical investigation supported by a larger cloud of evidence than the protective value of Jenner's discovery.

* These statistics have been obtained through the courtesy of Dr. Hyatt, from the records at the City Inspector's Office, which are not yet published for the last year. The number of deaths stated includes those from varioloid.
Still, it is not now believed that it will ever be the means of utterly extirpating small-pox from the earth, (this opinion has recently been expressed by Dr. Tuthill in his valedictory address at the New-York Med. College,) because there are undoubted proofs of its occasional spontaneous origin. Four cases of this kind are reported by Wm. D. Purple, M. D., one by E. C. Banks, M. D., and two by the Editors of the Phila. Med. Examiner. (Vide N. Y. Jour. of Med., vol. vii., N. S., 1851.)

In our investigation into the causes of the recent prevalence of small-pox, we have been led to the unexpected conclusion, that it is due, in a great measure, first, to the neglect of vaccination. The truth of this proposition is evinced by the large proportion of deaths that have occurred in children under the age of five years. It is a well-known fact, admitted by the most reliable authorities, that a death by small-pox in a vaccinated child is an exceedingly rare event. Indeed, Dr. Gregory of London, whose ample experience entitles his opinions to great respect, declared, in a discussion before the Royal Med. and Chirurg. Society, (reported in the London Lancet, March 8th, 1851,) "that cases of small-pox after vaccination, up to the fifteenth year, were very rare indeed."

The following Table exhibits the proportion of deaths under five years, in the city of New-York, to the whole number of deaths from small-pox and varioloid, for the five years ending 1st January, 1854:

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Deaths from Small-pox</th>
<th>Deaths under Five years</th>
<th>Percentage of Deaths under five</th>
</tr>
</thead>
<tbody>
<tr>
<td>1849</td>
<td>372</td>
<td>223</td>
<td>60</td>
</tr>
<tr>
<td>1850</td>
<td>241</td>
<td>147</td>
<td>61</td>
</tr>
<tr>
<td>1851</td>
<td>586</td>
<td>343</td>
<td>59</td>
</tr>
<tr>
<td>1852</td>
<td>516</td>
<td>383</td>
<td>74.2</td>
</tr>
<tr>
<td>1853</td>
<td>681</td>
<td>458</td>
<td>67.3</td>
</tr>
<tr>
<td>Totals</td>
<td>2,396</td>
<td>1,554</td>
<td>64.3</td>
</tr>
</tbody>
</table>

From these statements it appears, that of all the deaths
from small-pox which occur in New-York, a fraction more than 64 per cent. take place under the age of five, or during the period in which it is allowed by all authorities that deaths after vaccination rarely occur. Hence, we must conclude, that this large per cent. of deaths took place in the unvaccinated, and there can be but little doubt that many of the deaths among older persons also occurred in the unprotected.

I have recently seen in the Small-pox Hospital on Blackwell's Island, through the kindness of Dr. Sanger, the resident physician, 13 boys, from nine to fifteen years of age, who had been sent there from the House of Refuge, with small-pox and varioloid, six or seven of whom had never been vaccinated. Dr. Parkinson, vaccine physician to the New-York Dispensary, has informed me that almost all the cases of small-pox treated by the outdoor physicians of that institution have occurred in those who have not been vaccinated. Dr. P. has also told me that about one-sixth of the individuals vaccinated by him are upwards of three years old; and as his vaccinations average 3,000 annually, it will be seen, that at this institution alone, 500 children, more than three years of age, are presented every year, who have been exposed unprotected to the ravages of the small-pox.

Further evidence of the neglect of vaccination is afforded by a comparison of the mortality from small-pox, in those countries where it is made compulsory by legislation, with the mortality in New-York, and other places, where no such regulation exists. The following tables, extracted from the Report on Small-pox and Vaccination made to the London Epidemiological Society, March 26, 1853, exhibit the results of these opposite modes of treatment, which are of so much interest that they are presented entire:—

(A.)—Table showing the mortality in various places in England, Scotland, and Ireland, from small-pox, as compared with the total mortality, for ten years, ending 1850 or 1851:
(B.)—Table showing the mortality from small-pox in various countries in which vaccination is directly or indirectly compelled, as compared with the total mortality for various periods, stated in the "Tables exhibiting the Mortality from Small-pox in various Countries" at the end of this Report:

<table>
<thead>
<tr>
<th>Country</th>
<th>Deaths from Small-pox</th>
<th>Deaths from all Causes</th>
<th>Deaths from Small-pox</th>
<th>Deaths from all Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Westphalia</td>
<td>6 per</td>
<td>1,000</td>
<td>5.15 per</td>
<td>1,000</td>
</tr>
<tr>
<td>Saxony</td>
<td>8.33</td>
<td>1,000</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>Rhenish Provinces</td>
<td>3.75</td>
<td>1,000</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>Silesia (Prussian)</td>
<td>5.25</td>
<td>1,000</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>Pomerania</td>
<td>7.75</td>
<td>1,000</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>All Prussia</td>
<td>7.8</td>
<td>1,000</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Lower Austria</td>
<td>6</td>
<td>1,000</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

The following table, compiled from the annual reports of the City Inspector, exhibits the average of deaths from small-pox, out of every 1000 deaths from all causes in the city of New-York, for periods specified, from the year 1805, when the first report was made, to the end of 1853. It will be observed that the mortality from small-pox here, where vaccination is also voluntary, coincides generally with the results observed in Table A:

<table>
<thead>
<tr>
<th>Period</th>
<th>Deaths from Small-pox</th>
<th>Deaths from all Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>For the 10 years ending 1815</td>
<td>18.7 per</td>
<td>1,000</td>
</tr>
<tr>
<td>&quot; 10 &quot;</td>
<td>22</td>
<td>&quot;</td>
</tr>
<tr>
<td>&quot; 10 &quot;</td>
<td>18.5</td>
<td>&quot;</td>
</tr>
<tr>
<td>&quot; 10 &quot;</td>
<td>18.4</td>
<td>&quot;</td>
</tr>
<tr>
<td>&quot; 9 &quot;</td>
<td>25.4</td>
<td>&quot;</td>
</tr>
</tbody>
</table>
The highest ratio of deaths from small-pox in New-York occurred in 1824, when it amounted to 96.3 per 1,000 deaths from all causes; in 1853 the ratio per 1,000 was 32.23, which has been exceeded nine different years since the first report was made.

An inspection of the above tables reveals the significant fact, that, in those countries where vaccination is made compulsory, the proportionate mortality from small-pox is considerably less than half what it is where it is entirely voluntary, as in our own commercial metropolis. It must be borne in mind, that in many of the countries comprised in the second table, where vaccination is enforced by direct compulsion, by fine, &c., the public vaccinations occur but once a year; it necessarily happens that a number of the children are several months, or even more than a year old, before an opportunity is offered them of being vaccinated; and in those states where vaccination is only indirectly compelled, by making it an indispensable preliminary to admission to public schools, alms-houses, orphan asylums, &c; it may be deferred many years. The importance of this consideration is very obvious, when we remember that in England and Wales the proportion of deaths from small-pox under one year is 25 per cent., and in Paris considerably upwards of 14 per cent., and there is but little doubt, if proper regulations existed with regard to the age at which the operation should be performed, in the countries where it is directly or indirectly compulsory, the mortality might be still farther reduced. In proof of this statement, we are informed by Dr. Watson, in his valuable lectures, that, in Denmark, "Variola had at one time disappeared before the defensive influence of compelled vaccination;" but that "chance and a careless security, engendered by the absence of the pest, have led to its re-introduction there."

In view of the facts which have now been presented, is it surprising that, fifty-eight years after the discovery of vaccination, which was justly hailed as the greatest boon ever bestowed on man, we find small-pox committing such fear-
ful ravages in our midst? Indeed, is it not rather a matter of wonder that small-pox is not more prevalent? And what stronger evidence do we require than has been offered of the reckless neglect of vaccination, and of the great importance to society of making it compulsory?

The causes which induce this inattention to vaccination are ignorance and apathy, as well as the prejudice of some, who, without a sufficient examination of the facts, regard it as an inefficient safeguard. If they have seen one case, and heard of several others who have been vaccinated, and subsequently contracted small-pox, this is deemed ample evidence of the worthlessness of vaccination. Such individuals might, with the same propriety, abjure quinia as a remedy for ague, because it occasionally fails to arrest the disease. A melancholy instance of the effect of prejudice against vaccination has recently occurred in New-York, and was related to me by my friend Dr. Purple. A lady, who had no confidence in the protective power of vaccination, purposely exposed her children (four in number) to the contagion of small-pox, in order that they might have the disease at once, and thus relieve her from future anxiety. The calamitous result was, that three died, victims of the folly and prejudice of their doting, but deluded parent.

A second cause of the recent prevalence of small-pox is imperfect vaccination. Such unfortunately has been the want of attention to this important subject, that the salutary cautions of Jenner have been overlooked or entirely disregarded, and it has become a matter of importance, again briefly to call attention to them. It may result (1) from not observing the regular progress of the vaccine disease. Unfortunately, the opportunity of watching every stage of vaccination, which is absolutely necessary in order to arrive at correct opinions upon the case, is often denied to medical men; but this, which is unquestionably one of the fruitful causes of small-pox after (supposed) protection, might be obviated to a great extent, if the family physician would exercise his influence in impressing its great importance. If the
insertion of lymph into the arm is followed by the development of a vesicle, or even an ulcer, the unprofessional are often ready at once to conclude that cow-pox has been produced, and that the attention of a medical man is not longer necessary, when in truth no one, who is not thoroughly and intimately acquainted with the disease, is competent, or should be permitted, to decide so important a question. The illustrious author of vaccination, at an early period of its history, enforced, by frequent admonition, the necessity of a particular knowledge of cow-pox to the vaccine inoculator. "He should not only be acquainted with the laws and agencies of the vaccine virus on the constitution," says Dr. Jenner, "but with those of the variolous also, as they often interfere with each other. A general knowledge of the subject is not sufficient to enable or to warrant a person to practice vaccine inoculation; he should possess a particular knowledge; and that which I wish strongly to inculcate, as the great foundation of the whole, is an intimate acquaintance with the character of the true and genuine vaccine pustule (vesicle); the spurious pustule (vesicle), would then be more readily detected, whatever form it might assume, and errors known no more."

In our public vaccine institutions, it is customary to examine the vesicle but once, (and this is frequently not permitted,) and decide from that, whether the genuine disease is developed or not. This most reprehensible custom has been adopted, I presume, without acknowledging its propriety, because it is impossible to induce persons to return, or to convince the class who go there of the importance of observing regularly the different stages of the disease, in order to determine whether true vaccine has been developed. The following admonition of a distinguished authority, Dr. Labatt, is well worthy our consideration:—"Although the cow-pox be a mild disease, and the mode of inoculation apparently simple, yet a previous knowledge of the complaint is not the less necessary; and, indeed, the comparative mildness of it has led many to suppose that it is sufficient to ex-
amine the patient once or twice after inoculation. I am, however, convinced, that unless every stage of the complaint be strictly attended to, we cannot give a correct opinion upon the case. It should be recollected that 'there are gradations in the state of the vaccine vesicle, from that slight deviation from the usual course which is of no consequence, up to that which affords no security at all,' and which can only be distinguished by closely watching the arm through the whole progress of the vesicle." (Vide Address on Vaccination, p. 15. Dublin, 1840.) The Committee of the Provincial Medical and Surgical Association, in speaking of the tests for determining the true vaccine disease, observe that "the first to which we would advert is the regular progress of the vaccine vesicle, and we would lay it down as an axiom never to be forgotten, that no one is qualified to speak of its effective character who has not, at suitable periods, noticed this progress." (Transactions of Prov. Med. and Surg. Association, vol. iii.)

In a majority of instances the vaccine disease undoubtedly pursues its regular course; in others, however, no effect has been produced; and, in a still larger proportion, a spurious disease has been developed, sufficiently analogous to the genuine, to lull the parents of the child into a false state of security, which leaves it in a more perilous situation, from the variolous infection, than it was at first. The security of the public depends so much upon the regular development of the vaccine disease, that the inspection of the vaccinated, at regular periods, should not only be insisted on as a matter of the highest importance, but actually enforced by legal enactment. A slight deviation is at first observed, which gradually becomes greater—therefore, the least deviation from the normal vesicle should at once demand our attention.

(2.) Vaccination may fail in consequence of want of attention to the state of the recipient. The influence of cutaneous diseases, especially on the progress of the vaccine vesicle, is urged by all authorities on the subject of vaccination, and yet how often is the admonition disregarded! At a very
early period in the history of vaccination, Dr. Jenner observed the effect of cutaneous eruptions in deranging the character of the vaccine disease, and called the attention of his followers to its importance. In one of his unpublished letters, (quoted by the Committee of the Provincial Med. and Surg. Association,) he observes, that "the greatest of all impediments to correct vaccination is that which arises from an herpetic state of the skin; indeed, compared with this, all the rest are as dust in the balance; and when the rules which I have again and again laid down respecting this point, and for so long a period, are attended to, then, and not till then, will the confidence of the public be fully established as to its preventive power.” In another place, the Committee observe, that, "among those of our correspondents who have had most experience, and whose success has been most uniform, we find unequivocal testimony to the accuracy of Jenner’s doctrine on this head. Many have made no observation at all respecting it; while some mention dentition, general ill health, scrofula, &c., as impediments to vaccination."

An impression, unfortunate in its effects for the reputation of vaccination, is, that when pure vaccinal lymph is used, genuine cow-pox will be developed, regardless of the state of the recipient. This opinion is a prolific source of evil consequences. Examples are often met with in practice, where the purest cow-pox lymph may, from circumstances connected with the state of the patient at the time, produce an imperfect vesicle. "I have seen infection from the same source," observes Dr. Labatt, "produce in one child a genuine, in another a spurious vesicle, and, in a third, fail altogether."

Not only is a disregard of the state of the recipient, at the time of the operation, a common cause of the failure of vaccination to afford protection, but such patients are also fruitful sources of spurious lymph, which exerts an extensive deleterious influence, by the false security which it affords to others to whom it is applied.

(3.) Another cause which, it is said, may render the anti-
Hutchison on Vaccination and Variolous Power

The variolous power of vaccination imperfect, is the breaking the vesicle in the early stage of its forming. It was a rule established at a very early period, that one or more vesicles should be allowed to run their course without being in any way disturbed, in order to ensure their full protective influence. The weight of evidence is still in favor of the observation of this canon. Dr. Labatt, whose great experience entitles his observations to much respect, says, "when one puncture has been made, and of course there is but one vesicle, I would be disposed to let it run its course uninterrupted, lest, by injuring its structure, we interfere with the regular course of the disease, and prevent the completion of the anti-variolous process." Dr. Baron also insists on leaving one or more vesicles to run their course, without being in any way disturbed, and the late Dr. Chapman inculcated similar views.

On the other hand, M. Bousquet, whose zeal and experience in the practice of vaccination are well known and justly appreciated, argues, that if the full effect of vaccination is obtained on the fifth or sixth day, it can be a matter of very little moment whether the vesicles are left untouched or not. He has also appealed to experiment; having opened the vesicles, he has applied the nitrate of silver to the bottom, so as to put a stop to the local process. He has then re-vaccinated the children, and not in a single instance succeeded. (Traité de la Vaccine et des Eruptions Varioleuses ou Varioliformes.) Similar views are, it is presumed, very prevalent here, as it is almost a universal custom among private practitioners, and in some of the public vaccine institutions, to produce but one vesicle, and puncture that at the proper time, for the purpose of obtaining lymph.*

A serious objection to producing but one vesicle, and depriving that of the lymph it contains, independently of the

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* Dr. J. Lewis Smith, of the Northwestern Dispensary, has informed me that he does not lacerate the vesicle, because he is inclined to think its protective power would thus be lessened.
possibility of its impairing the constitutional protection, is, that we cannot afterwards determine so well the true character of the disease; in order to do this, as we have elsewhere said, the progress of the vesicle must be watched through its different stages; if two vesicles are produced, and one should be deranged by accident or puncture, the other enables us to decide its character.

(4.) It is alleged that the protective power of the vaccine disease may be imperfect from performing the operation at too early an age, that is, before the system is sufficiently developed to receive the infection perfect; this is considered to take place about the fourth month; and yet, if we are allowed to judge from the susceptibility of the infant to small-pox at an earlier age, this opinion is not based upon correct observation. It appears, from the Registrar-General’s second report, that in 1839 the deaths from small-pox in England amounted to 8,714, of which as many as 202 were within the first month, 181 in the second, 162 in the third, and 456 in the fourth month, making 1,001, or 11 per cent. of the whole number under four months. In the official reports made in the country, the ages under one year are not specified, but I have been informed by Dr. Hyatt of the New-York City Inspector’s Office, that deaths from small-pox are sometimes reported as early as the second or third week, and it is a well-known fact, that the foetus in utero is not exempt from variola. These results teach us the importance of not delaying the operation unnecessarily. Indeed, during the epidemic prevalence of small-pox, or when unavoidably exposed, it may be practised within the month, if the infant have sufficient plumpness to allow the insertion of the virus. If however vaccination should be practised so early in life, in order to ensure complete protection, its subsequent repetition, say about the fourth month, as is usually advised, should not be omitted.

(5.) Imperfect vaccination may be the result of the use of virus, which is not in its most perfect form, on account of being taken before it is sufficiently elaborated, or after the
areola has formed. It is considered a good general rule not to take lymph before the eighth day, when the vesicle has usually attained nearly, if not quite its full size, and it was a golden rule of Dr. Jenner, never to take virus after the efflorescence appears.

(6.) Dr. Stephen Brown, of New-York, has, in his prize essay on small-pox, called attention especially to the influence of the phlegmatic temperament in preventing the prophylactic powers of the vaccine disease. "It is a fact," remarks the doctor, "well known to every practitioner of much observation, during the epidemics of small-pox, which have recently occurred in this city, that in some families all the children have had the varioloid, and in others one half of the children only have had it, while the other half escaped, although as fully exposed as those who became affected; while, in other families, we see all the children escape entirely, after such exposure to the variolous contagion as to render it certain that they are unsusceptible of its influence. Instead of looking for some external circumstance for accounting for these failures throughout a family, as bad matter, improper mode of insertion, &c., we would refer the cause to temperament, more especially as these children were vaccinated successively in different years, and by different practitioners. It could not be expected, most certainly, that the causes here-tofore considered by writers and practitioners as the true ones, and which might be avoided by a little attention, should be permitted to happen so generally in one family, while in other families of many children they do not occur in one instance.

"It is a very common circumstance to witness two distinct temperaments in the same family; this occurs when the father presents one temperament and the mother another; some of the children partake of the father's, others of the mother's." *(Vide Am. Medical Recorder, January, 1829.)*

This view of Dr. Brown, although of no real practical value, is interesting, because it enables us to explain the cause of
occasional failures of vaccination, which might have unjustly impaired its reputation.

(7.) It has been asserted that vaccine lymph, in passing indefinitely through a vast number of individuals, with all due care and selection, has suffered an essential diminution in its anti-variolous property; and hence, that this is a frequent cause of small-pox after vaccination.

M. Bousquet, in comparing the vaccine of 1836 with that from which it was derived in 1800, by the aid of a colored engraving, clearly shows a positive diminution of intensity, and explicitly states that the course is changed; from this he infers a failing efficiency in the vaccine. Dr. Gregory, of London, has also observed a "diminished intensity" in the vaccine lymph, and expresses the opinion that, in passing through the bodies of many persons, it loses in process of time some essential portion of its activity. Other high authorities entertain similar opinions, which are contrary to former belief, as well as a most respectable weight of evidence of the present day.

Dr. Jenner declares that there is "every reason to expect that its effects will remain unaltered, and that we shall not be under the necessity of seeking fresh lymph from the cow." The Committee of the Provincial Med. and Surg. Association conclude that vaccine lymph does not necessarily become deteriorated, though it may have passed through a great number of subjects, and have been used for a great number of years. And the National Vaccine Establishment of England also maintains that vaccine lymph retains its protective property throughout, and in their Report for 1839, it is stated that they prefer the vaccine lymph derived from the original virus furnished by Dr. Jenner, and which has been in use forty years, to any which may have been taken recently from the cow.

We may more readily arrive at a conclusion on this subject, by inquiring what is requisite, in order that vaccine lymph should be pure and perfect. It is manifestly of the first importance that it should come from a vesicle which has been
regular and complete—that the state of the recipient, with regard to the condition of the skin and other constitutional peculiarities, should have offered no impediment to the regular course of the disease; in a word, that every care should have been taken to preserve its perfect integrity. Now, when we remember the numerous causes detailed above, which it is conceded may impair the protective value of vaccination, and that much of the lymph in use, (as there is great reason to believe,) is derived from such sources, I cannot forbear uttering the conviction, that not only are the individuals who furnish such lymph imperfectly protected, but that the lymph itself is more or less deteriorated.

The virus which I have recently been using is the 180th remove from the cow, and was furnished me by my friend, Dr. C. L. Mitchell, of this city, who obtained it of Dr. J. Otis Pond, of New-York. Dr. P. has informed me that it is the portion of a stock obtained through a friend, from a physician of Bristol, England, who had been employed to procure fresh virus for the London Vaccine Institution, which he did by variolating the sturk. Dr. Pond was supplied from the 18th remove, and from the care which he has exercised in keeping a registry of all vaccinations, rejecting virus from any except perfect pustules in healthy infants, we may infer that it is now uncontaminated.

In order to determine more accurately the difference in the effects of this virus, and that which has long been current in man, I have used both, simultaneously applied at different points in the same subject, and have invariably found the vesicle produced by that recently from the cow developed with more certainty, and its local action more analogous to that described by Jenner. This also coincides with the experience of Dr. Mitchell, and is further corroborated by the observations of Dr. Marvin, another distinguished physician of this city, both of whom have used virus from the same source for five or six years. If the test I have just mentioned could be more generally applied, I cannot doubt but that much of the prejudice recently excited against vac-
cination, in consequence of its failures, would be ascribed to the proper cause, viz., deteriorated lymph.

A third cause of the recent prevalence of small-pox is epidemic influence. The origin of variola is universally admitted to be a specific contagion. But that some other influence occasionally co-operates with contagion in producing this, as well as other diseases of analogous origin, is evinced by the fact that, although scarcely a week passes without some deaths occurring from small-pox, it only occasionally occurs as an epidemic, and then attacks many who have been frequently exposed to the contagion on former occasions without effect. What the origin or essential nature of this unknown influence is, cannot be determined in the present state of our knowledge; its effects, however, we are sufficiently familiar with. In the earlier ages of the world it was attributed to the anger of the gods. In later times its origin has been ascribed, with scarcely more reason, to some mysterious astral or meteoric agency; whilst others maintain that it is produced by lethaliferous agents which are extricated from the earth by the convulsions of nature. It is scarcely necessary to say that these explanations are purely hypothetical. We might indulge in much curious and interesting, but unprofitable speculation upon this subject, but we can only say with certainty that there must be some distempered condition of the physical agents around us, which occasionally generates a stronger predisposition to the disease than exists under other circumstances; and this, which we call epidemic influence, added to contagion, causes many individuals to be attacked with small-pox, to whom in ordinary seasons the vaccine disease would afford a sufficient security.

Although we know absolutely nothing of the origin or real nature of epidemic influence, we can observe its effects, and to some extent understand the laws which control its mysterious operations. And it behooves us to prepare for future aggressions of this epidemic influence by the exercise of proper care and vigilance in vaccination, thus depriving it of the
pabulum with which it has so recently, and is now satiating its gluttonous appetite.

A fourth cause of the recent epidemic is the neglect of re-vaccination. It is impossible to say with accuracy how far this may have contributed to the late prevalence of small-pox, because we cannot determine to what extent it has been neglected, nor can we say positively in any given case of small-pox that re-vaccination would have averted it. We may, however, by examining the question of its necessity, be able to conjecture with some probability how much it might have contributed to the prevention of the disease.

The distinguished Dr. Gregory has promulged opinions on the subject of re-vaccination, which, as I think, are not only at variance with well-established facts, but, from the high position he occupies, are calculated to effect serious harm; it becomes, therefore, a matter of grave importance to bring in review briefly some of the facts bearing on this subject.

In a discussion which took place before the Royal Med. and Chirurg. Society (vide London Lancet, March 5th, 1851), Dr. Gregory stated that, up to fifteen, the protection afforded by re-vaccination was as great as that afforded by inoculation all through life. After fifteen the system was subject to another law. "With respect to the question," he goes on to say, "as to whether re-vaccination after fifteen renewed the protection, he might answer, that in his opinion re-vaccination was a proceeding of very little moment. It satisfied the mind of the public rather than effected any real good. If it satisfied the mind, why should it not be performed? Let it be so by all manner of means, but not under the impression that it afforded any protection." Had we no other evidence of the importance of re-vaccination, that derived from the results of the operations in the Prussian army would be sufficient. Before re-vaccination was enforced, the different military stations were a prey to variolous disease, which has now almost entirely disappeared. From the Report of 1849, we find that 51,637 individuals were re-vaccinated, and only 62 cases of variolous disease occurred throughout that year, of which 9
were genuine variola, 24 varioloid or modified small-pox, and 13 varicella. One case only was fatal. A recruit, vaccinated when a child, had not yet been re-vaccinated, and died on the 10th day. (Am. J. of Med. Sci., vol. xxi., p. 479.) But we need not traverse the ocean to find evidence of the importance of re-vaccination. Our own country furnishes no statistical data on this subject, but occasional cases must have been witnessed, by almost every practitioner who has seen much of small-pox, illustrating the value of this precaution.

In advocating re-vaccination, it must not be implied that it is the writer's opinion that the protective power of vaccination extends to a limited number of years, and that afterwards the individual is again susceptible to variola. This question may still be considered as sub judice. Nor do we believe that a successful re-vaccination proves that the individual who has been subject to it is thus shown to have lost his vaccine protection, and consequently to have been liable to small-pox infection. Its importance is urged from other considerations, some of which will now be mentioned. (1.) We have no means of determining whether the vaccination was correctly performed; whether the development of the disease was regular and complete, and whether the condition of the patient was such as that no impediment was presented to the regular course of the affection. These it is impossible to know unless you have regularly and carefully watched the course of the disease, or have repeated the operation with genuine virus until there remains no longer a susceptibility to the vaccine impression, as was long since suggested, or applied to the well-known beautiful and ingenious test of Mr. Bryce. Even exposure to the contagion of variola with impunity, although it affords strong presumptive evidence, is not a positive assurance that the individual is protected by vaccination, because we occasionally meet with persons who have from time to time resisted the usual influence of contagious diseases, but finally have succumbed. A still less reliable evidence of perfect vaccination is the appearance of the scar, which, according to some of the most experienced observers,
offers nothing characteristic. (2.) As the permanent influence, even of duly conducted vaccination, is by no means a settled point, and as re-vaccination can do no harm, and may afford security from a most loathsome if not dangerous disease, we can see no possible reason why it should not be practised universally. If the following rule, laid down by the Committee of the Prov. Med. and Surg. Association, were generally acted on, I imagine we should hear much less of variola after vaccination:

“All cases of reputed vaccination, unless they have passed under the review of a competent judge, who has witnessed the different stages of the affection, should be considered as no vaccination.”

“Until this canon be universally admitted and acted upon,” the Committee go on to say, “we shall never have attained the complete security that vaccination is capable of affording. Failures may still occur, but they will neither be so numerous nor so fatal as they have been reported.”

It has been urged that if re-vaccination be looked upon as essential, less attention will be paid by practitioners and parents to the first vaccination than its importance demands, under the impression that any imperfection would be rectified by the subsequent operation. It seems to me extremely improbable that physicians, or parents especially, would incur the risk of having their patients or children contract variola from a want of proper attention to vaccination, especially when its protective power, for a certain period at least, is so universally conceded.”

From the materials presented in the preceding pages, and from other sources, the following conclusions may be legitimately deduced:

1st. That the recent extensive prevalence of small-pox in New-York may be, to a great extent, attributed to the neglect of vaccination.

2d. To imperfect vaccination, which may occur: (1.) From not observing the regular progress of the vaccine disease. (2.) From a want of proper regard to the state of the recipient. (3.) From injuring the vesicle. (4.) Performing the
operation at too early an age. (5.) Using lymph taken at an improper stage of the disease. (6.) Peculiarity of the temperament of the recipient. (7.) Vaccinating with lymph deteriorated by age, or any of the above causes.

3d. To epidemic influence.

4th. To a neglect of re-vaccination.

From the investigation we have made of the subject, our estimate of the immense value of vaccination is not only undiminished, but is positively increased, and we now feel more inclined to rally around the standard erected by the immortal Jenner, and vigorously to defend from the assaults of ignorance and prejudice the most brilliant triumph of modern medicine.

