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# The Canada Lancet.

VOL. XXVIII. |

TORONTO, MARCH, 1896.

| No. 7.

## CLUB FOOT.\*

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In order to appreciate properly the problems which present themselves in dealing with club-foot, it is necessary that we have an intimate knowledge of the normal anatomy and architecture of the foot. The foot has been aptly described as a tripod having one point of support at the heel and two in front. In the skeleton the longitudinal arch terminates behind in one bone, the os calcis, but as it proceeds forward the arch widens, so that in front it terminates in the five meta-tarsal bones, and rests chiefly upon the first and fifth. Transversely each foot has a half arch. When the feet are brought together, so that their inner borders are in contact, there is thus formed a complete arch whose extremities are found at the outer borders of the feet. Thus the two feet are complimentary the one to the other, and when brought together so that their inner margins are in contact there is a dome shaped space covered by two arches. The weight of the body in standing is transmitted through the leg to the astragalus through which it passes chiefly to the os calcis, as this bone lies almost directly in the line of transmission of the body weight. The downward pressure, however, falls upon the inner side of the os calcis. The astragalus is so placed in regard to it that it tends to roll the foot over upon its inner margin, the sustentaculum tali having no direct support. In walking, however, as each foot is placed upon the ground there is an outward impact which makes necessary the support which is found at the outer margin of the foot. The

continued existence and normal condition of these arches are necessary for free, graceful and easy movements. They are maintained in position partly by the form of the bones, partly by ligaments which act as tie-beams and more especially by muscles. Behind, the longitudinal arch rests upon the tubercle of the os calcis, the rest of the bone not coming directly into contact with the ground. The head of the first meta-tarsal also makes direct contact, while the fifth meta-tarsal has its head and base in contact with the ground.

The most important ligaments which assist in supporting the arches are the inferior calcaneo-scapoid, the two plantar calcaneo-cuboid ligaments and the various slips of the tendon of the tibialis posticus as they pass through their attachments to the different tarsal and meta-tarsal bones. The plantar fascia also acts as a powerful support to prevent spreading of the pillars of the arch. The chief muscles which support the arches in their normal condition are the tibialis anticus, tibialis posticus, flexor longus digitorum, flexor longus hallucis and peroneus longus.

There are no immovable piers to prevent separation of the extremities of the arches, hence the work of maintaining them in their normal condition falls upon the ligaments and muscles chiefly. In the skeleton the parts of the bones above named come directly into contact with the ground, and the work of holding the foot in its position falls chiefly upon the muscles. The astragalus, the only bone of the foot which receives the whole weight of the body at any time, is so placed that

\*Abstract was read before the Toronto Medical Society.

it articulates by means of its large posterior facet with the os calcis. Its head, however, is received into a large socket which is formed for it by the sustentaculum tali, the scaphoid and two ligaments which pass between the os calcis and the scaphoid, namely, one below, the inferior calcaneo scaphoid, and another on the outer side, the external calcaneo scaphoid ligament. There are four ligaments which hold the astralagus in its place, of which the interosseous is the most powerful. The external lateral ligament is a short band which proceeds from the outer surface of the astralagus to the outer surface of the os calcis. The posterior ligament passes from the posterior border of the astralagus to the os calcis. The dorsal ligament passes from the head of the astralagus to the scaphoid. The two lateral ligaments of the ankle joint also help to keep the astralagus in its place.

The inferior calcaneo scaphoid ligament fills up the angular gap between the sustentaculum tali and the scaphoid bone, and is an important element in forming the socket for the head of the astralagus, and is placed at the point of greatest strain in supporting the longitudinal arch. In contact with it upon its inner side is the tendon of the tibialis posticus, so that this point upon which falls so much of the strain in bearing the

body weight, receives both muscular and ligamentous support. The cuboid is bound to the calcaneum by four ligaments, the two plantar ligaments, and one dorsal and one internal ligament. In maintaining the longitudinal arch of the foot, the plantar ligaments are second in importance only to the inferior calcaneo scaphoid. The superficial one passes from the under surface of the os calcis in front of the tubercles, and extends to the inferior surface of the cuboid and has fibres which extend broadly to become attached to the three middle metatarsal bones.