I cannot close this inquiry without urging in conclusion the importance of the establishment of a "National Vaccine Institution," on a broad and liberal plan, which should be so conducted as constantly to keep ample supplies of pure vaccine virus, (which can be easily obtained by variolating the cow,) with which, from the great facilities of communication that now exist, the most remote section of our widely extended country could be promptly supplied. It is a well-established fact that cow-pox can readily be produced by inoculating the cow with human small-pox matter, and that lymph from this source develops in man a disease identical with that produced by casual small-pox. This experiment is said to have been successfully made so early as 1801, at the Veterinary College in Berlin. It was repeated in this country by Dr.Carpenter, of Philadelphia;* Dr. McPhail, of Baltimore, now of this city, (Balt. Med. and Surg. Journal, vol. ii., p. 301,) and also by Dr. Martin, of Massachusetts, Med.Examiner, v. iv., p. 782. Dr. Basil Theile, of Kassan in Russia, (Am. J. Med. Sci., N. S., v. ii., p. 407,) and Mr. Seely, of Aylesbury, in England, (Trans. of Prov. Med. and Surg. Association,) have also performed similar experiments. To the latter gentleman especially are we indebted for much valuable information.

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PARKER on a Form of Malignant

on the whole subject of Variola Vaccina. With the lymph obtained from the variolated cows, each of the experimenters succeeded in developing in the human subject vaccine vesicles in the most complete and reliable manner.

Such an establishment as we have mentioned, together with legal enactments enforcing vaccination under severe penalties, would be of incalculable aid in the suppression, if not the extinction, of the most loathsome and hideous disease that ever afflicted mankind. In New-York, vaccination is freely offered, "without money and without price," and its importance has been recently urged in hand-bills by the mayor, and yet how many reject the gratuity, except when alarmed by epidemic small-pox! and nothing less than legal compulsion will obviate the evil.

It is a matter of surprise that we are so far behind many of the less enlightened and more despotic countries of Europe on this subject, and that now, fifty-eight years after the discovery of vaccination, its importance remains to be urged. We might enter at large into the discussion of the propriety of compulsory vaccination, but we have already exceeded the limits at first contemplated. This question may, however, be examined at a future time.

Greenwich Avenue, Brooklyn, April 1854.

Art. III.—On a Peculiar Form of Malignant Inflammation of the Lips and Face, resembling Malignant Pustule. By W. Parker, M. D., Professor of Surgery in the College of Physicians and Surgeons, New-York.

There have come under my observation, within a recent period, several cases of a peculiar form of inflammation of the lips and face, which resembles somewhat phlegmonous erysipelas, but more strikingly, especially in its commencement, malignant pustule, and, in its subsequent progress, carbuncle. It, however, differs from these affections in some essential particulars, which will be noticed after giving the details of the following cases, which illustrate the peculiarity of this form of disease.

Case 1.—I first saw this patient on the 18th of last Decem-
Inflammation of Lips and Face.

...ber. He was a young man, aged 23, merchant, of good character, temperate habits, and in the previous enjoyment of good health. About a week before I visited him, a small pustule made its appearance upon the central portion of the lower lip, just below the edge of the vermillion border. It became painful, had a livid areola, gradually but slowly enlarged, and finally broke and began to discharge. The pain increased, and the swelling extended downwards upon the chin. At my first visit, about this period, the tumefaction had reached as low as the os hyoides, and had extended over the right side of the face to the head; it was hard to the feel, of a livid color, insensible, and had now much the appearance of a carbuncle. The lips were greatly tumefied, everted; gums swollen, and of the same livid color; tongue moist; inside of mouth unaffected; ptyalism considerable. The lower lip, about the seat of the original pustule, appeared gangrenous. The pulse was 120, rapid and feeble, respiration unaffected. He was able to get up and sit in the chair, but was suffering from great depression of the vital powers. The course pursued consisted of deep scarifications of the lips and yeast poultices to the swelling, and stimulants to sustain the general system. The swelling continued to extend, involving successively the neck, face, and finally the head. He died on the following day, the 19th, late in the evening.

Case 2.—I visited on the 15th of January, a patient, aged 45, merchant, suffering from what appeared to be a carbuncle of the under lip. He was of a good constitution, temperate habits, and in the enjoyment of good health, previously to the present attack. Four days before I saw him, he was supposed to have cut the lower lip slightly, and applied to it arnica. The inflammation commenced at this point, the lip swelled largely, became everted, had a livid color, was tender, hard, and the seat of a burning pain. At several points there were small sloughy apertures, discharging thin pus. The constitutional symptoms were considerable, but not sufficient to confine him to his room. The treatment consisted of free incision and yeast poultices to the lip, and sustaining
remedies for the general system. Portions of the lip sloughed, but he recovered.

Case 3.—Mr. W., aged 26, married, furniture dealer, of good habits, and hitherto perfect health, discovered a small pustule on the under lip near the right angle of the mouth, on the 2d of April. It was tender on pressure and had a hard base, but attracted no other attention. During the night the disease extended considerably, involving the whole lip and the right side of the face in a hard, livid, and painful swelling. On the evening of the second day his physician first saw him, and found the lip greatly swollen, of a livid color, and the seat of a burning pain. He scarified the parts for the purpose of local depletion, and also applied leeches. The swelling continued to extend, involving the right side of the neck and face to a great extent. I saw him on the 7th, at 11 A.M. His symptoms were then most unfavorable, pulse 130 per minute, intermittent every seventh or eighth beat, weak and small; respiration rapid, moaning; skin warm and moist; urine free; pupils much dilated; mind clear. He complained of oppression about the chest, and had not been able to obtain sleep. Both lips were involved in the swelling; were hard, livid, and insensible; the whole side of the neck and face was similarly affected, the eye being nearly closed. The frontal vein was livid, red, and prominent, and the veins of the cheek were also visible, as if distended. The treatment consisted of deep scarifications of the lips, and yeast poullices to the part, with anodynes and stimulants. I visited him again at six o'clock, P.M., and found him rapidly failing; treatment of no service. He died the same evening.

Case 4.—I was called, April 10th, to see Miss S., aged 30, occupied as a governess, of good constitution, whom I found laboring under the same difficulty as in the preceding cases. Her history was almost precisely similar. Five days before, while in the possession of apparently perfect health, she first observed a small pustule on the lower lip, just below the red line of mucous membrane; it was regarded as a small
boil, and no attention given to it. On the following day the pustule had enlarged somewhat, was hard, and had a livid areola, but she continued about her employment; she spent a feverish, restless night, and on the next day called her physician. The disease gradually extended, assuming the appearances already noticed, and for two days no danger was apprehended. Her symptoms now became much more unfavorable, and at this period I first saw her. She was lying in bed quite insensible; deglutition difficult; respiration laborious; right side of body paralyzed; lips large, everted, and cold; right side of face, neck, and forehead swollen like the lip, hard and purple; right eye protruded; pupils dilated and insensitive. On making an incision into the lip, the cellular substance was found filled with small deposits of pus, which were forced out on slight pressure. As she was moribund, treatment was of no avail.

From the history of the foregoing cases it is evident that this disease differs from erysipelas, for which it has in several instances been mistaken, in its origin in a pustule, without a chill or other constitutional disturbance, the hardness of the swelling, its purple or livid color, insensitivity, and absence of much pain. It differs from carbuncle, which in some features it resembles in the class of individuals which it attacks—they being young, temperate, of sound constitution, and in the previous enjoyment of good health—and in its rapidly fatal course. Carbuncle, on the contrary, occurs by preference in persons enfeebled by age or vicious habits. It differs again from true malignant pustule, to which in its origin it seems allied, by attacking persons who have not been affected by poisonous wounds, or who have been liable to the introduction of animal poisons into the system.

This disease would therefore seem to be peculiar, having many points of resemblance to other similar affections, but still not so closely allied to any one as to warrant its classification under the same head. In every instance which has come under my own observation, the pustule has been seated upon the lower lip, and from this point the inflammation has
spread. In a fatal case related to me by a physician, in whose practice it recently occurred, the pustule was seated upon the side of the nose.

Although the nature and progress of the disease show a vitiated state of the system, in no instance have I been able to trace the attack to the contact of poisonous matter, or its reception into the system in the food or drink. In every instance the patient has been in the enjoyment of good health, and the progress of the disease, though rapid, has excited so little local and general disturbance as not to excite alarm until a short time before its fatal termination. The general symptoms are of a typhoid character, the vital powers being evidently depressed either by the influence of the disease itself, or, which is more probable, the cause upon which the development of the disease depends.

The late Dr. Peirson, of Salem, Mass., reported (Bost. Med. and Surg. Jour., 1852,) several cases very similar to the above, and considers the disease malignant pustule. Among them is the case of Hon. Robert Rantoul, whose disease was thought to be erysipelas, but which Dr. Peirson describes as malignant pustule. The pustule in this instance was situated upon the forehead, and depended upon no known local cause. With but one or two exceptions, the remaining cases in this paper occurred in curriers, and hence Dr. Peirson attributes the disease to inoculation with dead animal matter. Some of them bear a strong resemblance to the cases above related, the disease attacking the lips of healthy young persons, entirely unexposed, and spreading thence upon the face. These can scarcely be classified under the head of malignant pustule as described by authors. Bayle speaks of a form not depending upon an external cause, but this distinction is not generally received.

The success of the treatment depends upon the early recognition of the true nature of the disease. It is very liable to be mistaken for erysipelas, and a course of treatment adopted accordingly, which avails little in staying its progress. Attention to the points of a differential diagnosis already
given, will prevent the practitioner from falling into this error. The treatment best adapted to meet the indications of the case are deep and free scarifications, followed by yeast poultices, or turpentine, the object being to prevent sloughing and to promote healthy suppuration. The general system requires soothing and sustaining remedies, such as are suited to an ataxic condition. The early and prompt employment of these means will afford a fair, and probably the only, hope of success in the treatment of this disease.

My object in this communication is to call special attention to this disease, which, from the frequency of its occurrence in my own practice, and other cases which have been related to me, seems to be very prevalent. The points of particular interest are in regard to its causes and pathology. Does it depend upon an endemic or epidemic cause, or upon the introduction of animal poison into the system? Is there phlebitis as a cause or consequence? These questions are important and can only be settled by careful observation made upon the living and dead subject.

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Art. IV.—Case of Amputation of the left Arm and Shoulder, including Portions of the Scapula and Clavicle, for the Removal of a large malignant Tumor. By Moses Sweat, M. D., of N. Parsonsfield, Maine.—[With Illustrations.]

On the 3rd of October, 1847, I was called to examine Ira Hobbs, in S. Bridgeton, aged 27, in regard to the expediency and practicability of amputating his left shoulder, for the removal of a very large tumor, of a carcinomatous character, involving all the bones and soft parts forming the shoulder-joint and the upper half of the arm. He had suffered much from this affection for a long time, and he had as long hoped in vain that some change in the tumor might take place for the better.

I found him feeble, much emaciated, and suffering severe pain continually, from compression and irritation of the brachial plexus of nerves, excepting when he was under the
stupifying effect of opium or morphine. And he was attended with distressing gastric irritation, produced, as I supposed, by the use of narcotics.

On exploring the chest, I found evident signs of organic lesion of the left lung, to some extent. The tumor was spheroidal, eight inches in diameter, hard, smooth, and uniform in its appearance. The skin was thin, from over-extension, but not discolored, except that the cutaneous veins were enlarged and blue. And, though there was no ulcerated surface, the odor arising from the tumor was very offensive. The shoulder joint was immovable, and, from the firm adhesion of the tumor to the upper part of the chest, it seemed probable that not only the muscles about the shoulder, and the scapular and pectoral muscles, but the intercostal muscles also were involved in the disease, and that it might be extending into the thorax. No particular cause could be assigned, by the patient or his friends, for the formation of tumor, excepting that, six years before, he fell from a low building, and struck on his back and shoulder; but there was no perceptible injury at the time, no fracture, dislocation or contusion. He was, however, after this, occasionally troubled with "rheumatic
pains" about his back, neck and shoulder. No enlargement of the parts was noticed for two or three years, and, for some time after the tumor was first discovered, it grew very slowly; but, for about a year before I saw him, it had grown rapidly, and his sufferings had increased in proportion to the increasing size of the tumor. Taking the case into consideration, in all its bearings, I was decidedly of opinion, that amputation, at this late stage of the disease, could not effect a cure; and although it might mitigate his sufferings in some measure, yet it seemed to be too formidable an operation for so feeble a man to bear, with no better prospect before him. I therefore advised him to continue in the use of such remedies as might best relieve his sufferings, and make him as comfortable as the nature of the case would permit, and to submit with as much patience and fortitude as possible to what awaited him; gave him such directions and prescribed such palliatives as seemed to be necessary at the time, and left him, never expecting to see him again.

About the 20th of the same month, I was called to visit him again, with an urgent request, by the messenger, to operate, if, on another examination, I should think "he would live through the operation." He said that Dr. Dunnells had rather advised to the operation since I was there. I accordingly went, and took with me my son, Dr. Wm. W. Sweat, to assist me, in case we should operate. On our arrival, we found the patient extremely anxious to have the limb removed, with the hope only of its mitigating his sufferings, during the short time he might live. Though he was at this time exceedingly feeble, and could not be raised in bed, nor elevated even at a moderate angle from a recumbent posture, without being faint, yet on the whole we were of opinion that, with due precaution in regard to securing the arteries, he would survive the operation. We accordingly made the necessary preparation; placed him on a table on his right side, with his head low, to guard against faintness. Ether was administered by a young surgeon dentist, by the name of Heald, and Dr. Jefferson Carter assisted us in the opera-
tion, which was performed as follows, viz.:—Commenced at a point two and a half inches below the ear, and, by two curvilinear incisions, divided the integuments anteriorly and posteriorly towards the axilla, the centre of which could not be reached by about two inches each way, on account of the fixed position of the limb and the size and pressure of the tumor against the side. On slipping back the integuments, or rather the skin (for there was no cellular nor adipose tissue), the tumor presented a disorganized, though smooth surface, of a dark livid color, emitting the same odor as when covered by the skin. With our fingers and the scalpel, we soon brought down that part of the tumor which lay over and under the clavicle, and in the fossae supra and infra spinata of the scapula, and with the saw removed such portions of these bones as were implicated in the disease, about two inches in length of each bone. Here we secured two small arteries, the posterior and superior scapular, which, coming from the subclavian, would continue to bleed after securing the axillary, which we had not yet come to. Proceeding to remove the diseased mass, we found that it had pushed itself deep under the scapula and clavicle, destroying the subscapular, subclavian, and pectoral muscles, and that it had insinuated itself between the three upper ribs, among the intercostal muscles, and, in all probability, its work of destruction was going on within the ribs. We now came down to the axillary artery, and secured it by ligature before dividing it, at the point where it assumes its name, within an inch from its exit from between the scaleni muscles. Here, too, we secured, in like manner, the axillary vein; it being large, and, fearing that it was distended beyond the capacity of the valves, we thought it safer to secure it before dividing, and thereby avoid the danger of retrograde hemorrhage, and the disastrous consequences of the rushing of air into this peculiar and important vein. These vessels and the brachial plexus of nerves seemed to be sound, with the exception of the enlargement of the vein, and a slight discoloration of the neurilemma of the nerves. These vessels and
nerves were then divided, and the limb removed by forming, with one stroke of the knife, the lower angle of the wound.

The flaps, which came together well, were secured by sutures and straps in the usual manner, and the patient replaced on his bed, apparently as comfortable as when taken from it. Not having lost a drop of blood from the principal artery, and but a very few jets from the smaller ones, he was not exhausted by hemorrhage.

He was subsequently under the care of Dr. Dunnells, of Harrison, by whose judicious treatment he was made comparatively comfortable till his death, which occurred on the 27th January, 1848.

I saw him but once after the operation, and this was on the 24th Nov. Up to this time he had been quite comfortable. The wound had united by the first intention the whole extent, excepting at the lower angle, where the ligatures had passed out. There was, at this time, a small tumor forming under the skin, near where the clavicle was removed; but, as it gave him no pain, and there were now unequivocal signs of permanent disease of the lungs, which was rapidly progressing, I thought it not expedient to remove it. This
secondary tumor grew considerably, and remained hard till a short time before he died, when it became softer; but some time before this softened the purulent discharge from, the lungs commenced, and he soon ran down.

Note.—In a letter from Dr. Dunnells, in answer to one I sent to him, he writes as follows:

"I first saw him (Mr. Hobbs) Oct. 14th, 1847. My impression of his case was, that if he could lose the entire disease about the shoulder, it was all the chance there was of his living long, and that was uncertain. With the hope of palliation and protraction of life alone, I advised the operation.

"I think the operation did all that we expected from it. It relieved him very much. The wound closed over, with the exception of a small opening at the lower angle.

"The probability in my mind was, that if the operation had been earlier performed, before the lungs became diseased, while all the diseased parts could have been taken away with safety, we might have saved him.

"The purulent discharge from the lungs commenced some time before the softening of the external tumor, and he sank from exhaustion."

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Art. V.—On Trephining in Infancy, with the Report of an Operation performed at a very early Age. By Jas. L. Van Ingen, A. M., M. D., Schenectady, N. Y.

Alfred, a child of Garret Van Vranken, of Schenectady, aged twelve months, while playing at a back door which was guarded by a board placed against the casing, was precipitated, head foremost, down two steps to the ground, the board being first displaced, and the child impaling itself on a "tenpenny" nail which was sticking in it. The nail entered the right side of the head, near the right parietal protuberance, and considerable force was required to remove the child from the board. The accident occurred at 6 P. M., Sept. 20, 1847. Professional assistance was sought in consequence of apprehension of danger, the child being apparently well.

At 7 o'clock, P.M., I first saw the case. The pulse was frequent, but there was a total absence of any other extraordinary symptoms.

Upon an examination of the wound with a probe, I found the nail had pierced the skull and membranes, and entered
the brain to the depth of two and one-quarter inches, measuring from and including the scalp, which was normal as to thickness.

I left directions to have the child closely watched, and to be informed immediately, should any alarming symptoms show themselves.

At midnight the child vomited, and had slight general convulsions, which lasted about half an hour, and then ceased entirely, their lack of severity not alarming the parents sufficiently to induce them to apprise me of the fact. The remainder of the night the child slept naturally, having neither stertor nor convulsions.

Sept. 21.—At nine o'clock, A. M., was called in consequence of the return of unfavorable symptoms. About this time the child commenced vomiting, and had convulsions of the left side of the body until about ten o'clock. At ten o'clock, there was paralysis of the muscles of the left side, except those of the face, which continued their convulsive action until half-past ten o'clock, when the child became insensible, and commenced sinking.

I then advised trephining to remove the small portion of bone displaced by the nail, which I regarded as the immediate and sole cause of all the unfavorable symptoms, acting simply as an irritant; but a consultation, which was called by the parents, decided that the operation was unwarrantable, and held out no reasonable hope of benefit:

1st. Because so small a portion of the bone as the end of the nail displaced could not produce such grave symptoms.

2d. That a child's brain could accommodate itself to infinitely more pressure.

And 3d. The probable cause of the convulsions, depression and sinking, was not the simple irritation of so minute a portion of the skull as had been displaced. Indeed, it was regarded as improbable that any displacement existed, for even if the inner table had yielded in the first place to the pressure of the nail, it was supposed that, from its great elasticity at so young an age, it had resumed its natural posi-
tion. The symptoms were, therefore, attributed to the penetration of the nail to so great a depth into the substance of the brain.

Dr. Chas. Martin, at present attached to our naval medical service, differed from the opinion of the other physicians in consultation, and insisted that the operation held out not only the sole hope of recovery, but a rational certainty of such an event. These were my own views, but the other physicians persisting in their opinion, and the parents refusing to consent to an operation, Dr. Martin and myself were left in a minority, and we simply watched the progress of the case.

At 12 o'clock, M., the skin was cold; there was no pulsation perceptible at the wrist, and but feebly at the corotids. I again urged the operation, and those who had opposed it now consented, because the child would certainly die, and the operation would only shorten its life an hour or two.

Operation.—The child was perfectly insensible, the breathing scarcely perceptible, and apparently it did not feel the incision in the scalp to expose the bone. When the bone was fully exposed, a small irregular opening was discovered, sufficient to admit the passage of the nail, the sides of which gradually approximated each other at the bottom, the nail having entered obliquely. Upon removing, with the trephine, the portion of bone represented in the cut (c), the depressed portion of both tables represented in the cut (b), was discovered, the degree of depression being irregular, from the oblique entrance of the nail. The appearance of the parts is very accurately and elegantly represented by the artist (Mr. Holton) in the cut (a).

Immediately upon the elevation of the portion of bone the child became sensible, the muscles of the left side of the face commenced twitching, then those of the whole left side of the body, and, immediately after, those of the whole body were affected with a slight convulsive movement; the pulse returned at the wrist, the heat to the surface, and the child had free use of its limbs, with the exception of the arm of the left side, which was partially paralyzed.
A lateral view of the portion removed, showing the actual amount of depression.

An internal view of the portion removed, showing the two small portions of both tables of the skull depressed.

An external view of the portion removed, being a portion of the right parietal bone near the parietal protuberance, showing the opening in the bone, caused by the entrance of the nail.

The wound was then brought together and dressed, the child removed to a dark and quiet room, to secure the brain from all disturbance, from light or noise, and then left with but one attendant. At 12 o’clock, M., the child had a slight convulsion—(a. Sulph. Morph. gr. 1-16) and the remainder of the night it slept quietly.

Sept. 22.—The day after the operation, the use of the left arm was perfect.

Sept. 28.—The child was removed to the family room, and the wound healed entirely in about three weeks. No further medication was used after the morphine of the first night, subsequent to the operation, with the exception of one drachm of castor oil, and the application of rum and water to the head.

April, 1854.—The child is healthy, has never had fits, spasms or spasmodic action of muscles since his recovery from the operation in Sept., 1847.

Remarks.—There are some points connected with this case worthy of a passing comment. In the first place, it seems surprising that so slight a depression should be productive of such serious symptoms. So numerous are the instances on record in which the most extensive mutilations of the brain have caused but trifling inconvenience, and have been followed by a speedy recovery, that it could hardly have been expected, especially in so young a patient, that the case would have assumed so grave an aspect.
We are inclined to believe, after a considerable examination of the subject, that our patient was the youngest in which the trephine has been applied. Many of our leading authorities inculcate the doctrine, that in consequence of the peculiar condition of the bones in children, particularly very young children, the operation of trephining can seldom be indicated. For example, Mr. Guthrie thus expresses himself on this point.

"There is an essential difference between a depression of the skull in a child and in an adult. In the child the inner table is not brittle—it bends equally and does not break; it very often does little mischief when depressed, and gradually recovers its level. The brain in young persons is softer, less consistent, and can accommodate itself more readily to pressure for a limited time, without ultimate mischief, than the brain of an adult; so that the most urgent symptoms can alone authorize the application of the trephine in children, and in young persons under fifteen or sixteen years of age. The same bending of the long bones in young children is often observed at the same period of life." (Commentaries in Surgery, p. 337.)

Our patient forms an exception to another rule laid down by Mr. Guthrie (op. cit., p. 345) and other writers, that young persons bear with impunity a greater degree of pressure and irritation than those of mature age, and we are strongly disposed to question his assertion that by far the greater number of cases in which recovery has taken place after fracture and depression of the skull, with injury of the brain, and loss of its substance, have occurred in children or in persons under the adult age. No one will dispute the fact, however, that in young children indentations of a large surface of the skull may occur to an astonishing extent, and yet no symptoms of pressure shall be manifested. Mr. South, in his edition of Chelius, vol. i., Am. Ed., p. 431, relates a remarkable case of this kind, the upper part of the lambdoidal suture having been so deeply indented "that the bowl of a dessert spoon would easily lie in it," and yet this child never had a bad
symptom, but left St. Thomas’s Hospital perfectly well, although the skull remained indented as at first. Between these cases, however, and punctured or penetrating wounds of the skull, there is a vast difference. Proof of this is furnished by Mr. Guthrie himself. We refer to the case reported by him in which a boy was struck by his playfellow with the end of a thick iron wire, which passed under the upper eyelid, between it and the eye, penetrating the brain. This child died on the sixth night after the accident, no operation having been performed. He remarks, in addition, that he has seen two other cases in children of a similar character, and terminating in the same manner. (On Injuries of the Head, pp. 137, 138).

Again, Sir Astley Cooper teaches, that when pieces of bone penetrate the brain, if symptoms of pressure do not exist, they should not be removed, as an operation for this purpose would be likely to give rise to extravasation of blood. —(Lectures on Surgery, by Tyrrell, vol. i., p. 315, Lond. Ed.)

Now, suppose that the wound in the case of our patient had produced no immediate unpleasant effects, is it not almost certain, that, in after years, if the depressed fragments had been permitted to remain, severe cerebral irritation would have been the result? Had we trusted to depletion, and other antiphlogistic measures, we are satisfied that the result in our case would have been similar to that in the instances referred to by Mr. Guthrie.

This course was likewise unsuccess fully pursued in the case detailed by Mr. Liston in his Lectures on the Operations of Surgery, &c. Edited by Dr. Mutter, 1846, p. 87. In this instance, a boy, twelve years of age, fell upon a nail in the door, which penetrated his skull near the right parietal eminence. He felt giddy at the time, but was not completely stunned. Swelling of the scalp followed, with some pain and tenderness, for which leeches were applied, and purgatives administered. On the sixteenth day he became delirious; and, for some days afterwards, he appeared drowsy, had frequent vomiting, dilated pupils, &c., for which symp-
toms Mr. Cooper applied the trephine, and the operation was followed by complete success. The dura mater beneath the puncture was found thickened and inflamed, and presented a small aperture through which fetid pus flowed freely.

In conclusion, we would remark, that our patient, now nearly seven years after the operation, most beautifully exemplifies the possibility of a closure of the orifice made with the trephine, by ossific deposit, as scarce a vestige of it remains uncovered by bone, and we have every reason to hope that, in a few years more, the opening will thus be completely effaced.

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**Art. VI. — A Case of Congenital Absence of the Parieties of the Bladder and Abdomen.** By Dr. Walsh, East Brooklyn, N. Y.

On the 7th of March, 1854, a strong, healthy woman, the wife of a laborer residing in Walworth-street, East Brooklyn, gave birth to a male child, in which the abdominal wall and the front portion of the bladder are totally absent in the mesial line, the rectus abdominis being covered over, for about two inches square of the linea alba, with a red, spongy or fungoid-looking mass, covered with mucous membrane, and bleeding very readily on being touched roughly or rubbed. On the surface of this mass, which presents in reality the mucous membrane of the bladder, are two small openings for the mouths of the ureters, which keep up a continual moisture and irritation on the exposed membrane. The contraction of the surrounding parts acting also on the urachus, probably has drawn down the umbilicus much nearer than usual to the pubes.

Separate from this malformed bladder, towards the pubes, is another ill-looking, red mass, which, after close examination, you trace out to be an effort at the formation of a penis. It is oblong, deeply grooved, or rather cleft, in the centre, and on each extremity is fixed a very small portion of the glans penis, and a trace of the frænum also remains; but no prepuce. The urethra is totally absent; there is no appear-
ance of a prostate; the scrotum is very perfect and thoroughly corrugated by the dartos, and the testes are also present. The child enjoys excellent health, and bids fair to maintain his existence. The parents are healthy, and by their account the child inherits no taint, syphilitic, scrofulous, or otherwise, from either themselves or their families.

A case somewhat like the foregoing, in a young man of rather delicate appearance, was displayed at the Cliniques in New-York in 1846, and attracted much attention at that time. In him the ureters opened on the surface of the skin, on either side of the penis, which was formed of the glands only; there was no urethra, the raphe passed deeply through the scrotum, and the tissues, being puffy, gave a pretty good imitation of the labia and clitoris of the female. The testes were present and settled the question of sex.

In the Southern Journal of Medicine for Jan., 1847, Dr. Hardy, of Nashville, N. C., has given an interesting case similar to both recited above, illustrated by a splendid lithograph. His case was fourteen years of age before he could determine the sex, and then, he says, “the testes first began to be developed.” The red, fungous-like mass, was in this instance on the site of the mons veneris, and presented on its upper part the fissure for the urethra, as in the first case above described; the surface of it bled on the slightest irritation. There was no portion of the red mass that could be pointed out as a malformed penis. The person was delicate in form and manners, bashful, and displayed no sexual desire.

In the American Medical Intelligencer for July, 1840, Dr. Curtis gives a case of the same kind. Dr. Dunglison, the editor, in introducing the case, mentions two others like it, then living in Philadelphia.

Dr. Baillie in his Morbid Anatomy mentions a like case, which he saw, and refers for the details to the Medical and Chirurgical Transactions, where he had reported it. In Dr. Gross’s Pathological Anatomy there is nothing on the subject; congenital absence of the urethra, and its opening in various
unusual positions, is noticed, but no nearer approach is made
to a description of the foregoing malformations. Baillie takes
no notice of congenital deficiencies or malformations of the
penis, which is a constant occurrence in cases like the fore-
going.

Meckel, in his *Anatomy*, gives a full and satisfactory ac-
count of all such cases. No notice is taken of these cases in
any of our systems of midwifery, anatomy, &c., except in the
above-mentioned instances.

Franklin Avenue, East Brooklyn, March 23, 1854.

Art. VII.—A Critical Examination of a Pathological Specimen of
Softening of the Intervertebral Cartilages. By Louis Bauer,
M. D., Member of the Royal College of Surgeons, England, late
Surgeon to the Royal Orthopaedic Institution at Manchester,
&c., &c.

Dr. Lewis A. Sayre, Surgeon to Bellevue Hospital, exhibited to
the Pathological Society of New-York, on the 8th inst., a specimen
of more than ordinary interest. It represents the lower half of the
spine and sacrum of a youth, 21 years of age, who suffered for about
18 months of caries in that organ, attended with consecutive absorp-
tion of the lumbar vertebrae, and who died with symptoms of reten-
tion of urea in the blood.

The history of the case does not furnish any reliable evidence as to
the origin of the disease, nor has the post-mortem examination of the
vital organs elicited any proof to that effect. This, however, does by
no means diminish the importance of the specimen, as regards pathol-
ogy in general, and spinal affections especially.

The specimen embraces the five lower thoracic, all the lumbar ver-
tebrae, and the sacrum. On the outside, right and left, there are large
cavities between the psoas and quadratus muscles, connected both with
a carious ulcer of the spine and the surface. In its passage, the
matter had superficially corroded the left transverse process of the
third lumbar vertebrae. The left kidney was somewhat adherent to
the spine by rigid and short fibrous bands; traces of fatty degenera-
tion were also perceptible in that organ.

The spine itself, anteriorly and longitudinally divided, presented in
its fresh state the following appearances: no engorgement of blood; no
tubercular deposits; no ordinary signs of inflammation, nor any trace of inflammatory products; the fibro-cartilages were very much softened, being almost gelatinous, out of which oily and adhesive liquid could be squeezed; the color of both the cartilages and the infiltrated liquid was of a whitish tint. The elasticity of the cartilages had entirely disappeared; they were apparently of different consistence; nearer to the carious ulcer, appearing to be softer than the more distant. Between the second and third lumbar vertebrae there were carious, disintegration, more superficial on the inferior surface of the second, but more substantial on the inferior surface of the third. In the centre of the third lumbar vertebral body, there was a small and movable sequestrum, and outside of that bone the commencement of an osteophyte became observable. The corresponding intervertebral cartilage was almost entirely destroyed, the anterior laminae only being left; but those vertebral bodies had not approximated, being kept separated by the articular process. On the inferior surface of the eleventh thoracic vertebra, about its centre, there was a small carious excavation surrounded by dense osseous tissue, (eburnated, Jones Tomes) and filled with an elongation of cartilage. Finally, it deserves to be mentioned, that the spine was almost straightened, the normal curves having nearly disappeared. This latter condition of the spine was by no means the effect of death, being found also in the cast, taken in plaster from the living patient by myself.

The microscopical examination, kindly aided by Prof. Alonzo Clark, presented the unmistakable marks of textural disintegration and fatty degeneration of the intervertebral cartilages in different degrees of advancement, from the breaking up of the fibrous texture, down to nucleated, elongated cells, corpuscles and fat globules; but there was no evidence of tubercular matter.

The nature of the case, and the peculiar pathological conditions of this specimen, give rise to most important considerations.

In the first place, it is of the utmost importance to determine whether the disease originated in the vertebral bodies, extending subsequently to the intervertebral cartilages, or vice versa. In examining this specimen, it strikes one forcibly that the carious destruction is not only of limited extent, and comparatively superficial, but is also confined to three vertebrae. Moreover, the caries, at the inferior surface of the eleventh thoracic vertebra, is in its incipient stage, presenting in its immediate vicinity eburnated osseous structure, which has been recognized by Jones Tomes as characteristic of the earliest
phase of caries. The excavation is but trifling, and would scarcely receive a small-sized pea.

The remaining seven vertebrae were, to all appearance, in normal condition. But the intervertebral cartilage between the second and third lumbar vertebrae is almost consumed, the anterior portion only being left. And the other intervertebral cartilages, (notwithstanding that their corresponding vertebral bodies are in perfect integrity,) are disintegrated and degenerated to a greater or less degree, obvious to the naked eye, as well as to microscopical inspection. Had the bones been primarily affected, the disease of the cartilages would have been confined to the neighborhood of the carious affection, and the degree of disorganization of the former would bear comparison with the extent of caries.

According to Mr. Toynbee's researches (Philos. Transac., 1841), the intervertebral cartilages are far less liable to spontaneous decomposition, absorption, and disintegration than the vertebrae; hence, it is not uncommon to find the intervertebral disks entire when the adjacent bodies of the vertebrae have been destroyed by disease. The specimen, however, exhibits the direct reverse. Again, it cannot be argued that caries of the lumbar vertebrae could become the proximate cause of degeneration of remote cartilages. Thus it is evident, that the latter have been primarily diseased, and that the vertebral bodies have been involved consecutively.

The next point of consideration is, as to the nature of the disease of the intervertebral cartilages in the present case. All that can be made out, in reference to the fibro-cartilages of the spine, is change of color, consistency, and organization, from the higher to the lower order, increase of saturation with serum, and the formation of fat globules.

There are no signs of ordinary inflammation either in the intervertebral disks or the adjacent parts. It is also doubtful whether the local pains which the patient suffered, were consequent upon the original disease or its ultimate effects, especially the formation of consecutive abscess.

Authors of note assert that cartilaginous tissue is not liable to inflammation, on account of not possessing blood-vessels and nerves. Later and more minute anatomical investigations have, however, shown that at least fibro-cartilages receive some minor blood-vessels, though they do not ramify in its parenchyma. But some modern writers entertain the idea that inflammation is but a perverted nutritive process, excited by morbid irritation. According to Redfern, Goodsir, Gurilt, Carpenter, Paget, Virchow, and others, cartilaginous structure,
is just as liable to inflammation as any other, provided that the formative action is carried on by some means, though the signs of inflammation, and the subsequent structural changes are necessarily influenced by those peculiarities which the nutritive process present. Thus we find, in conformity with the observations of Redfern, Goodsir, and Gurlt, the inflammatory changes confined to the cartilaginous fibres and cells—the former broken down, partly dissolved and separated; the latter enlarged, deformed, the nuclei degenerated into corpuscles, and the hyaline substance infiltrated with serous fluid. In comparing those statements of the before-mentioned authors with the pathological peculiarities of the specimen under consideration, I am inclined to believe that a low grade of inflammation has been the nature of the disease. But, however opinions may differ on this point, it will be unreservedly admitted, that the character of that malady of debility is minus of action, resulting in structural disintegration. And this is decidedly of great practical weight in reference to the treatment in analogous cases.

A third point worthy of discussion is the straight form of the spine. A straight vertebral column, at the age of twenty-one years, must be considered a deformity, for there should be two curves, respectively, in the thoracic and lumbar portions. This deformity is undoubtedly attributable to the entire loss of elasticity in the intervertebral cartilages, and at the same time to the recumbent posture the patient had adopted during the last fifteen months of his illness. In that position, the spine had but to yield to the weight of those organs which pressed upon it anteriorly, and to adapt itself to the mattress. To this circumstance may be attributed the absence of approximation between the second and third lumbar vertebrae, which would have been unavoidable in the erect posture. The fact that (according to the above statement) the spinal column had assumed a straight form, is a sufficient proof that the opposite deformity would have been acquired by the patient in the upright position. At this point I am naturally led to compare the views of Nelaton with the fact before the reader. This distinguished French surgeon states that posterior curvature and Pott's disease, are invariably the effect of tubercular deposits in the cancellated tissue of the vertebral bodies. Now this specimen is at least one of those exceptions, which I occasionally meet with. Posterior curvature of the superior thoracic portion of the spine not unfrequently occurs in apparently healthy, and even blooming children, at the age of three to six years, where no scrofulous or tubercular affection can be detected. There are no symptoms of inflammation
the pain is principally peripheral either in the epigastric regions or in the lower extremities; the latter become occasionally paralyzed, owing to pressure upon the intervertebral nerves and spinal chords. The patients may become emaciated and assume the appearance of old people. The spine is unusually flexible, though not commonly, in the distorted portion, being kept stiff and immovable by dorsal muscles. Left to themselves those cases often recover, retaining, of course, a deformity of greater or less extent; the spines consolidate, and the patients may attain a considerable age, affected usually with asthma. But if a patient is kept for some length of time in a horizontal position, in the enjoyment of good air and food, the progress of that deformity will be arrested, and being suspended in an appropriate apparatus, head and legs being used as weights, the deformity will even diminish and the general health improve remarkably. Such cases I have had in my Institution, and the results of that treatment have proved highly satisfactory.

I do not conceive the possibility of bringing cases of this description in any relation to tuberculous deposits. Miliary tubercles, as long as they remain latent, will not interfere with the shape of the vertebrae, and can therefore not come under consideration as causes of spinal deformity. But if the tubercular deposits augment, gradually soften, and subsequently involve the surrounding cancellated tissue, inflammation and caries will ensue, constituting at once a malady that does not come under that series of posterior spinal deformities, which I have in view. Nor can it be comprehended, why a horizontal posture and horizontal suspension of the patient could arrest the progress of the disease, and diminish even its material extent, if tubercles had misshaped the vertebral bodies. For this reason, I believe that cases of this description have nothing to do with tuberculous disease, and must be considered as the simple effect of softening of the intervertebral cartilages, associated with loss of their elastic properties. These views I have entertained for a long time, but I have never before had the opportunity to corroborate them by post-mortem examination.

I consider, therefore, this specimen as one of the greatest pathological importance; for it confirms the occurrence of idiopathic disease of the intervertebral cartilages, and establishes the fact that the mere loss of elasticity becomes the source of deformity, and also that even caries may result from such pathological conditions. According to such facts, Nelaton's opinion requires its limitation. In fine, it can also be said that the much-applied local derivation can hardly give any hope of success, but must render the debilitated state still worse.

Brooklyn Orthopedic Institution, March 2d, 1854.
ART. VIII.—Practical Observations on the Use of Quinine and Opium in the Treatment of Hip-Disease. By Nelson Nivison, M. D., Tompkins County, N. Y.

Among the various diseases that fall within the province of surgery, perhaps none are fraught with greater interest than those that pertain to the larger articulations. From the importance of these parts to the animal economy, from the peculiar character and conformation of the tissues involved, from the usually obstinate and intractable nature of the diseases themselves, and particularly from the diverse modes of treatment that at different periods have been advocated, this class of diseases has ever commanded and still claims a large share of the attention of the most eminent surgeons. Conspicuous among them are those of the ilio-femoral articulation; and of these probably none assumes a higher degree of importance than that usually denominated "Coxalgia" or "Hip-Disease." Under any system of treatment that has hitherto been devised, this disease is frequently unsucessfully managed in its earlier stages, and, if allowed to proceed to those more advanced, is always lingering, generally extremely painful, and not uncommonly fatal. Under such circumstances, we conceive that any individual, who shall be able to reflect the most feeble ray of light upon a subject so obscure, will not have labored in vain. It is extremely probable that in our present effort we shall fail to do even this. We nevertheless propose to give the results of our experience in a few cases that have recently come under our observation. We shall indulge in no vague speculations, but content ourselves by a simple statement of facts, and such inferences as appear to be fairly deducible therefrom.

The first case that I shall notice was a child two and a half years old. I was called Oct. 18th, 1851. I got from the mother the following history: The child had usually been healthy till about six weeks previous to my visit, when it was attacked with a pretty severe fever of a remittent type, which lasted about ten days. A physician was called, who administered some mild remedies, under the use of which the febrile symptoms gradually subsided. The child, however, did not improve in appearance, strength, or appetite, but seemed rather to decline. In a few days after the more violent febrile symptoms had subsided, the child began to manifest symptoms of inability to walk or even stand, would fall frequently, and cry violently as if in severe pain; the sleep was disturbed, and the patient became rapidly emaciated. About this time, the left leg was observed to be somewhat bent at the
knee, a day or two later at the hip, with considerable rigidity of the muscles. It would not allow the limb to be moved if possible to prevent it; every accidental movement was productive of much pain. At this stage of the matter, the mother had occasion to spend a couple of weeks from home; and, hoping the child might be benefited by the change, she took it with her. The symptoms grew worse. A physician was called. He pronounced it a case of hip-disease, and treated it accordingly; precisely what the treatment had been, beyond the application of a blister and some Dover's powders, I could not ascertain. Under the treatment, however, there was considerable amelioration of the symptoms. The child was brought home, and the treatment discontinued. In a few days all the unfavorable symptoms returned, with increased severity, and continued steadily to grow worse to the time of my visit. I found the little patient much emaciated, with a pallid countenance, a hectic flush on the cheek, and, although at the time sleeping somewhat quietly in the cradle, I noticed those convulsive twitchings, and distortions of the features, that told but too plainly of the violence already done to the integrity of the nervous system. Pulse small, quick, frequent, and somewhat irregular; the left thigh was drawn to nearly a right angle with the body, and the leg was flexed on the thigh. The whole limb was in a state of abduction; this, with a certain amount of apparent shortening, gave the limb somewhat the appearance of a dislocation, with the head of the femur on the dorsum ilii. The slightest movement of the limb awoke the patient, and his protracted cries were indicative of extreme anguish. I attempted to examine the limb, with a view to determine its true condition, but every movement so manifestly aggravated the sufferings of the little patient, that I was constrained for the time being to abandon it; but from the history and the appearances before me, I saw no reason to doubt the correctness of the diagnosis of the last medical attendant. The parents appeared healthy, but both acknowledged the strumous habit in their ancestry and family kindred. 

In summing up the matter, the case appeared to be the sequel of an idiopathic fever, which appeared not to have been very thoroughly treated or satisfactorily overcome. While it existed in this form, it could, doubtless, have been completely removed by a liberal use of the sulphate of quinine. Now, if this diseased action is but a different manifestation of the same morbid agency, and no structural disorganization has yet occurred, why should it not now yield to the same remedy? True, a very considerable amount of inflammatory action, with its attendant fever, still exists, and, furthermore, the much re-
pected authority of precedent would lend but little aid; I nevertheless resolved to give it a trial. I ordered a grain of quinine with $\frac{1}{3}$ gr. of morphine to be given every six hours, with additional doses of a solution of morphine, if the pain is not entirely quieted and rest procured by the powders. A stimulating liniment was ordered to be rubbed on the affected part twice a day.

Oct. 20th.—The child has been much more comfortable; rested well, is less feverish, appetite slightly improved. At this visit, I was able to make a tolerably satisfactory examination of the affected limb. Considerable motion can be made at the knee, but no movement of the hip-joint can be borne. In whatever position the child is placed, the thigh remains at the same angle with the body. Continue the treatment.

Oct. 23d.—The symptoms all materially improved; no fever, appetite good, sleeps well, will allow slight motion of the hip-joint without much complaining. In addition to the former treatment, give iodide of potassium, and apply a blister to the hip.

Oct. 26th.—Continues to improve. Blister drew well, but produced considerable disturbance of the nervous system, which was soon quieted by additional doses of the morphine. Continue treatment.

Oct. 23th.—Still improving. Stomach and bowels somewhat irritable. Omit the iodide of potassium. Ordered quinine, gr. xvi., sulph. acid dil. gtt. x., aqua pur. ʒiv. m. A teaspoonful four times a day; an occasional dose of laudanum if necessary, to procure rest.

Nov. 4th.—Improving rapidly. The limb can be brought nearly in a right line with the body. Occasionally puts the foot to the floor and makes some rather unsuccessful attempts to walk. Continue the solution of quinine.

Nov. 11th.—The limb can be moved in almost any direction without pain. The patient can walk about the room; appetite continues good; he is allowed a generous diet, and is gaining flesh. Nothing of special interest occurred after this. The solution of quinine was continued a week or two longer, and the patient was dismissed cured.

Case 2 was a boy 12 years old. In the latter part of May, 1853, he was thrown from a wagon, by which accident he received considerable injury of the right leg, which appeared to be mostly in the vicinity of the ankle-joint; pain was complained of along the course of the fibula, and the parts were considerably swollen. But the affair was regarded as trifling, and, aside from the application of severe stimulating embroctions, and advising that the parts be kept at rest, nothing was done.
Nivison on Quinine in Hip-Disease.

[May,

I heard nothing more of the patient till the 18th of June following, when I was called to visit him. I was told that he had suffered considerable pain in the limb most of the time since the injury; he had been able to walk but little. The swelling had nearly subsided, and the pain was now mostly in the vicinity of the knee; there had been more or less fever every day, generally worse on alternate days; he had passed restless nights, lost his appetite, and was losing flesh, and becoming peevish and fretful. He had a pallid countenance, a frequent pulse, and a furred tongue. The bowels being confined, I ordered a laxative, and agreed to see the boy the following day.

June 19th.—Was called early this morning to see the boy; found him complaining of excruciating pain in the knee and hip. I learned that he retired last night apparently as well as usual, and slept quietly during the early part of the night, but towards morning suddenly awoke, complaining of this intense pain, which had been unintermitting up to the time of my visit. The leg is now rigidly flexed upon the thigh, and the thigh on the pelvis, and the whole limb in a state of abduction, or drawn from the other. This position, I believe, is rather unusual in hip-joint disease. I notice, however, that Prof. March, of Albany, in his very valuable paper, read before the American Medical Association, mentions a case where the position of the parts was precisely similar. The boy refers the pain principally to the knee, and believes this joint to be the seat of the difficulty; fomentations have been freely applied to this part without relief. I found, however, that motion of this joint is less painful than of the hip. This directed my attention to that joint, and further investigation satisfied me that here was the real difficulty. The fact that the pain was mostly in the knee, rather confirmed this view of the case than otherwise, and again the previous constitutional disturbance had been altogether disproportioned to the slight injury in the vicinity of the ankle, and furthermore an inflammation of the hip-joint usually comes on rather insidiously. This, in connection with the fact that the boy was evidently of a strumous habit, could leave but little doubt that we had to deal with a case of hip-disease.

Being firmly impressed with the conviction that, in the former case, the sulphate of quinine, in combination with the opiates, were the chief agents in removing the morbid conditions of the system, upon which this species of diseased action usually depends, I determined to test it still further in this case. I therefore directed two grains of quinine, with a grain and a half of opium, to be given immediately, and to be
repeated every six hours, and \( \frac{1}{4} \) gr. of morphine every hour till the pain is subdued.

June 20th.—The boy is more quiet, has taken the powders regularly, but was obliged in addition to take the morphine very freely. The limb remains in the same position, will admit of some motion at the knee, but the least movement of the hip-joint is exceedingly painful; considerable tenderness is manifest on pressure about the hip. Continue the powders. Rub the parts twice a day with comp. camph. liniment.

June 22d.—Yesterday the boy had an uncomfortable day, several paroxysms of pain occurred that were represented as almost intolerable; used the morphine very freely; slept a part of the last night rather quietly, but if he chanced to make the least movement of the affected joint, the pain produced thereby awoke him instantly, and he was usually unable to sleep again till the morphine had been repeated. He is comparatively comfortable to-day, the knee-joint can be moved without pain, but can bear no motion at the hip; countenance more animated, no fever, tongue cleaner, appetite somewhat improved. Owing to the extreme pain produced by change of position, the bowels have not been opened in several days. Continue the powders; give pill hydrg. gr. viii., at bed-time; follow with castor-oil in the morning.

June 24th.—The boy is better. When perfectly at rest complains of no pain whatever. Had one or two pretty severe paroxysms of pain yesterday; was obliged to use the morphine; with that exception, the powders of quinine and opium have kept him comfortable; will allow a limited motion of the hip-joint. The tenderness about the joint is diminishing. The knee is no longer painful, appetite good, tongue nearly clean. Continue the powders, apply a blister to the hip, and allow a generous diet.

June 27th.—Continues rapidly to improve; considerable freedom of motion is allowed at the hip; succeeded in bringing the affected limb nearly parallel to the other, without producing much pain. There is marked improvement of the general health; the morphine has been used but two or three times since last visit. Continue the quinine and opium.

June 29th.—Still improving. The limb can be restored to its natural position, and moved in almost any direction, with but trifling pain. Reduce the powders to R. quinine, opium \( \text{aa.} \) gr. j. mix., one every six hours.

July 4th.—The boy can walk about the room; but complains occa-
sionally of an obscure pain in the hip-joint. Take a grain of quinine three times a day, with an occasional pill of opium if necessary.

July 10th.—The patient is apparently well; ordered some vegetable bitters, and discharged him. He has enjoyed good health up to the present time.

Case 3 occurred in August, 1853; the patient was a little girl about six years old. At my first visit, the mother informed me, that about two weeks previous, in climbing a fence, and endeavoring to reach the fruit of a cherry tree, she fell to the ground, striking upon the left hip; but beyond a slight limping, and occasionally a little pain, nothing of special importance occurred till the time I was called. I then found her complaining of excruciating pain in the left knee and hip; this pain had come on suddenly, and at first in paroxysms, but had now become constant; at each paroxysm the limb was drawn more and more from its normal position, and when I first saw it, it had assumed a position corresponding precisely with that of the last-mentioned case. The mother said she had always been a "weakly" child, and from appearances, I was satisfied that she was of the strumous habit. The subsequent history and treatment of this case correspond so nearly with the foregoing case that I deem it unnecessary to give the details. The only essential difference in the treatment was that this case was treated exclusively with quinine and opium; no counter-irritation or local treatment of any kind was made use of. The case terminated in health in about three weeks.

It is believed that a careful review of the foregoing cases will justify the following conclusions:

1st. That they were cases of genuine hip-disease in the early stages of development.

2d. That the removal of the diseased action was mainly owing to the free use of opium and quinine as remedial agents.

In regard to the diagnosis, we think, so far at least, as the first case is concerned, very little doubt is likely to arise. And of the second and third, we know of no disease with which they would be likely to be confounded, unless it should be certain forms of rheumatism. That they were not rheumatic, we think, may be fairly argued, from the fact that they were evidently the result of local injuries, and that, although the pain was somewhat migratory, commencing in the ankle and knee before becoming fixed in the hip, which might be considered evidence of rheumatism; the facts nevertheless show that motion of the knee-joint, even while the pain was mostly confined to that situation, was far less painful than movement
of the hip; thus indicating most clearly the latter situation as the real seat of the difficulty; and moreover, the pain in the knee is enumerated, by almost all writers on hip-disease, as one of the characteristic symptoms of its incipient stages. And furthermore, the fact that, after the acute pain in the hip had subsided, there was still great tenderness on pressure in the vicinity of the hip, which subsided only with the constitutional symptoms, would seem to leave little doubt of the true character of the affection.

Coxalgia, or hip-disease, I believe, is usually regarded as an inflammatory affection; the inflammation is, however, usually of an asthenic character. In order to its full development, some constitutional peculiarity, that shall operate as a predisposing cause, is believed to be requisite. That the strumous diathesis frequently constitutes this predisposition is, I believe, generally conceded. In addition to the predisposition, some well defined exciting cause may usually be recognized. All these conditions are present in the cases noticed. The symptoms were such as characterize the early stages of the acute variety of that disease; and it is extremely probable, had not the morbid train of symptoms been speedily arrested, that ulceration of the cartilages, extensive suppurations, ankylosis, or death, would have been the result.

In regard to the second position assumed, we may remark that, whatever be the diagnosis in these cases, they forcibly illustrate the importance of quinine and opium as remedial agents.

We believe a point has been reached in the progress of our science, in which a liberal use of quinine is no longer regarded as incompatible with every grade of febrile or inflammatory action. Neither is it necessary under these circumstances, in order to give a rational exposition of its modus operandi, to invoke its hyposthenic or sedative effects; for I believe it is beginning to be somewhat freely acknowledged that certain forms of inflammation are most successfully managed by a tonic course of treatment. Or rather, perhaps, it would be more correct to say that, in certain constitutions, almost any inflammation will admit of this course of procedure. I think I have seen cases of acute pleurisy, peritonitis, &c., more promptly and effectually subdued by a few full doses of opium or quinine, than they probably would have been by the lancet and its usual accompaniments; and the same is true of other forms of inflammation.

We believe that a deranged innervation often plays a more prominent part in the phenomena of inflammation, than has been generally believed; the immediate consequence of this derangement is a disturbance of circulation, of respiration and secretion; those parts of the
organs already enfeebled, are of course capable of making but little positive resistance to an increased flow of blood, and an engorgement or congestion of the vascular tissue of the part is inevitable. Under these circumstances, to restore the tone of the discordant nervous system is manifestly one of the first indications. But this is not enough; we have likewise to deal with the consequences of its derangement. The circulatory system, stimulated by its impulsive promptings, has reached a high degree of excitement; this must be moderated and equalized. The sedative effect of the opium fulfils this indication. By a judicious combination of quinine with the opium, the two effects are produced simultaneously; and, by maintaining the action of the remedies, they may be prolonged indefinitely.

To treat the different varieties and stages of certain inflammatory affections successfully, by these remedies, requires a certain degree of boldness combined with much discrimination on the part of the practitioner. To be able to estimate, from the existing symptoms, the precise quantity of each that shall enter the combination to adapt it to a particular case, can only be learned by experience. In cases of severe pain combined with great nervous susceptibility, very large doses of opium will often be found necessary, and it is believed that doses that would be considered unsafe when given alone, combined with quinine, may be given with impunity. The proper dose will usually speedily moisten the skin, equalize the circulation, and eventually restore lost secrétion. If the opium should be in excess or disproportioned to the quinine, along with a moist skin, we should probably have cold extremities, slow pulse, &c.; under these circumstances, we should not only diminish the quantity of the opium, and probably increase the quinine, but we may also, for the time being, resort to the more diffusible stimulants, as brandy, camphor, and ammonia. We may further remark that, adopting the tubercular hypothesis in regard to the proximate cause of this disease we think we may still philosophically account for the salutary operation of the remedies in question. It is probably generally conceded that no condition of the system is more favorable to the development of tubercule than one of decided atony, combined with extreme nervous susceptibility; and, for the removal of these conditions, we perhaps have no better remedies than quinine and opium. But with the pathology of this affection it is not now our purpose to deal. To determine to some extent the value of the remedies in question is our immediate object.

Whatever virtue we may assign to the quinine in the treatment of this disease, we believe the opium will generally be found to be an
indispensable accompaniment; for, independent of its power to soothe the sufferings of the patient, and restore the equilibrium of nervous action and circulation, we believe one of its chief merits will be found to reside in its power to overcome inordinate muscular contraction. To do this effectually and continuously, has ever been considered a great desideratum among surgeons in the treatment of this affection. Indeed, the idea has obtained to a considerable extent, that little beyond this is necessary, in many cases, to effect a cure. This muscular contraction not only produces the deformity, but, by forcing the head of the femur firmly against the acetabulum, an aggravation of the inflammation, with a rapid absorption of the articular cartilages, must result.

The means usually made use of to overcome this forcible contraction of the muscles has been some form of extension and counter-extension by mechanical contrivances. Now, although, in the advanced stages of this disease, in order to accomplish the desired result, this kind of proceeding may be necessary, and, where judiciously used, is doubtless one of the most valuable auxiliaries to any system of treatment, yet we believe, in the earlier stages at least, the object is more certainly and advantageously obtained by the free use of opium; for, aside from the inconvenience and usual dislike of all sorts of apparatus, their effect is often positively injurious.

The muscles resist forcible extension and counter-extension. In other words, when any attempts are made forcibly to overcome their contraction, they act with redoubled force; and it is not till their power to contract is exhausted, that the benefits of extension and counter-extension begin to be realized. This forcible exhaustion of muscular power, independent of the additional irritation necessarily produced in the situation of the disease itself, and the violence done to the surrounding structures, cannot fail to draw heavily on the latent resources of the system, without which a cure can scarcely be expected under any system of treatment. This rigid muscular contraction is doubtless but the reflection of the impression made on the nerves centres by the painful sensations transmitted thence along the nerves of sensation. If this be true, it follows that, if by any means we can prevent the painful sensation from reaching the sensorium, we thereby likewise prevent the reflex action which would otherwise manifest itself in the form of this muscular contraction. The opium enables us to do the former, and the cause being removed, it is obvious that the effect must cease.

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ART. IX.—Case of Complete Prolapsus Uteri in Pregnancy—Safe Accouchement. By N. Chapman, M.D., Brooklyn, N. Y.

Mrs. W., healthy, spare habit, and mother of three children, came under my observation during her second confinement. My attention had been called to nothing unusual in her case. I saw Mrs. W. on the 19th November, 1849; she remarked that her womb had been down for three weeks, with a constant bloody discharge, rather freer than the menses, but natural in appearance. For three weeks, she had been constantly on her feet attending to her household affairs. During the three weeks she had made many efforts to reduce the womb, which from its size and tenderness were ineffectual. I directed her to keep her bed till the next morning, and in the meantime foment the womb constantly, when I would call again and reduce it.

Nov. 20th.—On examination I found the womb of the size of the two closed fists, completely external to the body. My thumb and fingers could meet above its fundus, external to the vulva, having only the inverted vaginal walls and ligaments of the womb between them. When she was erect the womb must have extended nearly to her knees. At the time, I supposed the enlargement of the womb arose from its strangulation and congestion: It is proper to remark, that Mrs. W. said she had been subject since her first child was born to an almost constant prolapsus when she was on her feet, which she never before had found trouble in reducing. I affected the reduction without much difficulty; applied a compress over the vulva, with a T bandage, and directed her to get up after two or three hours.

Nov. 21st.—Immediately on Mrs. W.'s arising, the prolapsus recurred again. I directed her to lie down, and then found the womb more irritable and larger than before. I reduced it immediately, but with considerable difficulty and the exertion of some force. She was directed to keep the recumbent posture and use astringent injections; a putrid discharge followed and continued five days. On the 4th of December she felt life, fifteen days from the first reduction. After this time she was allowed to get up, and I discontinued my visits after the 8th.

On the 15th of March, I was called to Mrs. W. again. She said that she had continued feeling life stronger and stronger every day since I had last seen her; that the womb had been down many times since my last visit, but that she had been able to put it back; that now it was down much worse, and of greater size than ever before, and she could not reduce it. Besides, she had labor-pains that recurrent
every ten minutes. I found the fundus uteri as high as the umbilicus; the neck of the womb, external to the genital fissure, something larger than the two closed fists. Through the os uteri, I could feel the child's head resting on the rami of the ischium and pubis. As I failed to reduce the uterus while she lay in bed, I directed her to turn on her face, resting on her knees and shoulders, in which position I easily succeeded. On examination I felt the os uteri dilated to the extent of a circle two inches in diameter. The pains gradually subsided, and in two hours' time, the os uteri had contracted to the size of half a dollar.

On the 29th of March, she was taken in labor and delivered of a strong, vigorous female child, weighing six pounds. She must have been at her full term from the development of the child's head; the posterior fontanel was closed, and the anterior was no more open than usual. No prolapsus occurred during the labor, but the womb rested low in the pelvis. Mrs. W. said that the womb had come down every two or three days since the reduction in November, and also that in March, but that by lying down she could reduce it. Probably after the reduction in November the prolapsus was only partial. During her whole gestation, the child's head undoubtedly rested on the perineum, as she remarked that it always seemed to her that she sat on the child, when no prolapsus existed.

She was delivered 130 days after the reduction in November, consequently allowing 280 days for the term of gestation, she was in November advanced 150 days, or 21 weeks and three days, or about five months. At this time, it is to be recollected, when she was five months advanced in pregnancy, the womb had been completely external to her body, hanging nearly to her knees for the space of three weeks; and during this time she continued about her house every day, suffering nothing more than the inconveniences of dragging pains, the discharge, and the obstruction to walking, from the bulk of the womb and its tenderness.

The most important feature of the above case is, that a delicate woman, five months advanced in pregnancy, carried her child for three weeks external to her body; performed all her own house-work during that time, and neither miscarried or suffered much inconvenience, except soreness from the uterus being chafed.

Similar cases may, for ought I know, have been placed on record, but they must be of infrequent occurrence. They are instructive as showing the powers of nature to accomplish her purposes under the most unfavorable circumstances.
ART. X.—A Case of Disarticulation of the Femur at the Hip-joint.
By J. P. Stevens, M.D., Ontario Co., N. Y.

Mr. Wm. Aldrich of the town of Manchester, Ontario Co., about fifteen years of age, received in the year 1848, an injury of the left thigh and leg, which resulted in caries of the bones; commencing at the knee-joint, the disease extended gradually upward and downward, implicating eventually the greater part of the entire limb. The discharge of large quantities of pus during the last five years greatly enfeebled his constitution and undermined the general health. This condition of things seemed to demand the removal of the limb, as affording the patient the only hope of recovery.

Able counsel were summoned to the case, and coincided with this conclusion. Accordingly, on the 1st of Sept., 1853, Dr. H. A. Potter, of Geneva, assisted by Drs. Stevens, of the same place, and Howe, of Vienna, in the presence of several other physicians, performed the operation. The patient was brought under the full influence of chloroform, and the operation of amputation commenced.

As it was thought desirable to save the superior articulation of the femur, in order to facilitate the future adaption of an artificial limb, the point selected for the operation was about three inches below the great trochanter. The surgeon, therefore, proceeded to amputate the leg in the usual manner at this place. On the removal of the limb, the parts about the ilio-femoral articulation were sufficiently exposed to allow of a more satisfactory examination of the remaining portion of the femur. This was also found in a diseased condition like that already removed, the necrosis having extended up to the joint. On consultation, it was deemed advisable to complete the operation by the entire removal of the head of the femur from its socket. This was accordingly undertaken and accomplished without much difficulty. The cotyloid cavity was found free from disease. The flaps were brought together, and the appropriate dressings applied.

The case progressed favorably, the wound healing promptly and with no more than the ordinary amount of suppuration. It is now a little more than four months since the operation was performed, and the parts have entirely healed; the patient has recovered his former flesh, and is in the enjoyment of good health.

This was a case of true amputation of the hip-joint, in the completion of the operation, though not anticipated in its commencement.
PART SECOND.

CRITICAL ANALYSIS.


The Diseases of the Breast, and their Treatment. By John Birkett, Fellow of the Royal College of Surgeons of England, Fellow of the Linnaean Society, and Assistant Surgeon to Guy’s Hospital. (The Dissertation to which the Jacksonian Prize for 1848 was awarded by the Council of the Royal College of Surgeons of England.) London, 1850. pp. 264. With Plates.

The volumes before us are the productions of two surgeons of widely different reputations on this side of the Atlantic. One is from the pen of the world-renowned Surgeon of La Charité, and contains the results of his extensive experience for more than thirty years; the other comes to us with the seal of approbation of the Royal College of Surgeons of England, having obtained the Jacksonian Prize for 1848. For some years past Mr. Birkett has been one of the contributors to Guy’s Hospital Reports, but as its circulation is limited in this country, as a necessary consequence, his name is far less familiar here than that of M. Velpeau. However, the position to which he has recently been promoted, as the successor of the late lamented Bransby Cooper, Lecturer on Surgery at Guy’s Hospital, will doubtless add to his celebrity. In his preface he states that, through the kindness of many friends, and his connection with Guy’s Hospital, which is one of the largest and most richly endowed in Europe, opportunities on a large scale have occurred to him to examine,
Velpseau and Birkett on Diseases of the Breast. [May,
as minutely as possible, those morbid growths to which the mammary-
gland is liable. His avowed object is the instruction of his junior
brethren; and if he has been rather prolix in the description of their
minute anatomy, he trusts that "the fault may be forgiven, and that
the reader will attribute this, I hope, pardonable occupation of his
time to a desire to render the explanation clear, and the identification
of similar structures of easy attainment." One of the most important
practical points connected with the study of the diseases of the breast
is, certainly, the identification of their benign or malignant character;
and notwithstanding the microscopical researches of Müller, Gluge,
MM. Robin, Lebert, Bennett, and others, if the opinions of M. Velp-
seau be true, we must surrender our faith in the power of this instru-
ment to establish absolutely the differential diagnosis of the genuine
and the pseudo-cancerous tumor. In his preface he boldly asserts
that, since 1830, he has lost no opportunity of subjecting mammary
tumors to examination with the microscope, and he candidly
admits that, as yet, he is not in the possession of a sufficient number
of unequivocal facts to serve as a basis of an unobjectionable
classification of these tumors. Moreover, he believes that he has in-
controvertibly proved: 1, that the so-called cancer-cell is not the
specific element of cancer; 2, that genuine cancerous tumors may
exist without this cell; 3, that this cell has been found in non-can-
gerous growths. In arriving at these conclusions, he availed himself
of the same means employed by M. Lebert himself; for the last-named
author based many of the observations contained in his Physiologie
Pathologique, and his Traité du Cancer, on the analysis of a large
number of tumors removed by the surgeon of La Charité. Conse-
quently both observed the same facts, but in their interpretations of
these facts they differ. Had M. Lebert confined himself to the sim-
ple announcement of the existence of certain forms of globules in these
tumors,—in a word, if he had kept within the bounds of pathological
anatomy,—M. Velpseau would have been under no necessity of rejecting
his conclusions, theoretical or practical, on the subject of the cancer-
cell. He comments, at considerable length, on the course pursued by
MM. Lebert and Robin, though he would by no means wish it to be
supposed that he considers the microscope of no value in assisting our
diagnosis. He admits that this instrument has been the means of
bringing to light important facts, but it is the interpretation or appli-
cation only of these facts which he is disposed to call in question. He
is willing even to acknowledge that a notable difference exists between
the so-called cancer-cell and that which is found in tumors of a non-
malignant character. But this cancer-cell is not the *sine qua non*, the initial element of cancer.

Other points are noticed by our author in his somewhat lengthy preface, but these will be referred to in another place.

The work of M. Velpeau is divided as follows: in the first place, we have the diseases of the female breast, the non-malignant affections, including the inflammatory and the non-inflammatory; and, secondly, the malignant diseases of the female breast. Then follow the non-malignant and the malignant affections of the male breast; and the work is concluded with some remarks on the diseases of the breast in infants and children.

The following is Mr. Birkett’s arrangement:

1. The diseases before puberty. 2. The diseases during the establishment of puberty. 3. The diseases after the establishment of puberty, including those which occur during pregnancy, the puerperal period, and lactation, or at any period or age after puberty.

In our analysis of these volumes, we shall follow the order of arrangement adopted by the French surgeon.

By the term, benign affections of the breast, M. Velpeau would designate those which, if left to themselves, would not destroy the patient, or which have a natural tendency to a spontaneous cure. Of these he would make two groups: one embracing the different inflammatory affections; the other, those which are originally, or in their progress, unaccompanied by inflammation.

Nearly all of the inflammatory affections of the nipple are confined to the puerperal state. There are some, however, which occur independent of these conditions, such as eczema, excoriations, fissures, &c. Several interesting cases are related, but we shall refer to only one, in which the eczematous affection seemed to be developed under the influence of constitutional syphilis. This patient was twenty years of age; the nipple and areola presented a well-marked coppery red tint. The surface was moist, and there was a constant exudation of a reddish humor, which speedily dried into sallow-colored crusts. This affection was of some six or eight months’ standing, and had not changed its aspect from the commencement. Five months before, she had been treated at the Hôpital du Midi for well-marked syphilis. The eczema resisted all topical applications, but yielded, in the course of two months, to pills of the proto-iodide of mercury.

Some few years since, we treated a case of this kind, which had been pronounced by a physician to be carcinoma!
Among the topical applications recommended by our author, in cases unconnected with a syphilitic taint, are the following:

Axung. washed in rose-water, ... $\frac{3}{2}$ iii.
Sod. Bi-Carb. or Calc. Sulph., ... grs. viii m.

Or, Cerate Simpl., ... $\frac{3}{2}$ iii.
Calomel, ... 3 i.
Camph., ... grs. $\frac{3}{2}$iii m.

The crusts having been detached by the application of fresh butter, or a linseed poultice, the red surface is to be carefully covered with one of the above ointments, or, what is preferable, an ointment composed of fresh butter and powdered sulphur. Should these means fail, the whole of the affected part may be touched with the nitrate of silver three or four times, in the course of the day. With the topical applications, general baths, mucilagenous, sulphurous, or alkaline, should be employed. Internal treatment should not be neglected.

In the treatment of fissures of the nipple, he denounces the lotions of bi-chloride of mercury used by some surgeons, as the child may suffer seriously if but the smallest particle of this substance remain on the surface or in the fissure. The tincture of catechu he has not found of great service, but slight cauterizations with the nitrate of silver have proved quite efficacious. Should the disease affect a large extent of surface, a solution of this substance may be employed. Mr. Birkett also considers the nitrate, when endurable, a valuable remedy, but he remarks that its use is attended with great pain, although, after a second and third time, it is not so severe as on the first trial. Collodion is regarded by both our authors as an useful application; the kind of artificial epidermis which it forms affording protection to the skin, and permitting the fissures to heal undisturbed by the sucking of the child. As a general rule, M. Velpeau thinks it is better for the mother to continue suckling her child, as the engorgement of the breast, consequent on the discontinuance of this act, is calculated to exasperate the disease. Even when one breast only is affected, lactation in this should not be suppressed. But if the woman suffer too severely, and the child become emaciated, another nurse must be procured.

Deep-seated Mammary Abscess.—He refers to the anatomical arrangement of the parts, by which a kind of synovial cavity is formed between the mammary gland and the pectoralis major, and other coverings of the chest. This sac was first noticed by M. Nelaton, and is found principally in women whose breasts are voluminous, movable, and heavy, who have nursed many children, and may become the seat of various kinds of effusion and phlegmonous affections. In
consequence of their remote situation from the skin, local applications in the shape of ointments, cataplasms, &c., are of but little avail; general treatment is therefore required, and he has seen the happiest effects from the use of calomel, and tartar emetic in large doses. Pur-gatives also are indicated. Should the inflammation not yield to the above measures and to blood-letting in the course of four or five days, suppuration is sure to occur, and exit must be given to the matter by free incisions. Mr. Birkett directs that pressure should not be used upon the part to expedite the flow of pus, but the opening ought to be sufficiently extensive to admit the ready efflux of the fluid, and perhaps somewhat solid contents. Lint, moistened with warm water, may be applied, and upon the second or third day, the breast must be strapped up with plaster, and well bandaged. Should the patient become debilitated by the long-continued discharge, of course a gener-ous diet must be prescribed.

M. Nelaton has published some interesting observations in the Rév. Med. Chir., No. xiii., 1853, on the etiology of mammary abscesses, and he remarks, in relation to the diagnosis, that it may be laid down as an absolute rule, that whenever a puncture, after having at first furnished pure healthy pus, yields a sanguineolent pus on compression two days afterwards, the fluid taking on a bloody appearance without obvious cause, a second abscess has become developed in the vicinity of the first. By a little attention, this second tumor may be detected. The wall interposed between the two collections becomes the seat of great turgescence, and of a considerable efflux of blood, and a sanguineous transudation takes place into the first cavity. (Ranking's Abstract, No. xviii., p. 190).

Nearly 200 pages are devoted by M. Velpeau to the subject of the various phlegmonous affections of the breast, and the chapter is concluded by a statistical résumé of some 200 cases treated under his supervision since 1834. Of these 3 died; 139 were cured; 28 imperfectly cured; 5 left the hospital uncured; 21 were complicated with erysipelas, axillary abscess, abscesses in the neck and on the back; variola, pleurisy, phthisis, eczema, erythema, and gastric irritation. The right breast was the seat of the disease in 75 cases; the left, 75; both, 23 cases. Between 15 and 20 years of age, there were 20; between 20 and 30, 116 cases; 30 and 40, 23 cases; 40 and 50, 5 cases; 50 and 60, 3 cases.

Thirty-seven were subcutaneous abscesses; deep-seated, 38; paren-chymatous, 95; not specified, 6. Of the causes, 20, from contusion;
3, eczema; 7, pregnancy; 110, puerperal state; 2, chaps or fissures; 1, needle; 6, cold.

The very small number produced by chaps or fissures would seem to disprove the opinion of M. Nelaton, as expressed in the paper to which we have already referred. He believes that mammary abscesses are very often due to the existence of chaps or sores on the nipple, the irritation being propagated along the lymphatics of the organ, just as a wound of the foot or hand will give rise to an inflammation in the vicinity in the glands of the groin or axilla. Once excited in the breast, the inflammation may become speedily propagated to the deeper parts of the organ. He refers to M. Sappey’s preparations of the lymphatics, which exhibit the great abundance of these vessels, nearly all of which take their origin at the nipple or areola, and ramify from this common centre in all directions along the fibrous partitions of the gland. He also asserts that when the chap is situated at the upper part of the nipple, the inflammation will usually be found at the upper part of the breast, &c., &c.

But we must pass to Chapter II., which treats of affections of a benign or indolent nature. The following is M. Velpeau’s classification:

1. Hypertrophy
   a. of the gland,
   b. of the cellular tissue,
   c. of the adipose tissue.

2. Engorgements
   a. of the cellular tissue,
   b. of the glandular tissue.
   a. sebaceous,
   b. gelatinous,
   c. sanguineous,
   d. milky.

3. Cysts
   a. lipomatous,
   b. fibrinous,
   c. butyrous,
   d. tuberculous,
   e. osseous,
   f. granular or nodular,
   g. adenoid, or the so-called partial hypertrophy.

4. Tumors
   a. of the gland,
   b. of the cellular tissue,
   c. of the adipose tissue.

5. Imaginary tumors.

Of these various affections, we can notice but the cystic tumors, or the hydatid tumors of Sir Astley Cooper and Dr. John C. Warren, the carcinoma mammae hydatides of Sir Charles Bell, the sero-cystic of Sir Benjamin Brodie, and the unilocular or multilocular cysts of French writers. Mr. Birkett has devoted particular attention to this subject, and, previous to the appearance of his present volume, had published some interesting observations in Guy’s Hospital Reports, October, 1849. The conclusions to which he has arrived are directly
at variance with those entertained by Sir Benjamin Brodie. The following are his views, based upon a careful examination of these growths:

1. "That the lactiferous ducts are liable to dilatations resembling cysts; that this morbid condition stimulates more important diseases; hence, this suspicion being excited, the excision of the tumor has been resorted to.

2. "There is no evidence to prove, from minute examination, that the growth within the ducts enjoys any characters in common with either the cysto-sarcomatous or carcinomatous new formations; and,

3. "That this morbid condition belongs to the class of the non-contaminating diseases."

The morbid action which produces these tissues, he believes to be as follows: "In the first place, an excess of secretion takes place in the duct, which, from some cause or other—malformation of the nipple, or obstruction of the duct by pressure—does not flow away spontaneously, although it may perhaps be made to ooze out. The fluid becoming absorbed, the more solid material, the epithelium, remains behind, leaving a coherent mass of more or less solidity. This body may cause irritation, an excited action is induced, blastema is effused, and nucleated cells, which attain a degree of fibrillation, are formed; hence the appearance of organized growths found in the ducts."

A section of the distended ducts, he states, presented the appearance of a section of congeries of varicose veins with their smaller branches, and contained coagula. Indeed, it is a kind of varicose condition of the ducts, with partially organized contents, and the remains of that secretion which they are intended to convey. Mr. Birkett's remarks are illustrated by diagrams, which greatly facilitate the comprehension of his views.

M. Velpeau asserts that, although Sir Astley Cooper and Dr. Warren may really have seen hydatid tumors of the breast, it is probable that more than once they have confounded the simple serous cyst with this disease. He then asks, How is it that two surgeons of so extensive a practice, and such a long experience, have not met the proper cystic tumors of the breast, when they have met with the hydatid disease so frequently, whilst he himself has never observed the genuine hydatid affection, but a large number of different kinds of cysts? He would not deny the existence of the hydatid disease, but would simply maintain that it is less frequent than one would suppose from the writings of Sir Astley Cooper and others.

Sometimes these cysts contain new growths, in which both a fluid
effusion and a solid formation simultaneously exist, constituting what is known by the name of sero-cystic sarcoma; and not unfrequently this kind of growth is supplied by a large vessel, or even two or three large arteries, which may bleed very freely during their extirpation with the knife. An incision followed by pressure may occasionally prove of service, but both of our authors agree that amputation of the breast, or of the morbid growth alone, is the only means by which the patient can be relieved from the fears excited by the existence of the tumor, although the constitution is never contaminated by these growths.

Some twelve years since, we saw, at the Clinique of the College of Physicians and Surgeons of this city, a case of galactoele of enormous size. Prof. Parker punctured it with a trocar, and drew off three quarts of milk. It was punctured twice afterwards. This case is reported in the *New-York Medical Gazette*, January, 1842. Scarpa, in a similar case, drew off five quarts of pure milk! The report of it is copied by Mr. Birkett from the *Opusculi di Chirurg.*, t. ii., of the distinguished surgeon of Pavia.

We come next to the second part of M. Velpeau's volume, which treats of the malignant or cancerous affections of the breast. Cancer of the breast being the most common of all the forms of carcinoema, gives to this part of the subject an unusual degree of interest. We have here three principal forms of cancer: the scirrhous, encephaloid, and the fibro-plastic; melanosis, keloides, and the epithelial form, are very rare.

Scirrhus presents itself under different aspects, such as the ligneous, lardaceous, infiltrated, &c., all of which may be united in the same breast, or be encountered separately. Under the term ligneous cancer he would designate that kind of tumor in which the predominant characters are density, the firmness of tumor, without fixed limits, and diffused in the surrounding tissues. But our space is too limited to follow our author through all his observations upon the different forms presented by this disease, and we must confine our attention to his remarks under the heads of diagnosis and treatment. For more than thirty years, he has labored to add to our means of diagnosis; chemical analysis has proved of no avail; the microscope and clinical observation, however, have not been quite so barren in their results. In the commencement of our analysis of these works, we alluded to the conflicting opinions entertained by M. Velpeau and M. Lebert, in relation to the cancer-cell, and we here find him devoting some 23 pages to the microscopical anatomy of cancer. He quotes from Vogel the following remarks, to
show the present state of the question, according to the admissions of the micrographers themselves:

"The histological characters of cancerous tumors vary considerably, and not unfrequently they differ in various portions of the cancer." (Vogel, p. 266.) He then asks, Do cancer-cells contain elements distinct from those which exist in the organism in its healthy state? This the German histologists, Müller, Vogel, and Virchow would seem to deny. Dr. Bennett, of Edinburgh, admits an analogy between the normal cells of the liver and the microscopical elements of cancer of this organ. After noticing the conflicting statements of different micrographers, he observes that he has seen the so-called cancer-cell in tumors of the non-malignant character, of which there could be no doubt. In 1851, he removed a portion of the os calcis and of the heel, which for a long time had been affected with caries and a fungous degeneration of the tissues. Mr. Broca, who examined these fungous growths with the microscope, found them filled with the cancer-cells. The wound healed; the health of the patient became perfectly re-established, and M. Velpeau has no doubt of the innocent nature of the disease. He gives also in detail the particulars of a case in which he removed an adenoid tumor from the breast, in which MM. Follin and Lebert detected a certain number of cancerous or encephaloid cells, and yet this was a benign affection.

The following are M. Velpeau's conclusions upon this subject: Every form of cancer of the breast may be included under the terms encephaloid, scirrhous, chondroid, melanotic, and epithelial cancer. He is unwilling to admit that a homologous cell—the epithelial cell which enters into the composition of the normal tissues, which forms the epidermis, warts, corns on the feet—is the fundamental, the specific element of growths so incontestably malignant as are the cancerous tumors.

Mr. Birkett, on the other hand, boldly asserts that "the minute anatomy of carcinoma is so distinct and peculiar, so totally different in almost every respect, from that of any other tissue of the body, and the elements of which this tissue is composed are so characteristic, that the identification of a growth of this nature no longer remains a matter of uncertainty or doubt," p. 212. At page 242, he observes: "But since I have so positively asserted the specific character of carcinoma, as well as the possibility of its identification, it becomes necessary, in justification of this position, to add what I have myself observed." These appearances, he admits, are so variable, depending upon so many accidental circumstances, that we rarely meet with two pre-
ciselike alike. The essential elements, however, of carcinoma, are nucleated globules and a fibre. After perusing the thorough analysis of this subject by M. Velpeau, we must confess, that, henceforth, we must attach less value to these "nucleated globules and a fibre," than does Mr. Birkett. M. Gerdy, in his *Chirurgie Pratique*, tom. ii., 2d part, p. 405, after describing the various appearances presented by the microscope, thus remarks: "Tant de variétés ne donnent guère de l'unité, à mon sens, à l'élément spécial du cancer, et ses analogies avec le globule fibro-plastique l'en distingue souvent assez mal."

In the treatment of cancerous tumors of the breast, we find the following plan laid down by our author, as that in which he has most confidence. From 6 to 12 leeches are applied, not to the breast, but towards the axilla, once in 15, 20, or 30 days. The soap plaster, cicuta plaster, or emplastrum de vigo, is applied so as to cover the affected part, the former being changed twice a week, the latter only every eight days. Instead of these plasters, he frequently prescribes free inunctions with an ointment of the iodide of lead, or with the mercurial ointment, or an ointment of the iodide of potassium, the quantity of the iodide being small. Mucilaginous baths, rendered alkaline by the addition of the salts of potash or soda, or even a certain quantity of soap, are useful adjuncts.

Internally, he prefers the iodide of potassium, or the cod-liver oil, to the preparations of cicuta. All saline, spicy, or acid substances are to be avoided, in the way of food. A purgative to be administered every eight or fifteen days. Compression, though useful in benign tumors, he thinks, may prove injurious in those of a cancerous nature. Mr. Birkett disposes of the medical treatment in a very few words: "So far as the administration of drugs is advantageous in the restoration of the general health, there can be no doubt of their utility; but it must be confessed, that at present, no method is known by which the disease can be eradicated, if there be evidence of the constitution having become affected."

The question of *surgical* interference of late years has been much discussed, and it is still agitating the minds of the profession. According to some, an operation but accelerates the fatal termination. Others boast of a success truly astonishing. The American Medical Association, at one of their late meetings, appointed a committee to report on the results of surgical operations in malignant diseases. A most admirable selection of chairman of this committee was made, viz., Prof. Gross; and in his most able report, he has thoroughly examined the facts which bear on either side of this question. (Transactions of
the American Medical Association, vol. vi., 1853.) After passing in
review the opinions of many of the most eminent of European and
American surgeons, he comes to the general conclusion, that excision,
however early and thoroughly executed, is nearly always, in genuine
cancer, followed by a relapse at a period varying from a few weeks to
a few months after the operation. Those desirous of becoming fully
acquainted with the present state of our knowledge on this subject,
cannot do better than to study the above report, by the distinguished
surgeon of Louisville.

M. Velpeau asserts that both observation and statistics, prove that
the extirpation of tumors of the breast is not always followed by a
relapse, and is not always useless or injurious. Again, a large number
of facts in his own experience incontestably demonstrate the possibility
of a radical cure following the operation in cases "les mieux condi-
tionnés."

Mr. Birkett remarks that we must be guided by the stage of
development, as well as the constitutional condition of the patient, and
by the period of time the growth has been forming. If cases of acute
carcinoma are meddled with, they are sure to be followed by a relapse;
if those of a chronic character, the patient may enjoy almost certain
freedom from the disease for some years.

As to the propriety of repeating the operation in cases of a return
of the disease, M. Velpeau refers to a most remarkable example, in
which M. Roux is said to have succeeded in effecting a cure even when
the tumor had re-appeared for the sixth time. This case is reported
in the Bulletin de l'Académie de Médecine, t. ix., p. 595. The first
operation was performed in 1842, the last in 1852. He thinks there
can be no question that in this instance life was prolonged by the suc-
cessive operations which were performed. Mr. Birkett, on the other
hand, believes that little hope remains of the prolongation of the
patient's life by a second operation, but the perusal of other cases
detailed by M. Velpeau is calculated to produce a very different
impression.

The case of M. Roux, above referred to, is with the exception of the
seat of the disease, analogous to one related by Prof. Gross in his
report, in which the writer with other surgeons, prolonged a man's
life by repeating the operations for the excision of the lip and lower
jaw, involved in carcinoma. Life in this case was prolonged from
1844 to 1851, and in the opinion of Prof. Gross, it is one of the most
remarkable on record.

Mr. Birkett has seen but few cases of cancer of the breast in the
male; indeed, he mentions but one, which was removed by Mr. Callaway. M. Velpeau has seen nine or ten cases; others have been reported by MM. Sedillot, Petrequin, Dr. Walshe, and Dr. Warren. The writer has seen two instances of the kind, one at the Pennsylvania Hospital, the other at St. Bartholomew's, London. In 1853, we assisted Dr. Van Ingen, of Schenectady, in the removal of a fibro-plastic tumor in the mammary gland of the male.

We have already extended our analysis of these works to such a length, that we must now bring our remarks to a close. The reader can form but a very imperfect idea of their merits from our selections from their pages. Either volume is far more complete than the celebrated work of Sir Astley Cooper, which, as is well known, did not embrace the subject of the malignant affections of the breast, nor could it have furnished us with the light so recently shed by the microscope on the minute anatomy of mammary tumors. In those now under consideration, the student and the practitioner may find all of importance which the present state of our science can boast. The volume of Mr. Birkett needs not our humble commendation, after having received that of the Council of the Royal College of Surgeons of England, whilst that of the celebrated surgeon of La Charité requires but to be read to be justly appreciated. Its appearance in an English dress could not fail to be most cordially welcomed by those unable to read it in its native language.

G. C. B.


The diseases peculiar to females will ever merit and receive a large share of attention from the general practitioner of the healing art; but, were not the pathology of these Protean maladies more enlight-
ened and progressive than it was previously to the investigations and writings of Sir Charles Mansfield Clark, M. Récamier, and Mme. Boivin, charlatans and nurses might still have continued in full control of this their favorite and most lucrative department of practice, to the discredit of science, and the injury of the fairest and better portion of humanity. But thanks to the labors of such men as Récamier, Gibert, Kennedy, Montgomery, and Bennet, our knowledge of uterine pathology has received the form and certainty of a true science; the history and symptoms of the diseases peculiar to females may now be understood and properly analyzed, and appropriate remedial agencies applied. The pallor and debility of despairing female invalids may now be exchanged for health and vigor; vexatious and distressing bodily and mental suffering, and premature decline, are by the scientific physician readily arrested, and the natural tone and vivacity of health restored.

As the respected authors, whose names stand at the head of this article, lay claim to the honor of being foremost among uterine pathologists, in their respective countries, we are happy to see new editions of their labors laid before the profession at the same time.

The treatise by Dr. Meigs is presented to the profession as the result of that popular professor's extensive clinical observation and experience in the treatment of maladies affecting the cervix uteri. Prepared, as it was, as an erudite report to our great National Association, by special appointment, the profession had a right to expect an elaborate and complete resumé upon the subject. And these anticipations were greatly augmented when the worthy Treasurer of the Association, at its last meeting, based his successful appeal for largely increased means, for the publication of the Transactions, upon the great extent and excellence of his learned confrère's forthcoming report, the materials for which, as he stated, had been accumulating for many years, and the illustrations for which would be new and immensely important, as well as expensive.

Of the manner in which these high anticipations have been met, and of the actual merits of the work, every intelligent physician will be apt to judge quite as correctly as the gentlemen who labored to give special prominence to the report of the committee, represented by the amiable teacher of obstetrics in the Jefferson Medical College. But we do not propose to discuss any questions which may possibly stand connected with the historical origin of the enterprise of bringing before the world the immense treasures of clinical experience and profound erudition, which appear in this report; for upon this subject
we “know nothing.” Dr. Meigs has executed his work in “character,” indulging in his peculiar desultory style of writing and of reasoning, and adducing new and striking illustrations of the fertility of his own genius and his peculiar dialect of our mother-tongue.

Dr. Meigs commences his report by stating the necessity which exists for the publication of such a treatise as that which he has written, modestly asserting that “it was to be expected that the labors of ingenious men, devoted to this species of research, should, by this time, have placed all questions in this kind of practice so fairly before us, and with solutions of the various problems so clearly exposed, that there could be no farther real necessity for making public one’s, ‘observations or reflections.”

He then proceeds to discuss in extenso the questions of propriety and morality which have been raised by the fastidious concerning the employment of the speculum and toucher, and he concludes that “we do not find ourselves called upon to discountenance and reprobate the prudent and necessary employment of modern methods and instruments invented to improve the means both of diagnosis and surgical treatment of diseases of the cervix uteri; conceiving that this is a matter to be left to the conscience and judgment of our brethren whenever the occasion may arise.”

Our author opens his remarks on uterine pathology in the following language:

The reactions of the reproductive organs upon other members of the animal economy are known to be both diverse and comprehensive; nor is it difficult to perceive that this should be the case, seeing the great importance of their functions. One could hardly suppose, indeed, that a system of anatomical tissues, representing the complement of the vital powers, could be an indifferent in their constitutional reaction. The powerful sway they exert upon not only the physical, but the psychical condition and nature of the woman, might well persuade us that changes in their vital status, even such as are inappreciable, except by the reason, should greatly affect both the body and mind of the woman. * * * * A dark and mysterious veil hides from us many of the laws that grow out of the intimate relations and mutual dependency existing between the conservative or generic forces of animals, and their reproductive or generic powers. Many stumbling-blocks in the path of the practitioner would be taken away, if these laws and relations could be fully understood, and we should then be able to take more precise indications, and adopt more positive methods of treatment.

Concerning the nature and origin of malignant diseases of the uterus, our author propounds the following statements, which, if strictly true, would certainly simplify our views of the histology of such affections:
Unequable development of the several elements converts the womb into a tumor, degenerates it, and renders it incurable by medicines; whereas, the state of pathological hypertrophy is one to be recovered from upon removal of the cause.

If in the womb, the areolar, or the vascular, or the nervous element should be augmented several hundred per cent. beyond its normal ratio, the rest of the tissues preserving their quantitative relations to each other, the viscus would be changed into a hæmatoa, a cephaloma, &c., &c., according to the nature of the case or chief constituent element of such tumor.

Unhappily the womb is, by nature, peculiarly subject to such changes.

Concerning the nature and the relations of leucorrhœal discharges, Dr. Meigs justly remarks, that "the most mischievous of leucorrhœal secretions is that which comes from the canal of the cervix of the womb." But we think that the following statements, concerning the pathological relations and indications of the different varieties of these discharges, though strictly correct so far as relates to the secretion when fresh and in situ, are calculated to mislead the physician who would base a diagnosis upon the definitions given by our author. He remarks, that "the muciparous glands of the vagina furnish either a thin watery mucus, or else one of a creamy consistence, which, in other instances, appears to be butyaceous, or concrete. The excretion from the glands of the canal of the neck, however, is always gluey or albuminous, and resembles fresh white of eggs."

Now, it so happens, that in a majority of the cases of inflammatory affections of the cervix uteri accompanied by leucorrhœa, the patient seldom, if ever, notices any other than the opaque, creamy, or concrete variety of discharge. So true is this, that Sir Charles Mansfield Clark, one of the most careful observers who has ever written upon uterine pathology, considered the white, opaque, and amyloid mucous discharge a very important and characteristic indication of inflammatory disease of the cervix, believing that this kind of discharge originated in the glands of that organ. He states that this opaque amyloid discharge "belongs to one condition of the uterus only, and that it characterizes that condition with marked constancy." From very extensive observations, we are satisfied that Mr. Clark's observations on this subject are mainly correct so far as the pathological relations of the discharge are concerned, notwithstanding some obvious errors. The experiments of M. Donné, Mr. Whitehead, and Dr. Tyler Smith have demonstrated the fact that the ropy and transparent mucus which is the characteristic secretion of the glands of the canal of the cervix, is readily and quite certainly transformed into the opaque,
Meigs and Bennet on Diseases of the Uterus. [May,

cream, or curdy discharge, which is the most frequent form of leucorrhoea, and which Dr. Clark has asserted to be characteristic of inflammation of the neck of the uterus.

The practical importance of these facts, in the matter of diagnosis, &c., leads us to refer to them in this connection.

Dr. Meigs justly observes, that "the most essential element of a successful practice exists in a positive diagnosis. It will not do for us to believe this or that—we must guard the interests of the patient by knowing it is this, or that, or the other form and stage of a disease." But we conceive that the following comment upon the difficulties which lie in the way of attaining such precision in diagnosis savors of a prudish sentimentality, rather than of a scientific and conscientious devotion to the physician's highest duty:

It must be a very trying occasion, that of a sensitive and delicate woman, who is brought into such a strait as to require a physical examination of those parts which naturally shun exposure. The medical man who has even a common share of sensibility will always, therefore, defer this last resort as long as possible, while he makes use of empirical treatment; if haply he might thus be enabled to effect a cure without the waiver, on her part, of those honorable scruples which deserve from him the most perfect respect.

While we would forbid any indiscriminate resort to physical examinations of the uterine organs, and would frown upon any indelicacy, we would not consent to practice this department of the healing art in conformity to the spirit of these suggestions of our worthy author. But our observations have convinced us that the objections and difficulties, here referred to, are mainly imaginary rather than real; indeed, we are persuaded that the physician who is professionally and morally qualified for such duties will seldom meet with much embarrassment, so far as concerns the proper employment of the speculum among intelligent and virtuous females. An intelligent physician will seldom resort to such modes of investigation except in a case of necessity; and the fact that such necessity exists is sufficient apology for the means resorted to.

Dr. Meigs considers that the most reliable form of speculum "is a slightly conical tube of silver, six inches and a half in length. The uterine extremity should be one inch in diameter; * * the outer, or larger extremity, should be one inch and a half in diameter."

Our author's description of the appearance and condition of the inflamed and diseased cervix uteri, though very brief, is quite unique: "One or both of the lips of the womb may be found tumid, softened, granulated, or botryoidal in appearance, and of a uniform red; or else
drusy as to the surface, and presenting some resemblance to the surface and color of a ripe raspberry." A very singular appearance, certainly, is that of an inflamed cervix uteri, which could be termed botryoidal, or drusy. We cannot imagine a condition of that organ, which, even by a forced analogy, could be said to resemble a bunch of grapes, or the coruscations of crystals.

Young physicians must have better descriptions of the morbid appearances and conditions of the cervix uteri, before they will rise above the necessity of sending off their unfortunate lady patients to Philadelphia for counsel and treatment.

The illustrations which Dr. Meigs has given of diseased conditions of the cervix uteri are over-colored, and fail to convey a correct impression of the actual characteristics of the various forms and stages which they are intended to represent. This failure of the plates, however, is not so much the fault of the author, as the mode which was selected for their execution; and printing in colors signally fails, in point of effect, in delineating living morbid structures, for, to use the terms of artists, warmth and softness cannot be produced by the process in sufficient amount to answer the purpose. However, the plates which Dr. Meigs has furnished us are not utterly worthless as they will serve to call the attention of physicians to the obvious importance of surgical treatment, for the relief of the morbid conditions which they very fairly represent.

The tedious detail cases with which we are favored in this report might provoke some impertinent questions, but we are bound to infer that they are all intended as important to the design of the report and the treatise; but the terms and the statements, by which these cases are described, will fail to satisfy a scientific uterine pathologist.

So far as topical medication is concerned, our author relies mainly upon the application of the nitrate of silver; but this is by what he learnedly denominates "antiphlogistic contacts." As he accomplishes this by the application of the solid caustic stick, there can be no doubt of the effects which are intended and produced. The suggestions which he makes, concerning the rules to be observed in making these applications, are important, though singularly stated.

Concerning retroversion of the uterus, our author makes the following remarkable statement:

Among these cases of womb complaints, probably none are so common as those which depend upon retroversion of the womb. So frequently does this affection occur in the course of one's medical practice, that one almost acquires a disposition, in every ease, before examination, to suspect it has some dependency upon retroversion uteri.
The author has long been fully convinced that *retroversion of the womb constitutes seventy-five per cent. of all cases of sexual disorders, that are of a gravity sufficient to require appeal to medical advice.*

Though our author thus broadly declares that *retroversion constitutes* seventy-five per cent. of all cases of uterine disorders, this statement, when justly interpreted, means that, in this large percentage of diseases of the uterus, there is observed to exist a certain amount of displacement of the fundus of the organ backwards. But, when Dr. Meigs comes to teach that the cause of such displacement is to be found mainly in the bad habit to which females are prone, of allowing the bladder to become over-distended, and that the engorgement, hypertrophy, and inflammation, accompanying this malposition, are consequent thereupon, we can but believe that he is in error. But, in New-York, we do not find that retroversion exists in seventy-five per cent., nor indeed in one half that proportion of uterine diseases; and, in all ordinary cases of malposition, the mechanical abnormality is satisfactorily relieved so soon as the uterine engorgement and inflammation are cured, and the patient’s vigor restored. Of course we do not resort to the employment of the pessaries and uterine supporters which Dr. Meigs and his mechanical brethren have very ingeniously devised; and we have yet to learn that such contrivances are of any avail in the cure of uterine diseases. But it is not strange that Dr. Meigs resorts to pessaries, &c., for he asserts that “prolapsus uteri is a disorder or weakness of the vagina and its ligaments.”

Concerning ulceration of the cervix uteri, Dr. Meigs offers the following remark: “An immense experience in a populous metropolis—an experience greatly increased by the resort of numerous invalids from the country, and from the different United States—enables me with confidence to declare, that an ulceration of the womb is among the rarest of disorders.”

Of the diseased conditions of the canal of the cervix uteri our author says but little; and of the elemental and most important facts in the pathological history of any of the diseases of the cervix upon which he reports, he fails to give us any rational or important information. Indeed, the treatise, as a whole, is not only exceedingly meagre and unsatisfactory, but we feel that it does great injustice to its distinguished author, who has earned a reputation worthy of a far better production than this.

Dr. Bennet’s treatise is widely different from that of Prof. Meigs, both in its design and execution. He has attempted to present a
rational and strictly scientific pathological history of the inflammatory diseases of the uterus, and in doing this he has not allowed ambiguous terms or equivocal statements to obscure the truth. Ever since the publication of the first edition of Dr. Bennet's treatise, in 1845, it has been the subject of the most searching criticism, while it has instigated the most careful and extensive pathological investigations of uterine diseases. The present revised and enlarged edition must be acknowledged the best treatise of the kind in the English language, and we know of none in the French or the German that are equally valuable. It certainly is no small compliment to Dr. Bennet, that his treatise is published in the latter countries, and that a fourth edition has been called for and issued in our own country.

It must be admitted that Dr. Bennet's writings have served to mark a new era in the literature, if not in the pathological doctrines, of this department of medicine. The earnest and even angry opposition, by which the early editions of his treatise were assailed, indicates the important and wide difference of opinion and practice existing between Dr. Bennet and his worthy seniors; while the readiness and the remarkable uniformity with which our author's views are adopted or accepted by nearly all those physicians who were most familiar with uterine pathology and the diseases of females, demonstrate, no less certainly, the conformity of Dr. Bennet's teachings to the facts everywhere observed in practice.

We conceive that his work contains some statements and suggestions which will eventually be modified, and that it inculcates some erroneous, or at least too exclusive, pathological doctrines, against which those not already familiar with uterine disorders may need to be guarded; yet, in point of general accuracy and practical value, there certainly is no other treatise that equals this. No physician's library can be complete without it.

The very full analysis of the former edition of the work, given in this Journal, N. S., vol. v., precludes the necessity of an extended or critical notice of the present edition; we will, therefore, only refer to a few of the more important points which are newly stated or prominently re-affirmed in this edition.

In reference to the whole subject of inflammation and ulceration of the neck of the uterus, the opinions and doctrines put forth by Dr. Bennet, in the former editions of his work, are fully re-affirmed in this, and he re-states his definitions and views of what he terms ulceration of the cervix, in such language that no one need doubt his meaning, or cavil at his use of the term. He considers that any degree of solu-
tion of continuity occurring in the epithelial structure, or in any superficial tissue, occurring in connection with, or as the result of, an inflammatory process, constitutes an ulcer. That a solution of continuity in at least the epithelial structure is a very frequent, and, indeed, an almost necessary result of continued inflammatory action, does not admit of dispute. This being the common event in inflammation of the cervix, then, Dr. Bennet and all who admit the correctness of his definitions necessarily find ulcerations in the great majority of cases of inflammation of the cervix uteri. Again, Dr. Bennet and others consider that the presence or production of pus is an absolute proof of the existence of ulceration in the mucous, no less than in any other tissue. And further, he conceives that the opaque film that is formed by the contact of nitrate of silver to the diseased cervix accurately marks the extent as well as the existence of the ulceration.

Now if any one is disposed to call in question the correctness of Dr. Bennet's teachings on this subject, he would do well to consider that the pathological events upon which these questions depend are not yet satisfactorily settled, at least so far as the phraseology by which they are expressed is concerned. It is well known that in inflammation of a mucous membrane, there often occurs a mixture of imperfectly elaborated fibrine with the mucus, which degenerates rapidly into pus corpuscles, and Mr. Paget asserts that, in the more acute inflammations, the characters of the pus-cells seem to be acquired in the very beginning of organization of the exuded liquid. Mr. Paget also states the following important facts, which are relevant to this subject: "The superficial suppuration from inflamed mucous membranes is closely related to that from an ulcerated surface. I think, indeed, that an inflamed mucous membrane may yield purulent matter, even though it remain covered with an epithelium. I believe this happens in gonorrhoea and in purulent ophthalmia; the vascular tissues, in these affections, appear still to have an epithelium on them, though perhaps it is too thin and immature, and is reduced to a condition analogous to that of the thin and moist glistening epidermis on the inflamed 'weeping leg.' But observations are wanting on this point. The transition to the suppuration from an ulcerated surface takes place when the epithelium is wholly removed from a mucous membrane. This constitutes its abrasion or excoriation; in the next stage the surface of the membrane itself is cast off, and this is its ulceration or erosion." (Paget's Surgical Pathology.) Again, this clear-minded and candid pathologist remarks concerning ulcerative inflammation: "Of all that Hunter wrote, nothing, I think, is so intricate,
so difficult to understand, as his chapter on ulcerative inflammation; and much of the obscurity in which he left the subject remains. Some of this depends on the same terms having been used in different senses, and may be avoided if it is agreed to speak of the removal of those particles of inflamed parts which are not an open or exposed surface, as the 'interstitial absorption' of inflamed parts. Then the term 'ulceration' may be employed to express the removal of the superficial or exposed particles of inflamed parts; or rather, when the epithelium or epidermis of an inflamed part is alone removed, it may be called 'abrasion' or 'excoriation;' and when any of the vascular or proper tissue is removed from the surface, it may be called 'ulceration.'"—(Op. citat.)

Judged in the light of these technical and pathological distinctions, it is plain that Dr. Bennet employs the term "ulceration" in a sense altogether too wide and indiscriminate; but we think that 'no one need be misled who reads his treatise. He is certainly not as wide from the truth as is Professor Meigs, who asserts that "ulceration of the womb is among the rarest of disorders." The manner and form in which ulceration of the cervix uteri occur is most graphically illustrated in the elaborate paper by Dr. Tyler Smith and Mr. Hassell, on the Pathology of Leucorrhœa. (Med. Chir. Transact., vol. xxxv.)

We have thus called attention to the "vexed question" which has so long been acrimoniously but idly discussed, believing that the pathological facts, and the unsettled points therewith connected, to which we have referred, serve to place the whole subject in a true light, and to explain the discrepancies which exist in the statements of different uterine pathologists.

Dr. Bennet's chapters on the treatment of inflammatory affections of the uterus constitute the most meritorious and practically important part of his treatise; yet we have become satisfied that he presents the importance of topical or surgical treatment in too strong a light, and that he too freely commends the use of the stronger caustics. However, our own experience has taught us that something more than the "antiphlogistic contacts" of nitrate of silver is not unfrequently necessary in the treatment of ulceration and inflammatory conditions of the cervix uteri.

In his chapter on Ovaritis, &c., Dr. Bennet attempts, but we think unsuccessfully, to overturn the conclusions of Mr. Tilt upon that subject; yet the facts and reasonings adduced by our author are highly important, and practically suggestive.

On the subject of displacements of the uterus, Dr. Bennet has, in a few pages, given suggestions which are of greater practical value to
the profession than all else that has ever been written, if we except, perhaps, the excellent dissertation of Dr. Pecbles of Virginia.

The chapter on Syphilitic Ulcerations of the Neck of the Uterus is very valuable, but we must demur at some of the author's conclusions concerning the nature of the non-cancerous-looking ulcerations which complicate the various forms of secondary syphilis. He very summarily sets aside the conclusions of M. Gibert, in reference to the specific character of a large proportion of the ulcerations which occur about the cervix uteri in persons suffering from secondary forms of syphilis. If our observations and study upon this subject have not misled us, we are bound to conclude that the conclusions of M. Gibert are more nearly correct than those of Dr. Bennet.

The closing chapter of Dr. Bennet's treatise is devoted to the subject of diagnosis of cancer of the uterus, and for it the profession, as well as the unfortunate sufferers from inflammatory affections of the uterus, may be grateful; for it is perfectly manifest that the popular notions on this subject are not only entirely erroneous, but adapted to embarrass the practitioner, and also cause great damage to the suffering patient.

Notwithstanding that Sir Charles Clark, Dr. Montgomery, and Dr. Ashwell, have taught that the forms of induration, which they term cancer of the uterus, are generally curable in their incipient stage, —which is the only stage at which any of them are seen,—except in the cases of really malignant disease, which, so far as the histological evidences indicate, are certainly observed very rarely, we think that all who hold such doctrines concerning cancer of the uterus will find their minds very frequently and unnecessarily embarrassed in reference to these cases in practice; for it is conceded that it is not only hazardous, but utterly unjustifiable, to venture upon any surgical treatment of carcinoma uteri, short of amputation of the diseased portion. Hence, many a poor sufferer has been doomed by her medical advisers to endure a most vexatious malady, but, at the same time, one of the most curable of structural disorders of the womb.

Our prescribed limits forbid that we should enter more fully upon the discussion of this important subject, and we will here close this notice of the interesting treatises before us, with the expression of the hope that whoever reads the report and treatise by Dr. Meigs, will also attentively study the incomparably excellent work of Dr. Bennet, and the forthcoming treatise by M. Jobert de Lamballe, which is shortly to be issued from the press of the Messrs. Wood of this city.

E. H.
BIBLIOGRAPHICAL NOTICES.


This is a reprint of Mr. Fuller’s Treatise on Rheumatism, an elaborate review of which appeared in this Journal for November, 1853, soon after its publication in London. We would refer the reader, who may wish to estimate correctly the merits of the work, to that analysis. The publishers have done full justice to the mechanical execution of the work.

Art. XIV.—Elements of Human Anatomy; General, Descriptive, and Practical. By T. G. Richardson, M. D., Demonstrator of Anatomy in the Medical Department of the University of Louisville, &c., &c. Philadelphia: Lippincott, Grambo & Co. 1854. 8vo., pp. 734.

This work is put forth as possessing claims for improvement, upon previous treatises on anatomy. 1st. In the union of general, descriptive, and practical anatomy in the volume. 2dly. In the arrangement of the section devoted to practical anatomy, so as to secure the greatest possible economy of material; and lastly, in the substitution of English for Latin terms, wherever this appeared to be practical and judicious.

There is good reason to believe, that the experience of teachers and students will sanction the production of a work on anatomy upon these grounds, and from the limited examination we have given the volume, we believe it well adapted to the wants of student and teacher.


This is the second American from the second London edition of Dr. West’s truly practical work on the diseases of children. The additions to the text of the English edition amount to some fifty pages, thus supplying not a few of the deficiencies of the first edition.

Art. XVI.—History of the Epidemic Yellow Fever at New-Orleans, La., in 1853. By E. D. Fenner, M.D., President of the Louisiana State Medical Society; one of the Visiting Physicians of the New-Orleans Charity Hospital, &c., &c. New-York: Hall, Clayton & Co., Printers. 1854. 8vo., pp. 84.
Tableau of the Yellow Fever of 1853, with Topographical Chronological, and Historical Sketches of the Epidemics of New-Orleans since their Origin in 1796, illustrative of the Quarantine Question. By Bennet Dowlen, M.D., Corresponding Member of the Academy of Natural Science of Philadelphia, &c., &c.

These two productions, widely different in their general characters, are worthy of the pens of their authors. They contain an amount of general statistical and historical information nowhere else to be found, and must in future time be sought after as essential documents in a correct medical history of our country. We regret that want of space prevents us from noticing in detail the interesting contents of these publications.

Art. XVII.—A Report to the Indiana State Medical Society on Asiatic Cholera, as it prevailed within the State of Indiana during the Years 1849, 1850, 1851 and 1852. With Observations on the Laws which govern its Progress. By George Sutton, M.D. Indianapolis: Elder & Harkness, Printers. 1854. 8vo., pp. 67.

This is a valuable report, and presents the best summary of the progress of Cholera in the State of Indiana that we have seen. The materials from which it was prepared were derived mainly from facts communicated to Dr. S. by the principal physicians of the State.

Art. XVIII.—A Report on the Health and Mortality of the City of Memphis, for the Year 1843. By Charles T. Quintard, A.M., M.D., Professor of Physiology and Pathological Anatomy, in the Memphis Medical College. (Published by order of the City Council.) Memphis, 1854. 8vo. pp. 32.

The perusal of this report has afforded us much pleasure. In a future number of this Journal, we hope to lay some of the facts which it contains, before our readers.


We are pleased to see that a state medical organization has been effected in Texas. It will tend to promote unity of feeling and concert of action, which must conduce to the general welfare and improvement of the profession. The officers for the present year, are Dr. Geo. Cupples, of San Antonio, Pres.; Drs. S. K. Jennings, Jr., and Jno. T. Alexander, Vice-Pres.; Dr. R. N. Lane, of Austin, Rec. Sec.; Dr. A. J. Lott, Corres. Sec.
PART THIRD.

FOREIGN MEDICAL RETROSPECT.

PRACTICAL MEDICINE.

Fermentation in the Contents of the Stomach, with Development of Sarcinae. By George Budd, M.D.—It appears that the peculiarity of the disorder we are considering consists in this, that the secretions of the stomach, which seem to be usually more abundant than natural, undergo or excite in the food in the stomach, and after they have been thrown up from it, a fermentation which is attended with the evolution of carbonic acid, and with the production of torulae and sarcinae, and which leads to the formation of acetic acid. The production of the disorder seems to require that there shall be some condition which prevents the stomach from completely or readily emptying itself. The disorder may occur in young persons, and exist for a short time, as in one of the cases related by Mr. Busk, and in a case that has been recorded by Dr. Bence Jones, in which it was noticed a short time before death in a boy of 14, who died of peritonitis and granular disease of the kidney; but it has been most frequently noticed in men who have reached middle age,—persons more liable than any others to simple stricture and cancer of the pylorus, and to other diseases which prevent the stomach from completely emptying itself,—and in such persons the malady is usually of long duration, and may, indeed, continue to the end of life. The appetite is generally good, but the indulgence of it is followed by flatulent discension of the stomach attended by a sense of burning or other uneasiness, which, when an ulcer of the stomach exists, sometimes amounts to almost agonizing pain. When the disorder is slight, the heart-burn or uneasiness at the stomach continues for some hours, and then gradually subsides, as—in one way and another, by the absorption and discharge of its contents,—the stomach gets empty. When the disorder is in higher degree, the uneasiness persists until it is relieved by the vomiting or crutchation of a clear, sour, fermenting liquid. The quantity of this liquid ejected at once varies in different cases and at different times; and when an obstruction at the pyloric orifice has long existed, and the stomach has become much enlarged, sometimes amounts to two quarts or more. When much is thrown up from the stomach, the bowels as in ordinary cases of stricture of the pylorus, are usually costive. There is, in most cases, complete absence of fever, but sleep is often much
disturbed by the distension and uneasiness of the stomach, which, as they result from eating, are more distressing in the evening and at night than in earlier parts of the day. The disorder of digestion, the pain, the disturbance of sleep, cause loss of flesh, and after the malady has lasted long in high degree, the patient is usually emaciated, has a dry skin, a slow pulse, and the look of a person with serious organic disease of the stomach. The disorder is readily recognised when it is in such degree as to cause vomiting, by the circumstance, that the matter thrown up from the stomach ferments, and that both the foam which collects on its surface, and the sediment it throws down, contain abundance of sarcinae and torulæ. It would seem, from the evolution of carbonic acid, from the development of torulæ, and from the fact, that alcohol was detected by Professor Graham in the matter vomited in a case of this kind, that common alcoholic fermentation is the first step in the process of transformation; but the alcohol appears to be rapidly transformed, and the process ends in the production of a large quantity of acetic acid. No symptoms of intoxication have been noticed in cases of this kind.

As the production of acetic acid from alcohol requires a large quantity of oxygen, there can be little doubt, that where, as in the analysis published by Mr. Goodsir, a very large quantity of acetic acid has been found in the matter vomited, much of this acetic acid has been formed after the matter has been ejected from the stomach. We know that fermentation goes on actively in the matter ejected, and the conditions for the acetification of alcohol would seem to be much more favorable when the matter is exposed to the air than when it is shut up, excluded from the direct influence of the air, in the body. It must not be supposed, however, that this peculiar fermentation constitutes the whole disease. The disease consists primarily and essentially of some organic change which prevents the stomach from completely or readily emptying itself, and which causes a secretion from the coats of the stomach which when mixed with the food, is prone to undergo or to excite the fermentative process in question. The fermentation may be stopped for a time; the matter thrown up from the stomach may be alkaline, and contain no sarcinae, as happened to Barraston during his stay in the hospital; but the patient, instead of being then well, has the more common kind of disorder which an impediment to the emptying of the stomach causes. The question then arises,—How is it that an impediment to the emptying of the stomach leads to this kind of fermentation in some cases and not in others? Is there any peculiarity in the organic change in the particular cases in which the fermentation occurs? It is curious that, in two of the cases related by Mr. Busk, the disorder resulted from hernia of the stomach through the diaphragm, the coats of the stomach itself being sound. The development of the sarcinae has probably the same relation to the fermentative process, or to some stage of the fermentative process, as the development of torulæ has to simple alcoholic fermentation. It is worthy of note that sarcinae are not peculiar to the stomach. They have been found in other animal secretions in a state of decomposition. In a review of Lehmann's "Physiological Chemistry," in the British and Foreign
Medico-Chirurgical Review for 1851, it is stated, that sarcinae have been once detected in the urine by Heller; and Dr. Beale tells me that he has discovered them once in urine and once in decomposing bile. But, although the development of torulae and sarcinae cannot be considered the primary cause of the stomach disorder, the fermentation that attends it, by leading to the evolution of gas, and the formation of acetic acid, and thus distending and fretting the stomach, terribly aggravates the sufferings which the impediment to the emptying of the stomach, which is the origin of the mischief, would otherwise produce. The heart-burn and uneasiness of the stomach may be lessened, by neutralising the excess of acid by carbonate of soda or some other alkali; but the readiest, perhaps, in most cases, the chief means we have of relieving the disorder, are the agents which tend to prevent the fermentative process. The fermentative process may be checked by creosote, which has a remarkable influence in checking fermentation of various kinds, and which was given with benefit in three of the cases noticed above, and in several others, of which accounts have been published in the Medical Journals. Small doses—a minim or half a minim—in the form of a pill, might prove sufficient if taken, as it should be, at every meal.* If we may judge by the case of Burraston, the fermentation may also be checked, and the disorder, in some cases, be much mitigated by large quantities of common salt. A more effectual remedy still is, perhaps, the bisulphate of soda, which is a powerful antiseptic, and has been, of late years, much used in some anatomical schools, to preserve bodies for dissection. It has also been used to prevent the fermentation of vegetable juices. It owes its virtues to the circumstance, that it is decomposed by almost any vegetable acid, and that its decomposition liberates sulphurous acid, which has great power to prevent alcoholic and acetous fermentation.† The merit of suggesting it as a remedy for the disorder we are considering, belongs I believe, to Dr. Jenner who gave it with much success in the case to which I have before referred. I have myself tried it with much benefit in several cases in which the symptoms were like those that attend the vomiting of sarcinae. From 3ss. to 3j. of it may be given, dissolved in water, two or three times a day; and probably, with proper care as to the times of giving it, smaller doses would prove sufficient. There are, perhaps, many other agents having power to prevent fermentation, that might prove beneficial in the same way. In chronic cases of the disorder, the drain from the coats of the stomach, and the frequent throwing up of part of its contents, causes constipation; and it is requisite to obviate this condition, since any undue accumulation in the bowels aggravates the stomach-disorder. The best aperients are probably aloetic or colocynth pills. When the disorder is severe, and the patient reduced in flesh, opiates, timely administered, are of much ser-

* In the new mode of preparing vinegar from alcohol, by making the alcoholic liquid frequently strain through twigs or shavings, it is found that any charring of the twigs or shavings entirely prevents the acetification of the liquid.
† In some parts of Devonshire, sulphurous acid generated by the burning of sulphur, is used to arrest fermentation, and prevent acetification in cider.
vice in lessening the uneasiness at the stomach, and promoting sleep. It now and then happens, that the disorder co-exists with chronic ulcer of the stomach, and that eating solid food causes pain in the stomach, which is different from the uneasiness that results from distension of the stomach, and pain also in the corresponding part of the back. In such cases, as in ordinary cases of simple ulcer, the diet should be of the least irritating kind. By the various means which I have now enumerated, the disorder may be greatly mitigated, the strength of the patient kept up, and his life prolonged; which is as much as can be promised for any disorder which originates, as this usually does, in irremovable organic changes.—*Med. Times and Gaz.*

**Spinal Irritation.** By Robert Leaw, M.D.—That there is such a disease as spinal irritation I firmly believe. I further believe that there are two forms and modifications of this disease, as different in their nature as they are in the treatment they require. That one is of a constitutional origin, and is often induced by moral causes operating on the spinal marrow, which we may regard as the emotional department of the nervous system, and propagating their disturbing influence to the different organs situated along the spine. That different circumstances and causes influence the secondary organic affections, such as natural or acquired weakness, or morbid susceptibility in any of these organs. Period of life, too, according to which one organ may have its function more exercised than at another period, will serve to give a direction to this reflected morbid influence. The peculiar desultory or intercurrent character of this modification of disease is its characteristic feature, and with this I would connect its comparatively harmless character. It does not dwell sufficiently long in any portion of the spine to allow time for actual disease to establish itself in the contiguous organs. It changes its place too rapidly for this, and this shifting, versatile character has created the difficulty of bringing it within the limits of any general description. This is the reason, too, why its true pathology is so little understood, as it so rarely supplies material for post-mortem examination.

As this is essentially a constitutional disease, to which the local organic affections are mere accidents, so the treatment should be constitutional, with a due regard, however, to the local affections. Its changeableness and inconstancy preclude me from entering into the details of treatment, I can only deal in generalities. While the appropriate treatment is essentially tonic, we may employ local depletory measures with great benefit. I have remarked, in my observations on the fever that prevailed in Ireland in 1847–8, how frequently the symptoms of spinal irritation and most distressing pains in the course of the spinal nerves exhibited themselves, and how constantly these symptoms disappeared from the application of leeches to the spine, at the same time that the constitutional treatment consisted in the almost exclusive use of stimulants. I believe that these pains are, if I may so express it, an exaggeration of the feeling of *malaise*, so constant as an early symptom of fever, which I conceive to be a modification of
the peripheral sensibility, dependent upon the state of the capillaries, which are probably in a too congested condition, and that the relief from leeches is due to the removal of this congestion. And although it may appear inconsistent and paradoxical to deplete and stimulate at the same time, yet these opposite means are really promoting the same end. The overstrained and overloaded vessels are relieved by the leeches, and acquire from the invigorated system additional power to act upon their diminished burden. I have found hot stimulating liniments rubbed along the spine signally useful in relieving this feeling of discomfort, which I attribute to their stimulating influence on the capillaries.

The other modification of the disease is when it is of local origin, and where the spinal affection is secondary to and dependent upon some organic lesion situated in the spine itself, or in some organ from whence it is reflected upon the spine, and thus simulates a case of original spinal irritation. I saw a remarkable case of this kind, in which an insidious process of caries of the vertebrae eluded the observation of one of the most careful surgeons I ever knew, and was not detected until palpable deformity had occurred. In this case the patient at one time labored under the most distressing sickness of stomach I ever witnessed, and nothing seemed to exercise the slightest control over it. When it ceased, the patient suffered from violent palpitation of the heart and occasional hemoptysis. These, however, proved themselves more amenable to the influence of medicine. The patient ultimately attained to perfect health; the organs also resumed their normal regular action when nature had completed her cure of the caries.—Dublin Quarterly Journal.

Sciatica.—Mr. Hancock read a paper on the causes and treatment of Sciatica before the Medical Society of London, Feb. 25, (Med. Times and Gaz.,) of which the following is an abstract: He alluded to the various causes assigned as producing sciatica—viz., disorder of the stomach and bowels, inflammation and disease of the sciatic nerves, syphilis, gout, obstruction and distension of the caput coli, tumors, or accumulated feces in the course of the nerve, effusion of fluid into the sheath of the nerve, irritation and disordered state of the kidneys, and rheumatism, either acute or subacute; but that from the cases which had fallen under his observation, the prevailing opinion appeared to be that sciatica depends mostly upon rheumatism—an opinion which he considered erroneous, as having had ample opportunities of arriving at a conclusion, he felt convinced that the cause most productive of the complaint was irritation within the pelvis, either from loaded colon or cecum, or from tumors formed within that cavity, or, as had been suggested to him by his friend and colleague, Mr. Goldsboro, by the hemorrhoidal vein, which, forming a complicated plexus over the sacral plexus of nerves, would, when congested and engorged, cause undue pressure and irritation of the nerve; that although he would not presume to assert, in opposition to the high authorities who differed from him, that the disease never depended upon rheumatism, still he main-

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tained that it so seldom did so, as to constitute the exception to
the general rule, and not the rule itself. Mr. Hancock then
enumerated some of the modes of treatment, recommended such as
bleeding, cupping, calomel and opium, colchicum, quinine, carbonate of
iron, Indian hemp, acupuncture, actual cautery, blisters, moxas, punctu-
turing the limb, and introducing morphia and creasote into punctures.
He did not consider the disease difficult of cure; on the contrary, he
had found it readily and speedily yield to the remedies he had adopted,
which consisted in thoroughly purging the patient with small doses of
croton-oil, combined with blue pill, henbane, and compound extract of
colocynth, and removing the sensation of bruising in the course of the
nerve by the sulphate of quinine, in doses of three grains thrice daily.
He had commonly given croton-oil, because he had found it useful and
convenient, but he did not attach any specific influence to this medicine,
as he had found equally good results from turpentine and castor-oil,
the aloetic purgatives; and he considered that any medicine acting upon
the lower intestines would be of service. He did not consider local
applications at all necessary, but that they were frequently injurious,
by adding to the patient's sufferings. He narrated five cases which
had fallen under his care, having been previously treated for rheuma-
tism by the remedies appropriate for the affection, but without success.
In one the sciatica had existed for nearly two years; in another, for
above twelve months; and in the remainder, from four to two months.
The most obstinate of these was cured in three weeks, and the re-
mainder in a fortnight, the latter period being that usually required.
He could give many more cases of a similar character, but he thought
those he had described were sufficient to prove the validity of his posi-
tion, that in a vast majority of instances the disease did not depend
upon rheumatism, but upon the causes which he had already alluded to;
and he directed the attention of the Society to an interesting fact,
which he had not found noticed elsewhere—namely, that sciatica almost
always occurred on the right, and very seldom indeed on the left, side
of the body; and when it did, he believed it was caused by impaction
in the sigmoid flexure of the colon. In the majority of cases the affec-
tion commenced with stiffness, weight, and pain in the lumbar region,
resembling lumbago. He was inclined to attach some importance to
this fact, as affording a means of diagnosis between those cases depend-
ing upon loaded intestine and those resulting from tumor in the pelvis;
and that where this symptom is absent, it is desirable to institute a
careful examination, not only above Poupart's ligament, but in the
perineum within the tuber ischii, and also by the introduction of the
finger within the rectum. He had in two instances detected the exist-
ence of tumor in the pelvis by adopting these measures; and he
thought this the more desirable from the importance of avoiding irrita-
tion as much as possible in cases of this description.

Galium Aparine in certain forms of Cutaneous, Scrofulous, and
Cancerous Diseases.—When Dr. Winn first drew the attention of his
professional friends to the properties of this plant, two years since, he
was only aware of its efficacy in treating lepra; since then he has ascer-
tained its benefit in other skin diseases. Dr. Winn then related the circumstances which led to his acquaintance with the galium aparine. A friend of his in Truro, who had suffered for many years from lepra vulgaris, and had taken all the usual remedies in vain, informed him, that he possessed at last a remedy for his troublesome complaint in a common wild plant, of which he did not know the name. Dr. Winn found this plant to be galium aparine, which grows abundantly in England; and, on further inquiries, learned, that three other persons in that district had been cured by the same remedy, one of whom had been discharged from St. George's Hospital as an incurable patient. After a botanical sketch of the plant, Dr. Winn expressed his belief, that the ancients were acquainted with this plant, and that it is identical with the ἀνάφυτον of Dioscorides. On referring to some very old authorities, he ascertained, that the galium was much in vogue as a domestic remedy in this country many centuries since; it was then highly extolled as a cure for cancer, scrofula, leprosy, and dropsy. An Italian writer, Giuseppe Ferramosia, had published in Schmidt's Jahrbücher, an account of several cases of scrofula, in which the galium appeared to produce rapid absorption of enlarged scrofulous glands. Diebach had also recommended it for phthisis, asectes, and scrofula. Richter considered it beneficial in strumous affections. Dr. Winn wished to direct attention to the fact of galium having been efficacious in glandular affections as well as lepra; it tended to confirm the theory, that the two diseases were owing to the same cause, a strumous diathesis. It was also a remarkable circumstance, and one not generally well known, that arsenic is highly beneficial in glandular swellings. Mr. H. Rees, an experienced and successful practitioner in the diseases of children, informed Dr. Winn that he had tried arsenic in infantile glandular affections, and proved it to be a most efficacious remedy. When first Dr. Winn tried the galium it was in the form of a decoction; but finding this mode inconvenient, he requested Mr. Hooper, of Pall Mall, to prepare an inspissated juice, and that able operative chemist had succeeded in making a very valuable preparation. A teaspoonful of the juice equals in strength a half pint of the decoction. In ordinary cases a drachm taken three times daily will be found sufficient, but in obstinate affections the dose must be doubled. The juice of the galium had been analysed by Ferremosia and Robert Schwartz. The former gives as its constituents acetate of potass, gallic acid, tannin, extractive, water. The analysis of Schwartz is somewhat different. He gives its component parts thus: Galitannic acid, citric acid, rubichloric acid, chlorophylle, starch. With regard to the modus operandi of the galium, Dr. Winn said he had little to offer but what was merely conjectural. Many of his patients were conscious of an increased flow of urine during its use, possibly from its acting on the kidneys as a depurating agent. The class of cutaneous diseases which had been benefited under his own observation, was chiefly that dependent on a state of dyscrasia, such as lepra and psoriasis. He also considered these diseases as often arising from a strumous diathesis. The gentleman suffering from lepra, whose case had been referred to at the commencement of the paper, was one of a very consumptive family. In him the family disease had mani-
fested itself under another form. It is highly important that the fluid extract be perseveringly used. Many patients have failed, no doubt, from not having given the remedy a sufficient trial; the same may be said of arsenic. Dr. Winn had tried the galium in 19 cases of skin diseases. Of these, five were cases of lepra; six of psoriasis; four of eczema; two of lichen; one of inflamed acne; and one of ordinary copper-coloured syphilitic eruption. In nine of these cases the benefit derived from this medicine was very striking. In one, an instance of lichen circumspectus, the effect produced by substituting the galium for other remedies was almost marvellous. With regard to the efficacy of this plant in the treatment of cancer, Dr. Winn was solely indebted to the experience of Mr. Bulley, of the Bucks Hospital, who had forwarded to him an account of two cases of cancer in which the galium appeared to exercise a remarkable influence in arresting the disease.

Pemphigus.—The following are the conclusions appended to a report of eighteen cases of Pemphigus, (Med. Times and Gaz.):

1. That pemphigus is a disease affecting all periods of life; especially liable to occur between the ages of 4 and 25.
2. That, like many other skin diseases, it very frequently recurs in those who have once been its subjects.
3. That it usually affects those only of a fair complexion and thin skin. (To this we find no exception among the cases in which note has been made as to the complexion.)
4. That it is rather more common in the male than the female sex.
5. That its severe chronic and relapsing forms are more frequent than the benign and transient.
6. That the parts most liable to be affected are the legs, arms, genitals, abdomen; seldom the face, and very rarely the hairy scalp.
7. That the serum of the bullæ is almost always alkaline. (It was tested in most of the cases, and no exception occurred; the alkalinity was generally very great.)
8. That it is very rarely a symptom of congenital, and perhaps never of acquired syphilis.
9. That it occurs commonly to those of good physical conformation, but is mostly coincident with temporary cachexia.
10. That it is not very markedly influenced by season.
11. That its idiopathic infantile form is a very mild disease, and will usually recover spontaneously.
12. That it is not, as a rule, associated with any particular form of cachexia. (In but two of the above cases were the patients serofulous; none were known to be rheumatic, or to have had ague; dyspepsia was an attendant in but few.)
13. That the general indications are for the use of tonic regimen and generous diet, but that these will not suffice for the cure.
14. That arsenic may be esteemed an almost specific remedy even in the worst class of cases. [The careful perusal of the preceding series, will, we think, convince the reader that this proposition is not too strongly put. Many of the patients were, when admitted under Mr. Startin’s care, in a truly deplorable condition,—the disease had
produced extreme irritation, it had lasted for many months or years, it had resisted all sorts of treatment previously. In every instance but two the most marked benefit attended the adoption of the arsenical plan.

15. That arsenic does not merely repress the eruption, but remedies the unknown constitutional cause on which that symptom depends, always very much benefiting the general health of the patient.

16. That arsenic does not prevent the liability to subsequent attacks, but that such attacks are always much less severe than the original one, and tend, if treated by the same remedy, to diminish in intensity on each successive occasion.

17. That the early age of the patient does not in the least forbid resort to the arsenical treatment.

Those acquainted with the literature of this subject will observe, that the above conclusions differ considerably in some respects from the statements to be found in books. The disease itself may probably differ somewhat in London and on the Continent. Gilibert, whose monograph on it is the best extant, appears, for instance, to have met with but three examples of chronic pemphigus, all of them in elderly and enfeebled subjects. A current opinion has accordingly prevailed, that that form is almost peculiar to the aged, while the fact is, as we have above shown, that in London, at any rate, the young are much more frequently its subjects. Cases of relapsing pemphigus, or those in which the disease has extended over many years, do not appear to have attracted much notice from previous writers. Pemphigus is not known to prevail endemically in any part of England; on the contrary, it seems to be about equally scattered over all districts. Two cases came under our notice in York some years ago, and during the last summer we saw a very well-marked ease in the Leeds Infirmary, under the care of Mr. Samuel Hey. Mr. Hey informed us, that the disease was very rare in Leeds, and that he had, during many years, seen but that one example. There does not appear to be much foundation for the opinion that the disease prevails most in damp localities, and on the banks of rivers. Such a notion is supported by but a small proportion of the above cases. The preceding series probably scarcely presents the benign and chronic forms in their due proportions as to frequency of occurrence, since cases of the former are often of so transient a character that they never come under care at Hospitals. With regard to the treatment of the chronic form by arsenic, we have recorded all that we have seen. A case has been mentioned to us, however, by a gentleman of very careful observation, in which the arsenic is stated to have quite failed to cure the disease, while it seriously interfered with the patient's (a child) health. We have not obtained particulars as to administration, etc.

Surgery.

On a Peculiar Disease of the Rectum.—We find among the "Selections from the unpublished Manuscripts of the late Abraham Colles" (Dub. Quart. Jour.) the following fragment of an essay on a peculiar disease of the rectum:— But, although the following remarks
cannot furnish us with an insight into its nature and cure, yet I trust it may be a task not unworthy of your notice to lay before you the symptoms of this disease, which, I fancy, has been long known to practitioners, but the symptoms and natural history of which I cannot find recorded in any surgical works. I have seen it attack patients of both sexes indiscriminately, and persons of all ranks of life indifferent-ly. I have met with no instance where it occurred before puberty or after 60; it may attack at any age between these two periods. Many of these unhappy people commence the history of their disease,—that their bowels had been obstinately costive for some days, or even for weeks; that they had taken very large and repeated doses of salts and other purgative medicines without having been able to procure a single evacuation; that this long-continued constipation of the bowels at length gave way, and on passing a stool a large discharge of pure blood, or blood mixed with purulent matter, to the amount of some quarts, followed the evacuation. With other patients, a tenesmus for a few days preceded this costiveness; the tenesmus having continued some days, many of them then perceived a lump or fulness at the verge of the anus, which they did not notice previously, and which they conceived to have been caused by the affection. Some few of these patients cannot refer the commencement of the disease to any particular period; they have never been sensible of any lump or tumor. Such persons generally mention that they had often been subject to inward piles in the rectum.

However different the commencement of the disease may be in different patients, yet they are all similarly affected in its subsequent stages, for after this first large evacuation of blood, or other fluid, the patient is troubled with a frequent desire to go to stool, on which occasions, in general, nothing but a very small quantity of fluid escapes, sometimes a table-spoonful of a glutinous matter, sometimes more thin and liver-coloured. Seldom is a feculent stool passed, and when it is, the patient is sensible of a contraction in the gut, or diminution in its caliber; if the feces be hardened, the evacuation is attended with excessive pain; if of a more soft, though solid consistence, the diameter is much lessened, sometimes not exceeding that of a writing pen. They generally pass two, three, or more days without a feculent stool unless they use some article of diet or medicine for the purpose of evacuation. From the description of these patients, it appears that the tenesmus which accompanies the alvine discharges is the prime source of this distress. The stools vary in number on different days, sometimes amounting to twenty, seldom fewer than six or eight. After the disease has continued in this state for some indeterminate period—a few months or years—the condition of the patient is rendered more distressing by a discharge of a thin, ichorous or coffee-colored fluid, which flows from the rectum when he coughs, or walks, or uses any bodily exertion; not unfrequently his nights are rendered still more uneasy by the flow of this matter as he lies in bed. The urinary discharge is, in some instances, affected even early in the disease; in some few by a difficulty or delay in commencing this evacuation; in others, by an inability to void the last drops. In the very
last stages the urine cannot be voided without causing an irresistible desire to go to stool.

If we examine the rectum we may there perceive one or two excrescences at the verge of the anus. These seem to be formed partly by the lining membrane of the gut, at least their inner surface appears like a secreting surface or excoriation. In many instances, two level excrescences lie with the adjoining edges in contact, so as to resemble the arytenoid cartilage, or the spout of an ewer. The patient being desired to press down or strain as if at stool, a few drops of a liver-colored fluid are discharged. A hard mass can, in some instances, be felt by pressing around the anus. On introducing the finger into the rectum a hardness and roughness, caused by innumerable protuberances, is to be felt seated at different heights. In some it commences immediately at the very verge of the rectum, and extends nearly as high as the finger can reach; in other cases this morbid condition does not extend beyond that portion encircled by the sphincter; and in others again, the disease is seated still higher up. In all, considerable resistance is given to the introduction of the finger, not only by the narrowness of the canal, and its projecting irregularities, but also by the firm, unyielding hardness of the diseased portion. In one or two instances the canal of the gut was particularly contracted in one spot—as if a small aperture had been left in a membrane which stretched across the gut. The introduction of the finger in all instances has given considerable pain, but if the finger be slowly passed up the gut it will be found gradually to dilate, and then admit the examination with less distress. The hardness which is felt in the substance and neighbourhood of the gut does not always uniformly surround it. In some instances the hardness is felt at one particular spot, as if a tumor lay connected with the coats of the intestine at this part. There is one symptom which is to be met with in, perhaps, every third or fourth person affected with this disease, and which deserves particular attention—it is an external fistulous opening at or near the verge of the anus, which yields a discharge resembling in quantity and quality that of the ordinary fistula, and by no means of the same quality with that passed through the canal of the intestine. I have myself, before I was aware of the nature of the disease, cut one of these patients as for fistula, and have seen more than a few instances in the hands of other practitioners, and always with this remarkable effect, that these incisions, in general, healed as kindly as if the fistula had been the only disease; and in no instance—not even one I had cut, and in which the incision did not heal up—could it be said that the operation added to the subsequent distress of the patient, or exasperated the original disease. Where the fistulous opening occurred in cases with a tumor at some particular spot of the gut, the fistula was found to lead to such tumor.

I have not been able to trace in the relation of these cases that any of the patients experienced any constitutional symptoms which could be considered as precursors or attendants on the first stage of this local disease. Nor does it, during the greater part of its progress, seem to make any impression on the constitution—indeed, my aston-
ishment has been excited on perceiving that such trains of local distress had not produced any sensible decay in the general habit. I should observe, that in one instance only vomiting accompanied the first attacks of this disease. Symptoms of hectic fever first denote the injury done to the constitution. The time at which these appear differ in different individuals; in some so early as six months, while others have remained with the constitution unimpaired for as many years. In one case there was not any regular Leetic, the patient was reduced to the most extreme degree of wasting and emaciation that I have ever witnessed. I am inclined to think that the appearance of hectic is the only index that can lead us to a knowledge of the probable duration of the disease.

'I have had the opportunity of inspecting only one of those whose death had been caused by the disease. It was the case of a gentleman who had never shown symptoms of regular hectic. Some slight marks of inflammation appeared in different spots; on the small intestines a quantity of fluid, partly composed of coagulated lymph, and partly purulent, was found in the pelvis; the alteration in structure was not confined to the rectum, but was remarkable, though not to an equal degree, along the left colon, as may be seen in the preparation preserved in the Museum of the Royal College of Surgeons. The tumor, or hardened part, was closely in contact with the anterior face of the sacrum, so as to render its separation from the bone both difficult and tedious; the bladder was much thickened and contracted. How far the state of the viscus was a consequence of the decrease in the very scanty secretions of its fluid during the last month of life, I cannot pretend to say.

'From the history of the symptoms, and the appearances on dissection, I fear we can derive but little useful information which could lead to a successful mode of treatment. I shall now proceed to state the various remedies I have tried, and the results of such trial. From the reports of Desault, on whose authority I have always placed great reliance, I tried, in almost every case, the effects of dilatation. For this purpose I have used a variety of substances, such as prepared sponges, bougie composition rolled so as to form pessaries of various thickness, tallow candles of various sizes, adapted to the diminished capacity of the canal in each case. My expectations, which had been raised so high at reading Desault's cases, I must say, have been completely disappointed, for when the dilatation has been used in the early stage of the disease, before any symptoms of hectic had appeared, although some had steadily persevered in its use, yet I could not discover much amendment in the symptoms, and the most regular of these persons have at length laid them aside, fully convinced by experience of their total inefficiency to afford even a mitigation of their distress. After the accession, the use of the dilating instruments could not be borne by any patient longer than one week, owing to the pain and irritation they occasioned. Those who had been cut for the fistulous openings near the rectum did not experience any relief from the original disease, even in the cases in which the incisions had healed up. One or two of these patients seemed to think the passage was
rather more narrowed after the operation. From the supposition that
the disease was cancerous, I have given the solution of arsenic in such
doses as to produce the usual symptoms attending its operation on the
system, and continued its use for some time, but without producing
any alleviation of the suffering. With the same view, and with the
same inefficacy, has hemlock been administered. I have used mercury
in small doses, so as to excite ptialism, and have even used this medi-
cine as freely, and for as great a length of time, as is in general suffi-
cient for the cure of secondary venereal symptoms, but have never been
able to observe that its use afforded even temporary relief; and not
unfrequently has the general health been materially injured by it.
Mucilaginous fluids, combined with opium, have appeared to give more
relief than any other medicine I had tried; yet this medicine has not
uniformly, or even in the majority of cases, been of service. Large
leechings are prejudicial.

'This disease might be considered as cancerous, but as an objection
to this opinion, I must remark, that cancerous diseases are much exas-
perated by incisions or partial excisions, whereas this disease did not
appear to be at all increased by such treatment.'

Abscess in the Tibia, by Mr. Simon of St. Thomas's Hospital.
Samuel Todd, aged 24, a shoemaker, was admitted, September, 27,
1853, on account of painful swelling in the upper part of his left tibia,
from which he had long suffered. The following is the account he
gave of his illness. On Christmas-day, 1842, he was out skating,
and had numerous falls, by which he received severe bruises in several
places. Towards the end of the day he had the misfortune to break
through the ice, and was for some minutes up to his neck in water.
On being taken out, he did not at once return home, but remained for
upwards of half an hour standing about in his wet and half frozen
clothes. During the following night, he was unable to sleep, on ac-
count of shiverings and pains in his joints. In the morning, a medical
man was consulted, who considered the disease as rheumatism, and
prescribed accordingly. Leeches were applied to a swelling beneath
the knee, but no matter formed there. An abscess, however, formed
in one heel, which broke, and continued open for a long time. During
the whole six months following, he was unable to walk, and suffered
throughout that period intense pain in the shin-bone, a little below the
knee, where, however, the amount of swelling was but trifling.
Subsequently he resumed his work, but was frequently obliged to desist,
on account of attacks of intense pain in the bone. An abscess also
formed over the ulna, from which scales of bone came away. Six
years later, that is, five and a half from the present time, an abscess
formed over the painful part of the tibia, on account of which he ob-
tained admission into one of the London hospitals, where he remained
until it healed. No bone came away. With the exception of tender-
ness and pain in the bone, which rendered him unable to kneel upon it,
he remained during the year following in good health; but at the end
of that time, having caught cold, as he supposed, an abscess again
formed over the part. It healed in a month, and remained well for the
two years next ensuing, when, for a third time, it opened, and he was re-admitted into one of the hospitals. He was discharges from this hospital in March, 1853, and continued well until within five weeks of the time of his admission under Mr. Simon's care. His condition then was as follows:—About two inches below the left knee-joint, over the inner surface of the tibia, the skin was dusky and inflamed, and there were three or four small spots of ulceration, from which pus exuded, but through which no dead bone could be felt. The whole shaft of the bone at this part looked to the eye larger than that of the opposite side, and this opinion was confirmed on handling it, the bone itself seeming to be generally expanded. The man, who was of dark complexion, looked hectic and extremely ill. He was worn out, in fact, by long-continued pain, having for many nights scarcely slept at all. Mr. Simon having examined the part affected, and entered carefully into the foregoing history of the disease, gave at once a decided opinion that there must be abscess within the bone. Whether that abscess depended on a portion of enclosed dead bone, or whether it was idipathic, he could not say; but, judging from the account given of eleven years' liability to attacks of very severe tensive pain in one particular spot, unattended by proportionate swelling in the soft parts, generally relieved by leeches, blisters, &c., but always returning with increased severity on any exposure to cold, he considered it almost certain that there was deep-seated mischief. He should, therefore, instead of again being content to relieve temporarily by antiphlogistic means, attempt a radical cure, and trephine the bone. The circumstance that the repeated abscesses which had formed had never given rise to exfoliation, or left sinuses, or materially relieved the pain, rendered it probable, Mr. Simon thought, that they had been but superficial, and had not communicated with the internal mischief.

On October 1, accordingly, the operation of trephining was performed. A crucial incision having been made over the affected part, and the skin dissected up, the bone was found to be rough and rather spongy, but not actually carious. The trephine being applied, the external layer was soft, and cut easily; but the deeper ones were thickened, and much indurated. As soon as the instrument reached the cavity, there welled up by its sides a quantity of thick yellow pus, and, on the plug of bone having been extracted, about six drachms were removed. There was no dead bone. The cavity in which the matter had been lodged was circumscribed in every direction, as was ascertained by probing and introducing the finger. It was lined by a soft villous layer of false membrane. The pus was of the most laudable character, and had no foetid smell whatever. The sequel of the case may be told in a few lines. Some wet lint was placed in the wound, and the whole covered by a poultice. The severe pain which had before existed never returned. In a few weeks the whole cavity had become filled with firm granulations, and, at the end of November, the man was discharged in excellent health, and with the wound all but healed.—Med. Times and Gaz.
On Pedunculated Exostosis of the Long Bones.—We copy from the Assoc. Med. Jour. the following abstract of Mr. Syme's paper read before the Medico-Chirurgical Society of Edinburgh:—Mr. Syme remarked upon the loose and ambiguous manner in which the term exostosis had been employed by authors, and the consequent confusion in which the subject was involved. The opinion which Sir Astley Cooper had hazarded as to the origin of the disease in long bones, that it was due to excessive muscular action, he considered was sufficiently met by the two facts—first, that, as in the femur, the exostosis is found by the side of the tendon; and secondly, that it occurs on the distal phalanx of the great toe, where such a cause cannot exist. In young people, the tuberosities of the long bones are frequently enlarged, and occasion much alarm. Mr. Syme, in such cases, finds that symmetry is ultimately restored, and advises non-interference. In his opinion, the occurrence of such cases accounts for a large amount of the so called orthopaedic successes. The ordinary exostosis is not unlimited in growth; but, after a certain increase, it is found to remain stationary. A member of the profession, many years ago, presented himself to Mr. Syme, laboring under what he imagined was subclavian aneurism. Mr. Syme, on making the necessary examination, at once recognized the disease to be an exostosis of the first rib, situated close to the insertion of the scalenus anticus muscle. The subsequent history of this patient showed that the disease did not increase in size. A lady of rank consulted Mr. Syme for a tumor growing into the pharynx, and expressed her wish to have it removed; but, as the tumor presented all the characters of an exostosis, and, from the history, had evidently reached its entire growth, Mr. Syme recommended non-interference. As to the structure of ordinary exostosis, it presents a thin osseous lamina externally, and cancellated tissue within. It is sometimes covered by a thin coating of cartilage. Sir Astley Cooper's definition of this form of exostosis is very defective, and might apply to any bone of the body; and he includes under it two very dissimilar diseases—viz., simple exostosis, and the fibro-cartilaginous tumor of bone. Mr. Syme regretted to find Mr. Paget, in his lately-published lectures, making the same mistake. The two diseases differ structurally; the first, presenting a simple bony texture, tipped with cartilage; the second, a cartilaginous matrix, with a bony shell. Pathologically, they differ; in the first, there is no tendency to increase, while no limitation can be placed to the growth of the second. Lastly, they differ practically. While the first may be successfully removed by the division of its neck, the second can only be extirpated by taking away the whole of the affected bone, or by section at a distance from the disease. Mr. Liston failed to make this distinction, and hence recommended amputation in the case of exostosis of the distal phalanx of the great toe—a practice which was always reprobated by Mr. Syme, and is now abandoned by the profession. With regard to the occurrence of the second form of disease in the upper-jaw, Mr. Syme early saw the folly of attempting to dig it out in piecemeal, instead of removing the whole bone. And as to the priority of having performed this operation, and any merit which might depend thereon, he would
merely state, in passing, that he performed it on the 15th of May, 1829; and that an account of the operation appeared in the July number of the Edinburgh Journal of the same year. This fact seems to have escaped most authors of students' books, among whom he might mention Mr. Erichsen as the latest. In the case of the humerus, where this fibro-cartilaginous growth is of most frequent occurrence, Mr. Syme had many years ago removed successfully the entire arm for a growth of this kind, which was one of the largest on record. In another patient where the tumor arose by a neck from the middle of the bone, and was about the size of an orange, the portion of the shaft from which the tumor sprung was included within two incisions, and the whole disease was removed. By the use of leather splints, the use of the fore-arm was in a great measure preserved. To avoid confusion, Mr. Syme was of opinion that tumors formed by bone being developed around serous cysts, abscesses, &c., &c., should be named from the causes occasioning the growth. The disease which formed the especial subject of this paper was most frequently met with on the inner side of the thigh, above the condyle, and at the neck of the humerus. Its neck varied from half an inch to an inch in length, and was always placed obliquely to the shaft. The tumor itself was nodulated, covered with cartilage, and of a pearly lustre, and had no communication with the surrounding parts. In a case which Mr. Syme had met with, where the exostosis was situated on the outside of the femur, similar characters were presented. About twenty years ago, Mr. Syme was consulted by a gentleman who presented an example of the disease in question. He recommended avoidance of violent exertion, and learnt from time to time, that the tumor remained stationary. In February, 1851, Mr. Syme was requested by Dr. Handyside to see his old patient, and found a very decided change. There was swelling and deep-seated fluctuation. A cautious prognosis was given. Rest and a blister, to be followed by gentle pressure, were ordered; and the result was looked forward to with some anxiety. In a short time, all the untoward symptoms disappeared, and the exostosis was found to be in its original state. Another case, which fell under Mr. Syme's observation not long after, sufficiently explained these anomalous symptoms. A servant girl, in crossing from Fife to enter the hospital for the same disease, received a blow which fractured the neck of the tumor, and detached it. Fearing suppuration, Mr. Syme cut down upon the loose exostosis, and found it lying in a bag of serum. On examination, all was explained; a synovial membrane covered the tumor, and was reflected in the form of a cyst, so that a double covering existed; and in the present case, from the violence applied, serum had been poured out between the layers. The other day, in company with Professor Simpson, he had seen a young lady who had suffered much agony from an exostosis on the inner surface of the neck of the humerus, pressing upon the axillary plexus. From its situation, it had been deemed incapable of removal; but, on careful examination, Mr. Syme found that its origin could be traced by a narrow neck to the outer and back part of the arm, and, by an incision between the deltoid and the triceps, he was
enabled to divide the neck by means of cutting-pliers, and successfully to remove the tumor.

Obliteration of the Innominata by Ligature, by M. Peixoto, of Rio Janeiro. In the Gazette des Hôpitaux, March 9th, 1854, p. 115, we find among the reports made to the Royal Academy of Medicine, at its session of March 7th, that of a supposed obliteration of the innominata, by a ligature of reserve! The case was laid before the Academy by M. Velpeau, and is briefly as follows: M. Peixoto, of Rio Janeiro, November 14th, 1851, tied the right primitive carotid at its middle portion, for an erectile tumor of the ear. "Hémorrhagie foudroyante avant la chute de la ligature d'attente à la naissance de l'artère sur le tronc brachio-céphalique; formation du caillot dans le tronc même, après douze jours de compression par la ligature d'attente, qui n'a ni ulceré, ni enflammé l'artère au point de la couper." In two months, it is added, the patient was perfectly well. It seems remarkable that the constriction of the ligature, not sufficient to inflame or ulcerate the artery, should so obstruct the current of the circulation, through the trunk of the innominata, as to produce its obliteration, and we do not wonder that M. Malgaigne should have expressed some doubts as to the value of this case, doubts in which M. Velpeau confessed he himself participated.

Excision of the Wrist-joint.—Several instances of this operation have recently been reported in the London journals, but the results have not been very favorable. Mr. Ericusen, on the 19th of October, 1853, removed the first row of carpal bones, with an inch of the lower end of the radius, and a little more than the styloid process of the ulna, by making a transverse incision on the dorsal aspect of the wrist-joint, and two incisions at right angles to this. These bones were in a carious condition. The case went on favorably for over a month the suppuration being free and the health of the patient improving, when she passed from under observation.

Mr. Furgusson operated, August 16th, 1853, upon a suppurating wrist-joint, making longitudinal incisions on the radial and ulnar sides, and a transverse incision, about one inch above the joint, and removed all the carpal bones except the trapezium, with the bases of three metacarpal bones and the styloid process of the ulna. No vessels required ligatures, nor were the extensor tendons injured. At the end of nine months the parts were still discharging freely, with little prospect of healthy cicatization.

Mr. Furgusson operated on a carious wrist-joint, May 21st, 1853, removing most of the carpal bones, and a small portion of the extremity of the radius, through the openings already existing. Cicatization did not follow, and, several months after, more carious bone was removed. Eight months subsequently to the first operation, the suppuration continued free.

Mr. Simon performed this operation, Oct. 9th, 1852, upon a young
man who had suffered for several months from caries of the metacarpal and carpal bones. All the carpal bones except the pisiform and trapezius were removed, and a portion of one of the metacarpal bones. The incisions in this case were made longitudinally on the anterior and posterior aspect of the wrist-joint, between the tendons running down to their destination. The wound made in front was brought together by sutures, but that on the dorsum was left open. The patient improved in general health, suppuration continued free, but at the end of a year, when the final cicatrization was confidently anticipated, the patient was seized with symptoms of fever, of which he died.

Amputation at the Ankle-joint without the Removal of the Astragalus.—Mr. Simon modifies the operation of Mr. Syme by not excising the astragalus in his amputation at the ankle-joint. He considers the stump thus obtained preferable to that of Chopart, because of its being undisturbed by muscular contraction, and better than Syme's, because of its great breadth, its mobility in the joint, and the saved inch and a half thereby. A stump thus made was seen after several years, and was found to have worked very advantageously for the patient.

Amputation at the Hip-Joint.—An unsuccessful case of amputation at the hip-joint, is recorded by Mr. Mackenzie. The following is the history of the case and operation:—(Edin. Med. and Surg. Jour.—James O'Hara, aged 18, was admitted into the hospital, under my care, January 3, 1853, with fracture of the right thigh-bone a little below its middle. He had suffered for more than seven years from necrosis of the bone, large portions of which had exfoliated from time to time, and he had left the hospital only a month previously with sinuses on each side of the thigh still discharging matter. Whilst limping along the street on New Year's Day, he was pushed over by a drunken man, and the thigh was fractured by the fall. When brought to the hospital the limb was much distorted, the upper fragment nearly projecting through the skin anteriorly, and the lad was suffering so intensely that he entreated the limb might be amputated immediately. The fracture was adjusted, but the extension required for this only increased his suffering, and on the following day it was necessary to remove the splint, and the limb was kept in the easiest position between pillows.

On the 5th, at the urgent request of the patient, who was much exhausted by his continued suffering. I had him removed to the operating theatre, where I promised to amputate the limb, or remove any dead portions of bone, as seemed best on examination, when he was under the influence of chloroform. On introducing my finger into an opening on each side of the thigh, I found the whole shaft of the femur at the seat of fracture in the state of necrosis, and the very scanty substitute of new bone on one side of it fractured, and detached from the soft parts to the extent of three or four inches. Those of my colleagues who were present at once agreed with me as to the propriety of amputation, the extensive detachment from the
soft parts of the thin shaft of new bones rendering the prospect of union hopeless. It was a more difficult matter, however, to decide at what point amputation was to be performed. The entire upper part of the thigh-bone was much thickened; and on introducing the finger into a large sinus, which existed on the back of the thigh, near the tuberosity of the ischium, the bone was felt rough and bare in the neighbourhood of the lesser trochanter, and the probe here entered a cavity in the bone. Under these circumstances, it appeared doubtful whether division of the bone through the highest part of its shaft would suffice for the removal of the entire disease; and as the weak state of the boy rendered the speedy completion of the incisions very desirable, so as to avoid unnecessary loss of blood, it was deemed prudent not to make any exploratory division of the bone through the trochanter, but at once to disarticulate. The operation was performed, nearly in the way recommended by M. Malgaigne, by transfixion, and the formation of a long anterior flap; but a short posterior flap was also made, by carrying the knife a little obliquely outwards after disarticulating the head of the bone. The limb was thus severed in less than ten seconds, and the hæmorrhage was so effectually controlled by my colleagues, Dr. Dunsmure and Mr. Spence, that scarcely a teacupful of blood was lost.

On the Treatment of Hæmorrhoidal Tumors.—In the discussion which followed the reading of a paper by Mr. Lee before the Medical Society of London (London Lancet), on the use of nitric acid in the treatment of these tumors, as recommended by Dr. Houston, of Dublin, Mr. Coulson remarked that he "considered nitric acid to be a remedial agent of very limited efficacy as compared with the ligature. This would be evident from a consideration of the nature of hæmorrhoidal tumors, their situation, and the complications with which they are sometimes attended. These tumors may be divided into two great classes, one kind being not unlike a hot-house grape approaching to ripeness, of a whitish-bluish color, with its mucous covering, smooth, entire, and thickened. These tumors are varices, with the coats of the veins, and the surrounding cellular tissue in a more dense condition than normal. Two or three, or even more, of these swellings are usually present in the same person, and generally produced after an evacuation. Now, to this class of tumors the author of the paper had himself admitted that the nitric acid is not applicable. The surface could not be easily permeated by the acid, and if it could, its extent would be too large to be acted upon by this agent. The next class is of a more vascular kind, resembling a raspberry or mulberry, bleeding on the least touch, and analogous in structure to the erectile tumors in other parts of the body. Two or more of these tumors usually exist at the same time, and their base is large. These also descend at stool, and often bleed considerably. It is to this class that Mr. Lee restricts the application of the acid, but he thought that it could only be of use when these tumors are small and within reach. The situation of these swellings would often render it very difficult to use the acid; they are not always situated close to the anus, but sometimes above the fibres
of the inner sphincter, so that the surgeon experiences great difficulty, even with a tenaculum, in keeping them within his reach. To this it may be replied that the obstacle may be overcome by the speculum, and the acid applied high up by means of it. But he thought it very difficult to apply the acid with accuracy in this situation. Then, these tumors are sometimes complicated with fistula in ano, and fissure of the rectum. Only a few weeks ago he had operated on a patient of Dr. Jones's of Dalston, for a fistula of long extent, by the side of which there was a large vascular tumor. Now, in such a case nitric acid could scarcely be employed, one application would not have been sufficient, and the cauterized surface would be sure to come in contact with the edges of the wound. The ligature was effectually applied at the time of the operation for the fistula, and under similar circumstances he should always employ it. The hemorrhoidal tumors are also sometimes complicated with fissure of the rectum. Now, the application of nitric acid, from time to time, to the tumors would be very likely to irritate the divided surface, and give great pain. Very recently he had operated on a patient of Mr. Bowling of Hammersmith, for fissure of the rectum, in whom there were two vascular excrescences, and in all cases of this kind he is confident the nitric acid would be inapplicable. He came therefore to the conclusion that this agent is of use only in cases of the vascular sort, when the tumors are small, easily reached, and not complicated with fistula or fissure. Why, then, not adopt the ligature, which can be easily applied to all cases, however numerous the excrescences, and aggravated in their nature. It is also effectual in its results, and perfectly safe. He had operated in a large number of cases, and had never met with an unfavorable result—in fact, he had seen, in the practice of others, only one fatal case after the ligature, and death arose in that instance from extravasation of urine. Retention of urine, as is well-known, occurs in the majority of cases after the operation by ligature. In this case the condition of the bladder had been overlooked, and extravasation of urine was the result. The operation by ligature is painful, but the pain soon subsides; it also entails confinement for ten days or a fortnight; but this surely is not too great a sacrifice to make for getting rid of a painful malady. For the ligature, however, to be a safe and effectual remedy, it must be properly applied. Each tumor should be transfixed at its base with the tenaculum, and tied as firmly as possible, outside the instrument, with twisted thread. Before the knot is finally tightened, the tumor should be punctured with a lancet, so that the ligature shall not be subsequently loosened by any exudation from the vessels. If the base of the tumor be too large to be effectually strangulated by one ligature, it should be transfixed by a tenaculum, having an eye at its end, and armed with a double thread, so that one-half may be tied with one thread, and the other portion with the other. Afterwards the strangulated tumor should be returned within the rectum, and the thread secured by adhesive plaster to the nates. The ligatures usually come away within a week, but this is uncertain. In these cases the integument round the verge of the anus is usually loose and hypertrophied, and many surgeons remove it with a knife or scissors at the time of
operating on the haemorrhoidal tumors. He considered that this state of the external integument depended on the condition of the rectum, for he found it disappeared after the internal tumors were cured. He therefore did not think it necessary to meddle with the external integument in the operation, and he especially guarded against involving any of the skin within the ligature. It added much to the discomfort of the patient, and delayed his recovery.

DISEASES OF FEMALES.

On Some Diseases of the Rectum in Women, Resulting from Certain Conditions of the Uterus. Mr. Brown read a paper on this subject before the Medical Society of London. The following is from an abstract published in the Lancet:—Enlargement of the uterus from any cause,—whether from the most common and natural one, pregnancy, or from retroversion, hypertrophy, inflammation, distension, or imperfect contraction after labor, fibrous or scirrhous tumor, polypus, hydatids, or from any other disease,—alike tends to produce the same result in the bowel; and when the subject is fairly considered, it will become self-evident that the uterine and intestinal affections are in these cases related to each other, as cause and effect; and that, bearing this in mind, we may in many cases the more surely and quickly apply our remedies, and look with confidence for a favorable issue; whereas if the uterine origin of the disease is not suspected, we may treat a woman affected secondarily with constipation, piles, intestinal irritation of a dysenteric character, or other allied disorders by therapeutical agents, directed to the bowel as the primary seat of the disease, and yet the patient shall derive no benefit from any of them. Few surgeons, indeed, can fail to recollect instances in which this kind of treatment has disappointed them, and I hope to be able to show the reason why it has failed. These affections of the rectum may arise, as I am certain they often do, from an enlarged uterus, and that in two ways: firstly, by dragging on the lateral ligaments and elongating them, it falls down under the promontory of the sacrum, and presses on the bowel, interfering with its muscular action, irritat- ing its lining mucous coat, and deranging the circulation in its blood-vessels; and secondly, any hyperemic disturbance in the uterine circulation increases the force of the circulation in the haemorrhoidal vessels by establishing a determination of blood to them. Thus by reflecting on the anatomy of the parts, it will be easily understood why and how diseases of the rectum, such as haemorrhoids, prolapsus, fissure, stricture, fistula, as well as disordered functions of the bowel, as constipation, dysenteric irritation, &c., do sometimes result directly either from the mechanical pressure of an enlarged uterus, or simply from the derangement of the haemorrhoidal circulation resulting from uterine disease. It is obvious that in the treatment of these various affections so arising, unless the attention of the practitioner is directed to the uterine origin of the disease, no permanent benefit can possibly result. Therefore, when any of these affections occur in females, it is necessary to inquire into the condition of the uterus, which will often
at once explain the cause, and indicate the treatment. Mr. Brown then proceeded to demonstrate these remarks by cases. He observed that the haemorrhoidal veins suffer more from pressure than the arteries, because the coats of a vein are thin, and capable of great distension, and not resilient; whereas the artery is smaller, firm, elastic, but very resilient, and the vis à tergo being greater, the circulation of the blood is less liable to interruption. Therefore, as might be expected, the mischief is greater in the veins than in the arterics. Hence we find that the blood often coagulates in the veins, and forms a semisolid tumor, and the cellular tissue around becomes thickened, and the mucous membrane covering them becomes excessively vascular and sensitive. Mr. Brown observed that he alluded here entirely to internal haemorrhoids. He then related six cases: 1, haemorrhoids; 2, prolapsus ani; 3, ditto; 4, fissure of the rectum; 5, constipation; 6, fistula in ano; and in all these cases the disease had been found to have a uterine origin. The uterus was treated first, and the result was in every instance successful.

Nature of Puerperal Tetanus.—In his contributions to Obstetric Pathology, and Practice, (Monthly Journal,) Prof. Simpson has the following on the Nature of Puerperal Tetanus:—It will be granted, I believe, by all pathologists that the existence of an injury or wound upon the external parts of the body is by far the most common cause of tetanus. After abortion and parturition we have the existence, upon the interior of the uterus, of a similar state of lesion. All authorities seem now generally agreed as to the facts (1) that the human decidua is, as was maintained in the last century by Krummacher, the thickened and hypertrophied mucous membrane of the uterus, (2) that the epithelial or superficial layer of it separates from its basement or outer layer in abortion and after delivery—and (3) that this separation or solution of continuity of tissue, as well as the rupture of the organic attachments of the placenta from the uterus, leaves the interior of this organ so far in the condition of an external wound, or with a new or raw surface for the time being exposed. Obstetrical tetanus has, in this respect, an exciting cause essentially similar to surgical tetanus. And perhaps the great reason why this state of lesion of the interior of the uterus does not more frequently give rise to tetanus is simply this, that the uterus is itself principally, or indeed almost entirely, supplied by nerves from the sympathetic system, while apparently, as stated by Mr. Curling and other pathologists, tetanus is an affection far more easily excited by lesions of parts supplied by nerves from the cerebro-spinal system, than by lesions of parts supplied by nerves from the sympathetic system.

The following are his views of its treatment:—Let me merely remark that, in obstetrical tetanus, no kind of local treatment to the seat of the original uterine lesion could be well applied, or would probably be of any avail, if applied. And, as to constitutional means, perhaps the most important are—

1st, The greatest possible quietude and isolation of the patient
from all irritation, corporeal or mental, during the course, and for some time even after the resolution of the disease.

2d, The special avoidance of painful and generally impracticable attempts at opening the mouth in order to swallow; but sustaining the strength of the patient, and allaying thirst by enemata, or by fluids applied to the general surface of the body.

3d, If there is any well-grounded hope of irritating matter lodged in the bowels, acting as an exciting or aggravating cause, to sweep out the intestinal canal at the commencement of the disease with an appropriate enema.

4th, To relax the tonic spasms of the affected muscles, and diminish the exalted reflex excitability of the spinal system by sedatives, or anti-spasmodics; with the prospect of either directly subduing this morbid reflex excitability; or of warding off the immediate dangers of the disease, and allowing the case to pass on, from an acute and dangerous attack, to a sub-acute, and far more hopeful and tractable form of the malady.

Anteflexion as a Normal Condition of the Uterus before Pregnancy. By BouLARD, (Monthly Jour.)—From observations, embracing 107 dissections, the author concludes that anteflexion is, with rare exceptions, the normal condition of the uterus in the foetus, the young girl, and woman previous to pregnancy. The body of the uterus is bent forwards on the neck, so as to give the organ the shape of a retort, with the broad end directed upwards and forwards. The axis of the body of the uterus is nearly horizontal, while that of the neck corresponds with the axis of the superior aperture of the pelvis; the fundus is in relation with the posterior wall of the bladder, the anterior surface is directed downwards, and the posterior surface looks upwards: the anterior surface is bent forwards upon itself, the angle of flexion being at the junction of the body and the neck. This flexion cannot be considered a cadaveric change, because, if artificially straitened, the uterus returns to the bent position. In ten examinations in the living subject, the author has found the same condition. By the occurrence of pregnancy the anteflexion is removed, and, if observed after this period, it depends on some pathological condition, as abnormal adhesions, etc.—Gaz. Med.

Treatment of Prolapsus of the Pelvic Viscera, and Lacerated Perineum. By Mr. Hilton.—I certainly think the cases of lacerated perineum are worth publishing, and I have great pleasure in sending to you a statement of the reasons which induced me to adopt the operation performed in each of the cases. As far as I know, such an operation had not been done before that period, 1848, with the purpose of relieving the distress and annoyance to which these patients were exposed; but in this opinion regarding the originality of the operation I may be wrong, if so, your better information will set me right.

When you requested my assistance to determine what had best be done in a surgical direction, remembering that the levatores ani have
one firm and fixed attachment to bone near the arch of the pubes, and another at the coccyx, and that the internal sphincter ani might be regarded anatomically nearly in the same light in relation to its effects upon the injury to the perineum, and bearing in mind that all muscles contract towards their more fixed point, no matter how that fixity of position may have been acquired, it occurred to me, if I could, by a simple and uncomplicated operation, disengage the coccygeal attachments of the levatores ani, I might allow them to retract the anal aperture and adjacent structures in a direction towards the pubes, as it were, to bury perineal injury deeply in the pelvis, thus enabling the lower fibres of those muscles (which blend with the muscular parietes of the vagina, and perineum) to assume the office of a sphincter to the lacerated opening, by approximating the edges of it, and drawing it upwards towards the pubic arch. In reference to the external sphincter ani, I concluded that, by taking away or separating the coccygeal fixed point of that muscle, I should necessarily change the direction of its contractile power from the coccyx towards the vagina, and thence to the pubes; this I hoped would help to occlude the lacerated opening between the vagina and rectum. Whether I had reasoned rightly or not, the results were as satisfactory, and indeed more so, than I had anticipated. It seemed to myself, that two ulterior purposes might be held in view by such an operation; the first was to ascertain how much of complete relief could be afforded by an operation which promised to be altogether free from both the danger and the severity of the ordinary operation for such cases, and secondly, should no important immediate benefit be derived, it would certainly tend to the advantage of the patient, by putting the parts into a better state (by relaxing them, and so taking off tension) for the easy and perfect accomplishment of the usual but more formidable operation of paring the edges of the lacerated wound, and maintaining them in contact for a time by sutures.

The method of proceeding was as follows:—A narrow sharp-pointed knife was introduced through the skin on one side of the point or free extremity of the coccyx, about half or three-quarters of an inch from its end; it was then passed into the pelvis, between the concave surface of the coccyx and the rectum, special care being taken not to puncture the intestine; the cutting edge of the knife was now made to sweep over the sides and ends of the coccyx, so as to separate from it the coccygeal attachments of both the sphincter and levatores ani; the knife was then withdrawn through the same small opening by which it had been introduced; scarcely any blood escaped from the wound, but a compress of lint supported by adhesive plaster was applied over it to keeps the parts quiet, and to intercept the flow of blood.

That the operation had accomplished its intention of detaching the muscles from the coccyx, was obvious enough, by examining with the finger upon the skin, the median line between the end of the coccyx and the posterior margin of the anus; the resistance which the muscles naturally give to pressure in that position had disappeared, and the anal aperture became retracted or drawn up into the pelvis.—Guy's Hospital Reports.
PART FOURTH.

AMERICAN MEDICAL RETROSPECT.

Remarks on Ergodeleteria. By Prof. Slack, of the Cincinnati College of Medicine and Surgery. (Western Lancet.)—In Wood & Bache's Dispensatory, of 1845, page 311, it is remarked "in all the Graminacce, or grass tribes," "the place of the seeds is sometimes occupied by a morbid growth, which, from its resemblance to the spur of the cock, has received the name of Ergot." The celebrated James T. W. Johnston, F.R.S., Professor of Agricultural Chemistry in the University of Durham, England, invited by the State Agricultural Society of New York, delivered at Albany, the capital, a course of very able agricultural lectures in 1850. His remarks on this subject will be found in his published lectures, by Saxton, of New York city, page 72. He fully endorses the permanent poisoning character of the Secale cornutum, and the distressing results of the use of infected bread to the poor classes of Europe, in serious and long-continued disease. He adds (in his own words), "it is a curious fact that this same ergot is found, not only in rye, but in various kinds of common grasses, on which cattle feed, particularly among the rank grasses that grow in marshy places. It was immediately inferred that this kind of fungus thus produced in these grasses on which cattle feed, and which, in rye, produced the remarkable feverish effects on the human body, was the cause of similar effects in cattle. which, in many districts" of Great Britain, "prevails to such an extent that the farmers find it impossible to secure calves." Many other proofs, if necessary, might be adduced. My experience coincides entirely with the latter gentleman's positions.

1. That the poisoning in cattle, which affects their milk, butter, beef, and calves, results from an ergot or fungus production in grass seeds, which the cattle, at certain seasons, cat in grazing.

2. That this poisonous principle, affecting the cattle through their products, forms, in our communities, what is designated as the cause of milk sickness, formerly so common all around us.

3. That the ergot in rye results from much wet just before seed or grain setting, followed by great heat or high temperature. The spurred rye is found more especially in low or wet grounds; if at all on up-lands, in very wet seasons. The same principles hold good in regard to all grazing or pasture grasses. The seeds are found diseased or ergotized chiefly in low, wet grounds, great heat having prevailed, in rank and vigorous grass.
Hence, milk sickness prevailed fearfully, some years since, up the Licking river and in adjacent lands, opposite Cincinnati, near Brookville, and in perhaps one hundred other places, where it is now unknown. Why now unknown? The cause has been removed by clearing and cultivating the land, and draining the swamps. The remedy, then, is easy. Whenever drainage and cultivation are vigorously pushed, the disease is no longer found; because the strong pasture grass having air and sunlight, the *nidus* of the fungus seeds is not furnished, and the fungus, which is a poison *parasite*, will not grow and ergotize the seed of the grass.

Early in November of 1839 and '40, by request, I visited a very respectable family. I found them all laid down with milk sickness. The house was a hospital—all were sick. The lady was retching and vomiting in a manner unusual to me. She died during the night after. What was the condition of the lands around? The family lived in a fertile place, 11 miles from Memphis, Tenn., on the east bank of the Wolf River. The whole space, except a small strip of land, was frequently overflowed by water. In this particular case I looked round carefully for a cause of the very distressing malady, and was satisfied it resulted from something produced in the vigorous grasses of those *low lands*, since which time botanical facts confirmed my impressions, and led to the sentiments above.

It has been noticed, that at harvest onward to the middle of winter, the disease is found in its worst form. It may have occurred in the spring, but of that I have no information. If so, it must have resulted either from some of the infected seed still remaining, or from the cattle, previously poisoned continuing diseased, grazing in the low swamp pastures.

The chemical character of ergot of rye and of grasses, I have not space to furnish. Indeed, no very reliable analysis of its poisoning parts and simple elements has been given. The smut in maize, Indian corn, is produced by a *parasitic fungus* of poisonous character. I have known many cattle, in the fall season, to die from eating the smutted corn ears left by the huskers when gathering the corn. The ergot of rye and other grasses, as shown, is produced by a *parasitic fungus* of the same genus as the smut in Indian corn. The ergot is possessed of a concentrated poison, or that which is quite active in its operation. In the deleterious principle of both Indian corn smut, or ergot of rye and other grasses, there is, no doubt, a small proportion of nitrogen. This is found to be the fact in regard to all *poisonous vegetables*. Let the nitrogen be in large quantity, and the vegetable article is, in general, nutritious as tea, coffee, chocolate; but in tobacco the nitrogen is small in quantity, and the poisonous character is frightful! It ranks, notwithstanding the unnatural use made of it, as a near relative,* in poisonous character, to prussic acid, the most terrific

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* "Near relative." What the essence of tobacco is has not been decided, so that the expression "near relative" is in point. The prussic poison is an acid of peculiar character, not sour, but by combination with bases forming salts is its constitution decided. Nicotine C10 H8 N by Turner, not very certainly decided, is an alkali, yet our positions above are by no means disproved. In regard to the treatment of ergodeleteria I have said nothing; that is obvious to the experienced practitioner; it is to be removed from the system.
poison in the catalogue, to which arsenic is almost nothing in compari-
son. The essence of tobacco and prussic acid are both vegetable pro-
ducts. Let tobacco users beware; the affirmation here is no tale, but a
solemn and impressive truth.

In conclusion, I propose to call the poisoning principle of ergot of
rye and other grasses, Ergodeletaria, from ergot (French), a spur or
cock-spur, and Deletérion (Greek), poison. Translation: The poi-
sonous principle of ergot of rye and other grasses.

Remarks upon an Analysis of twenty-one Cases of Articular
Rheumatism. By Austin Flint, M.D., Prof. of Practice of Medi-
cine, in the University of Louisville.—The results developed by the
analysis of the few cases contained in this collection are of importance
only as a small contribution toward the accumulation of facts by
which, it is to be hoped, the merits, real and relative, of the several
remedies that have been noticed may be determined. As the true
point of departure for studying the effects of any or all remedies, our
science lacks here, as with reference to most other diseases, knowledge
of the average duration, etc., of a series of cases in which the disease
was allowed to pursue its course undisturbed by medicinal interference.
This knowledge cannot be voluntarily and deliberately acquired. Facts
bearing thereon can only be obtained slowly, as chance supplies them.

And, at the present moment, we cannot answer the question, What
are the intrinsic tendencies of articular rheumatism as respects its con-
tinuance, its complications, and remote consequences in the organism?
Were we able to answer this question by an appeal to facts, we should
then have a criterion by which to estimate the favorable or unfavora-
ble influences of different measures of treatment pursued in a series
of cases. As it is, in bringing statistical information to bear on the
therapeutics of the disease, we can only study the immediate apparent
effects of different remedies, and institute comparisons, in this point
of view, and also with reference to the duration of the disease, etc.,
in different series of cases treated by different methods.

So far as the few observations go which have been presented in this
paper, they lead to a distrust of the efficacy of the several remedies
employed, rather than tend to increase confidence in our ability to
control, by means of them, the progress of the disease. Some of the
remedies appear to possess more or less palliative power. This is true
of colchicum, bleeding, and opium; but as respects the duration of the
disease, it was in some cases short, and in other cases protracted, under
different remedies. This being so, it is, perhaps, more philosophical
to attribute these differences to variations in the tendencies of the
disease, in different cases, rather than to the agency of the remedies
used.

It is to be observed that under the use of several remedies suppos-
ed to possess more or less remedial efficacy in this disease, the compli-
cation most to be apprehended, viz., heart affection, became developed.
This was true of colchicum, the nitrate of potash, calomel, and opium.
Observations on the Use of Tinct. Feri. Mur. in Scarlatina. By H. L. Byrd, M.D., Prof. of Materia Medica and Therapeutics, in Savannah Med. College.—During the present year, both erysipelas and scarlatina have prevailed to some extent in this city, and the latter disease has been attended with considerable mortality among young children. After having used the tincture chloride of iron, in erysipelas, with considerable success, as recommended by Dr. Bell (page 126 of your Journal for last year), and remembering the general sequela of scarlatina—often after the most favorable convalescence—I determined to give it a trial in the latter disease. My first impressions, as to its usefulness, were strengthened by the recollection, that chlorine had been recommended in scarlatina, and a knowledge of the value of mur. tinct. ferri, in the anasarceous swelling, which so often results after an attack of that disease. My most sanguine hopes have been more than realized, experimentally, in more than twenty cases. So much am I convinced of its value, that I would not willingly exchange it for all the other remedies which I have heretofore used, or seen recommended, in scarlet fever. I am not aware of the article having been noticed before. Should such have been the case, however, I feel it due to the profession, and to suffering humanity, that the fact should be as widely disseminated as practicable. I will leave others to determine its modus operandi, and proceed at once to the narration of some of the most prominent cases, and the peculiar circumstances connected with them. The first case in which I used the mur. tinct. iron, occurred on the 10th July, 1853. The patient, a bright mulatto boy, act. eight years, exhibited the eruption very distinctly, over the entire surface of the body and extremities; the throat was very much injected, and the ulceration of the tonsils had already taken place. I ordered the bowels to be opened with salts, senna and manna, and the tincture of iron given afterwards, in eight-drop doses, diluted with gum-water, every four hours. Gargle: I drachm of the tincture to 4½ water, every three or four hours. This case went on well, and in two or three days the patient was up about the chamber. The second case was the son of H. C., Esq., aged two years. This child is rather delicate, with fair hair and full blue eyes. On my first visit (20th July), I found the skin covered with the eruption peculiar to scarlatina. The entire surface seemed to be involved in the eruption; the tonsils very red and injected; the parotids enlarged and painful to the touch, the left particularly so; the pulse 150, compressible; tongue furred, except at the edges, which were red; considerable thirst; no action on the bowels since the previous day. I directed a dose composed of ol. ricin. 3 iii. sup. carb. soda, grs. ii. tinct. opii. camph., gutt. iv. camphor liniment to be rubbed over the enlarged glands of the neck, and a flannel saturated with the same, applied afterwards; throat penciled three times a day, with a solution of 6 grs. of argent nitrat. to one ounce of rose-water. After the action of the oil mixture, the following was directed to be given in papspoonful doses, every two hours, until visited again, viz.: R. Salt tart. 3 1, mucil. G. acac. 3 iv. tart. ant. et Pot. gr. ½, tinct. op. camph. 3 i, M: iced gum-water allowed as a common drink. On my visit in the afternoon, I learned that the bowels had been acted
upon once or twice, and the pulse was reduced by the last mixture to 140, and the skin was soft, though not actually moist.

The child being delicate, and of somewhat strumous habit, and having been pleased with the success of the iron in the preceding case, and believing the indications even stronger in this one, I resolved to venture on its use at once. I directed mur. tinct. ferri. 50 drops, muel. g. arabie, 3 ii, M. a teaspoonful to be given every four hours. Suspend previous mixture and continue iced gum-water.

On my visit the following morning, I found the skin less red; pulse 130; no action of the bowels since yesterday; urine somewhat increased in quantity; tongue clean and red; throat the same; glands the same. Continue treatment to throat and neck; also, the iron as before. Evening visit—found the patient in much the same condition as at last visit: pulse 128. The next morning the skin less red; appetite increased; tongue clean and red; some thirst, which, however, is rapidly allayed by the iced gum-water; neck and throat the same. Ordered the castor oil-mixture mentioned above; directed the iron treatment to be resumed after its action. Did not call again until the following morning, at which visit I found the bowels had acted well the previous day; condition generally improved; pulse 118. The iron was continued, and the lunar caustic twice per day to the throat. The next morning the skin was much paler, the throat much improved, the pulse 110. The bowels being bound, a dose of castor-oil was prescribed, and, after its action, the iron to be resumed. The following morning, I found all the symptoms so much improved, that I did not deem it necessary to continue my visits.

The epidermis had commenced to desquamate, and the throat appeared well, beyond a slight redness, which remained for a few days, as I subsequently learned. The patient continued improving for near two weeks, when he was taken with slight fever, after one or two rides during the afternoon. During this attack, the glands of the neck, which had not entirely subsided from the first illness, became swollen and very painful, and, despite of every effort, suppuration took place on the left side. I opened the abscess, kept it poulticed with flax-seed, and put my patient on the syrup of the iodide of iron in six-drop doses, four times per day, with one-half a grain sulphate quinine, three times per day, and in a few days he was well. I have been thus minute in the details of this case, as it was the only one out of twenty in which suppuration occurred; and, further to convey a correct general idea of the course usually pursued. In no case did anasarca supervene, and the cases were usually cured in from seven to ten days. It is proper that I should remark, that occasionally other remedies, as blue pill, rhubarb, etc., were found to be necessary; and in all cases, with one or two exceptions, I made an effort to lessen the frequency of the pulse, and to determine to the surface before commencing with the iron. Minute doses of tart. ant. or ipecac., in combination with other diaphoretics, were used for this purpose; and in all cases in which the tongue grew dry under the use of the iron, it was suspended until that difficulty was removed. I found but few cases, however, in which the dryness of the tongue was traceable to the iron. I used
demulcents and cool drinks, as asked for, throughout the disease. In one case treated recently, the infant child of the Hon. E. J. H., I used no other remedy than the mur. tinct. of iron. It was given in doses of from \( \frac{1}{4} \) to \( \frac{3}{4} \) of a drop suspended in gum arabic water, three times per day. Notwithstanding the throat was considerably inflamed, and the glands enlarged, this patient convulsed rapidly, and was well in four or five days. The child was an infant at the breast, six or seven weeks old. Two other cases had previously occurred in the same family, in one of which I scarified the tonsils, and blistered the throat, finding both these expedients necessary to relieve the unusual inflammation and tumefaction of the tonsils which existed. It yielded readily to the iron, after the reduction of the high arterial excitement that ushered in the attack. In this case, complete desquamation of the epidermis occurred. The last case worthy of notice is that of Ella, aged eight years, the eldest child of Dr. R. A., now under treatment (Dec. 2d). I saw her first five days ago. The eruption was very distinct, and the throat unusually ulcerated; the tongue was coated with a brown fur, except the edges, which were red; the bowels constipated; pulse 145. I prescribed three grains each, of mass. hy- drarg., pulv. rhei., and creta preparat., to be followed by castor-oil in four hours. After the action of the oil on the bowels, the pulse remaining the same, and the skin dry, I used a mixture composed of sal. tartar, 3ss, mucil. g. acac. 3 vi., tart. ant. et pot. gr. 1/2, and paregoric 3ss, in papspoonful doses, every two hours, for ten or twelve hours; after which the mur. tinct. iron was begun with and continued in doses of ten drops, three times per day, until this morning, when it was deemed no longer necessary. This case is alluded to, simply on account of the obstinate character of the ulceration and inflammation of the throat. I have used the mixture of silver in different proportions to the ounce of water, without much benefit until yesterday, when a solution of twenty grains to the ounce was used. Gargles of tannin and pyroginous acid, were also resorted to as auxiliaries during the intervals that the caustic was suspended. A circumstance worthy of note was, that little or no swelling or enlargement of the glands of the neck occurred during the entire case. After the solution was used, as just stated, two or three times, without any perceptible improvement in the ulceration, I applied the solid nitrate of silver with complete success.—Charleston Medical Journal.

On the Influence of Chloride of Sodium on Absorption and Exhalation. By Henry Parker, M.D., of Ill.—From the experiments and inquiries into the influence of chloride of sodium upon the blood, we observed three important facts:

1st. An increase in the capacity of this fluid for the absorption of oxygen

2d. An increase in the amount of carbonic acid exhaled, and

3d. An augmented excretion of urea.

The effects observed upon these several processes are so marked that every intelligent and scientific physician must see the importance of their due consideration in the treatment of certain forms of diseased
action. With these facts before us, we infer, that the use of this substance is indicated in those diseases dependent upon or accompanied by a too small supply of the former, and an undue accumulation and retention in the system of the latter. Docs experience confirm this view, and the results of its use in such cases establish the correctness of our deductions? If we call to mind the pathology of those diseases, in which its use has been attended with the most marked benefit, we observe the existence of one or all of these three conditions, viz.: A diminished supply of oxygen, with an abnormal accumulation and retention in the system of carbonic acid and urea.

Congestive pneumonia affords us a good illustration of this,—a want of efficient oxygenation of the blood, and the due elimination of carbonic acid and those morbid substances designed for excretion. This want, oftentimes, if not generally, constitutes the only real source of danger to the welfare of the patient. That other means and other remedies may be demanded to subdue the local trouble, to remove the cause, of which this is an effect, I admit; but the period of time required to effect this is often protracted,—the patient sinking from a want of efficient oxygenation of the blood. This fact indicates the use of such remedy, combined with those adapted to the removal of the cause, as will most effectually promote the due interehange of these elements, viz., oxygen and carbonic acid. Reasoning, then, from the known effect of chloride of sodium upon the blood, in promoting the absorption of oxygen and elimination of carbonic acid, we infer that in this substance do we find such a remedy. And the fact, also, that the greatest apparent good results from its use, when such pathological conditions exist, it seems to me, furnishes strong evidence that its modus operandi, or rather, morbus curandi, is through its influences upon absorption and exhalation.—N. W. Med. and Surg. Jour.

Case of Trephining for Epilepsy. By W. Stone, M.D., Prof. of Surgery in Medical Department of University of La.—The use of the trephine as a remedial agent in epileptic convulsions, cannot be recommended with much reason or propriety; yet there occasionally occur cases where, from disease of the bones of the skull, internal ostitis or thickening of the membrane, the pain and suffering are more or less localized, and lead to the supposition that such may be the cause of the convulsive attacks mentioned in the following case:

In 1841, I was requested to see, in consultation with Dr. Davezac, Mr. F——. I found him laboring under epilepsy, which had assumed the periodic form, returning every four weeks, from the effects of which he scarcely recovered before the time of another attack. I recollected to have seen the patient before, some time in 1839, when he was suffering from tertiary syphilis, iritis, and a soft node on the forehead, which was absorbed under treatment. Dr. Davezac had encouraged him with the hope of relief from an operation, but recognizing the patient, and believing there had been absorption instead of depression, I declined operating. The disease, however, defied treatment, and having in the mean time made a post-mortem examination of a case, which showed internal ostitis, evidently the cause of convulsions, I
was induced to apply the trephine; nothing was discovered, unless a thickening of the dura mater; the patient expressed himself relieved from certain indescribable sensations; he had a slight convulsion that evening, and no return for twelve years. A year ago he had a recurrence of his convulsions, the periods between each attack becoming shorter, until they occurred every week. Applying to me again for relief, and his condition having been so much improved by the former operation, I again applied the trephine, operating on the edge of the former opening; he has again been relieved, with no return of convulsions.—N. O. Med. News.

Concluding Remarks upon the Treatment of Miasmatic Fever.

By G. S. Upshur, M.D., Surgeon U.S. Marine Hospital, Norfolk, Va.—In perusing the foregoing observations, which are taken indiscriminately from a large number of cases of miasmatic fever admitted into the hospital during the last summer, two things will strike the attention; the exhibition of quinine in large doses, regardless of the stage of the disease, and always with benefit, and the small quantity of the mercurial preparations prescribed. If the bowels were constipated, and the condition of the patient was such that he could afford to run the risk of another paroxysm, the treatment was usually commenced with a mercurial cathartic, of which there is none better than calomel and jalap, in Dr. Rush's old dose of "ten and ten." As a general rule, however, the so-called preparatory treatment, in uncomplicated miasmatic fever, is unnecessary, and usually entails a loss of time which frequently can ill be spared.

I am no advocate for the doctrine that quinine is a sedative, as that doctrine is promulgated and insisted upon by some quinine enthusiasts. As I have said elsewhere, it is, undoubtedly, a sedative, but not in the same sense that digitalis is a sedative. It may be given during the height of the febrile paroxysm, but not if the fever is the result of pneumonia or arachnitis; and he who would give quinine in these diseases to reduce the pulse, because he had seen it produce such an effect in remittent fever, would commit a great blunder. The truth is, quinine is a medicine sui generis, and its impression upon the system, like that of many other remedies, varies with the condition of the patient and the cause of his disease. Administered in large doses to a healthy person, it undoubtedly quickens the pulse, flushes the face, and brightens the eye, and so far it may be ranked as a stimulant. Furthermore, I believe, nay, I know, that in inflammatory affections of the brain and its membranes, quinine is decidedly excitant, and, given in large or small doses, will increase the head symptoms invariably. This knowledge of the effect produced by quinine upon the healthy and inflamed brain, has unfortunately led to a timid use, or almost entire abandonment, of the agent in all cases where the head is affected. And in this consists the error of those who refuse to give it in miasmatic fever, where there is even the slightest tendency to the brain. Inflammation of the brain is a very rare complication in this fever, while drowsiness, coma, and even convulsions, are frequently its accom-
paniments. There is a vast difference, however, between these symptoms and inflammation; and large doses of quinine will be found the best treatment for them.—Virginia Med. and Surg. Jour.

On Iodine Injections in Leucorrhœa. By Thomas T. Russell, M.D.—We have used it varying in strength from one to four grains of iodine with double the quantity of the iodide of potash to an ounce of water. It may be applied once or twice a day, or once every second or third day, as occasion may require. In some of the severer forms of this complaint, attended with considerable abrasion and ulceration, the diluted tincture may be used with great advantage.

Its curative powers are far greater than the nitrate of silver,—which, in our hands, often seemed to exasperate the complaint,—or any other remedy with which we are acquainted.

As an internal remedy in leucorrhœa, iodine has been recommended by Goden, Broglio, and other continental physicians; but, in our hands, notwithstanding the genito-urinary organs appear to be most susceptible to its action, it has proved of little or no value; our experience with it, in this respect, coinciding with that of Eberle, Barbour, and others of our own country.

Müller, Gimelle, and Jewell applied it in the form of ointment to the inner sides of the thighs with success, and are advocates for it.

We have never seen or heard of iodine being used as recommended in the foregoing, and do not know whether there is any originality in it; neither do we care; our object being simply to call the attention of the profession to it, with the hope that they may be so far influenced by our humble testimony in its favor as to be induced to give it a fair trial.—Amer. Jour. Med. Sci.

MISCELLANEA.

Iodine as an Antidote to Curare.—We find in the Gazette des Hôpitaux, for March 9th, the relation of several experiments by Prof. Brainard of Chicago, and Dr. J. W. Green of this city, both temporarily resident in Paris, to prove the efficacy of iodine as an antidote to the poison known in this country as curare or woorara. The following are their conclusions:

1. The solution of iodine and iodide of potassium is, within certain limits, a perfect antidote against curare, and when mixed with the poison, also in solution, destroys its poisonous effects.

2. The solution of iodine, injected immediately after the solution of curare, neutralizes completely its effects, provided we apply a cupping-glass for the purpose of arresting the circulation until the iodine unites with the poison. It neither produces suppuration, nor loss of substance by gangrene.

3. The solution of iodine, applied to the surface of a deep wound of the muscles in which the curare has been introduced, prevents the effects of the poison.

4. The solution of iodine has precisely the same action upon the
curare, that it had previously been shown to have upon the poison of the rattlesnake.

5. The identity of effects of the curare and the poison of the rattlesnake, the similarity of odor, and the effect of iodine upon their action, give much weight to the opinion already advanced, that the active principle of curare and analogous preparations is nothing more than the poison of the rattlesnake preserved in a particular manner.

An Act to promote Medical Science.—Thanks to the good sense of our legislators, this bill has become a law. We have barely room to give the bill, which we do without comment.

"An Act to promote Medical Science. Passed April, 1854. The People of the State of New-York, represented in Senate and Assembly, do enact as follows:—It shall be lawful, in cities whose population exceeds thirty thousand inhabitants, to deliver to the professors and teachers in medical colleges and schools in this State, and for said professors and teachers to receive, the remains or body of any deceased person, for the purposes of medical and surgical study; provided that said remains shall not have been regularly interred, and shall not have been desired for interment by any relative or friend of said deceased person, within twenty-four hours after death; provided, also, that the remains of no person, who may be known to have relatives or friends, shall be so delivered or received, without the consent of said relatives or friends; and provided that the remains of no one detained for debt, or as a witness, or on suspicion of crime, or of any traveller, nor of any person who shall have expressed a desire in his or her last sickness that his or her body may be interred, shall be delivered or received as aforesaid, but shall be buried in the usual manner; and provided, also, that in case the remains of any persons so delivered or received shall be subsequently claimed by any surviving relative or friend, they shall be given up to said relative or friend for interment. And it shall be the duty of the said professors and teachers decently to bury in some public cemetery the remains of all bodies, after they shall have answered the purposes of study aforesaid; and for any neglect or violation of this provision of this act, the party so neglecting shall forfeit and pay a penalty of not less than twenty-five nor more than fifty dollars, to be sued for by the health officers of said cities or of other places for the benefit of their department.

"The remains or bodies of such persons as may be so received, by the professors and teachers as aforesaid, shall be used for the purposes of medical and surgical study alone, and in this State only; and whoever shall use such remains for any other purpose, or shall remove such remains beyond the limits of this State, or in any manner traffic in the same, shall be deemed guilty of a misdemeanor; and shall, on conviction, be imprisoned for a term not exceeding one year in a county jail.

"Every person who shall deliver up the remains of any deceased person, in violation of or contrary to any or all of the provisions contained in the first section of this act, and every person who shall re-
ceive said remains, knowing the same to have been delivered contrary
to any of the provisions of said section, shall each and every of them
be deemed guilty of a misdemeanor.

"All laws, so far as inconsistent with this act, are hereby repealed.

"This act shall take effect immediately."

OBITUARY.

DEATH OF PROF. R. L. HOWARD. Dr. Howard died at his resi-
dence, in the city of Columbus, O., on the 16th of January last, in the
45th year of his age. The following are some of the particulars of
his professional life, as we gather them from the Ohio Medical and
Surgical Journal—the Journal of which he was editor at the time
of his decease. Dr. Howard was born at Andover town, Vt., in the
year 1809. Nursed in the lap of poverty, his energies and faculties
were cramped, and being destitute of the means of acquiring even a
common education, he was necessitated to employ himself at hard
labor with an ax and maul through the day, and then to take as much
of the night as he could spare from sleep, for the purpose of improving
his mind. He formed the resolution of studying medicine when quite
young, and, even while a student, he was frequently compelled to sus-
pend his studies and resort to drudgeries, in order to get the means to
further his design. Possessed of an indomitable perseverance, he
surmounted all difficulties, and at the age of 22, graduated at Berk
shire Medical College, Mass. After this event, he settled in the prac-
tice of his profession, at Windham, Ohio, but soon after removed to
Elyria, Ohio. During the first ten years of practice, his business was
not sufficient to place him above want. In 1844, he removed to Colum
bus, O., where, in the capacity of a general practitioner, his success
was rapid. In 1847, on the removal of Willoughby Medical School
to Columbus, he was appointed to the chair of Surgery, and subse-
quently to the same chair in the Starling Medical College. After the
death of Prof. Butterfield, he assumed the editorial management and
proprietorship of the Ohio Medical and Surgical Journal, and, as
before stated, was editor of the same at the time of his death. As an
editor, he was always courteous and dignified, knowing but one objeet,
and that, the honor and dignity of the profession; as a surgeon, he was
among the first of his State, if not of the age. In him the profession
have lost an earnest co-laborer, and the science of medicine a warm
and devoted friend.

DEATH OF J. S. SHULER, M.D. Dr. Shuler died in San Francisco,
Cal., on the 27th of February last, aged 63 years. Dr. S. was a native
of this State, (N. Y.) and, for nearly twenty-five years, practised his pro-
fession in Lockport. He was a licentiate of the New-York State
Medical Society of 1818, and some time after received, we understand,
the degree of M.D. from the Ohio Medical College. During the
period he resided in Niagara county he occupied a high position among
his professional brethren. In 1843 he was elected president of the
Niagara County Medical Society, and on several occasions occupied
offices of distinction in the gift of the society. In 1850 he emigrated to California, and soon after his arrival in San Francisco established a private hospital in Mason street, in which he exercised principally the duties of his profession to the time of his death. Through a long series of years (it is said by one who knew him well) he maintained the honor and dignity of his profession. Ardently attached to the profession of his choice, he was never more happy than when in the active exercise of its arduous duties. Benevolent in his disposition, his doors were closed to none who required his professional services, and at no time, from the opening of his hospital to his death, was he without patients who were receiving gratuitously the benefits of his professional skill. He died after an illness of only twelve hours, of apoplexy.

**Death of Nelson Shook, M.D.**—Dr. Shook died in this city (N. Y.) on the 27th day of March, in the 41st year of his age. He was a graduate, we believe, of the College of Physicians and Surgeons of this city of 1836. In the summer of 1836 he was Resident Physician of the New-York Hospital, and published in the *New-York Journal of Medicine and Surgery*, 1839, a report on the cases of fever admitted into that Institution under the care of Dr. F. U. Johnston.

**Death of George Cheyne Shattuck, M.D.**—Dr. Shattuck died in Boston on the 18th of March, in the 71st year of his age. He was a native of Templeton, Mass. He was a graduate of the University of Pennsylvania in 1807, where he presented an inaugural dissertation on *Hydrocephalus Internus*. Previous to graduation, he had obtained the Boylston prize medal for the best dissertation "On the difference between mortification produced by an external cause, and that which arises from a constitutional defect; the diagnostics and proper mode of treatment." This, and two other dissertations by the same author, were published in a volume at Boston in 1808. Dr. Shattuck was gifted above common men in the faculties of quick discernment and ready adaptation. His discrimination in disease was remarkably acute, and he brought to the aid of his patients the advantages of a quick eye, a large experience, a kind heart, and a prompt interposition of the appliances of the healing art. In his life the profession of medicine will find much to remember—of great and honorable purpose, of philanthropy, of scientific and comprehensive knowledge. His name will be transmitted to posterity as one of the noblest benefactors of medical science, for which the city of Boston is so eminently distingished.

**Death of Dr. Stephen Cummings.**—Dr. Cummings died at Richmond Island, Me., on the 2d of March last, aged 82 years. He was a native of Andover, Mass.; studied medicine with Dr. Kittridge, and, after completing his studies, commenced practice in Waterford, Me., in 1794. In 1801 he removed to Portland, where he acquired a good reputation and an extensive practice.
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## NEW SERIES.

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