The tibialis anticus has its origin on the front of the leg, and passing down to the inner margin is inserted into the internal cuneiform bone, and the base of the first metatarsal bone. It thus serves (1) to flex the ankle joint; (2) to draw upward the inner border of the foot and thus invert the sole; (3) to adduct the front portion of the foot. The second and third of these movements occur chiefly in the mediotarsal and calcaneo-astragaloid joints. In walking this muscle lifts the anterior part of the foot, enabling the foot to clear the ground when the leg is swinging forward. The tibialis posticus has its origin in the back part of the leg, passes downward behind the inner malleolus contained in a synovial sheath which accompanies it to its insertion upon the scaphoid bone. It also sends several fibres to be inserted into the sustentaculum tali, and all the other tarsal bones except the astragalus. It also sends fibres of insertion to the bases of the 2nd, 3rd, and 4th meta-tarsal bones. This powerful muscle therefore acts, (1) to adduct the front of the foot; (2) to invert the sole; (3) to extend the ankle; (4) to support the longitudinal arch. Its insertion into the scaphoid enables it to draw this bone backward against the astragalus, preventing the downward movement of the arch at the point where the greatest strain falls upon it. The flexor longus hallucis arises in the back part of the leg, and passes downward and inward behind the lower end of the tibia in a groove at the back of the astragalus under the sustentaculum tali—passing forward to be inserted into the base of the last phalanx of the great toe. Thus passing under the sustentaculum tali it serves as an important support to prevent the rolling inward of the foot when the weight of the body is being transmitted through the astragalus to the ground.



FIG. 1—Showing Incision in Phelps' Operation.

The flexor longus digitorum also passes from the back of the leg behind the inner malleolus beneath the internal angular ligament, and forward to its insertion into the toes. The peroneus longus arising from the outer side of the leg passing downward behind the external malleolus beneath the external angular ligament to the outer border of the foot, changes its position, and through a groove in the cuboid bone it passes obliquely inward and forward across the sole of the foot to its insertion near the inner border of the sole, into the base of the first meta-tarsal bone and the internal cuneiform. This muscle acts, (1) to extend the ankle joint; (2) to adduct the anterior part of the foot; (3) to depress the inner border and so to evert the sole. By drawing backward and outward the base of the first meta-tarsal bone, it tends to render more concave the antero-posterior and transverse arches of the foot. Thus while in part of its action it tends to oppose the tibial muscles, on the other hand, it assists them in maintaining the longitudinal arch. The tendo Achillis, by which the powerful muscles forming the calf of the leg are inserted into the posterior end of the os calcis, raises the heel from the ground lifting the weight of the body, and slightly adducting the foot and inverting the sole. The latter motion occurring at the joint between the astragalus and the calcaneum.

*Pathological Anatomy.*<sup>1</sup>—The various abnormal positions assumed by the foot, and thus constituting its deformities are only exaggerations of positions which are normal and physiological.

There are four main divisions made of the deformities of the foot :

- (1) Talipes equinus—exaggerated extension.
- (2) Talipes calcaneus—exaggerated flexion.
- (3) Talipes varus—exaggerated adduction.
- (4) Talipes valgus—exaggerated abduction.

It is seldom that any one of these exists alone, It is generally associated in some degree with another form, for example the equinus and varus which when combined constitute the ordinary club-foot, also calcaneus and valgus are frequently associated. The term club-foot is generally employed to designate the combination of an excessive degree of extension and adduction. This deformity may be defined as consisting of inversion, torsion and depression of the front part of the foot accompanied by elevation of the heel so

that when the subject of deformity is in the erect position the outer border of the anterior portion of the foot alone constitutes the walking surface. The plantar surface is not directed downward but in a varying degree backward and upward. The degree of severity of the deformity will depend upon the amount of exaggeration of positions that are in themselves normal. This is the most common deformity of the foot constituting about three-quarters of all cases, and is mostly congenital. In a typical case all the structures of the foot, bones, ligaments, muscles, fasciæ and skin take part in the distortion.

The deformity is not alone one of the foot proper but has also to do with the relationship of the foot to the leg, and even the leg bones in strongly marked cases are abnormal through relative shortening of the tibia, especially of its inner border, while the fibula at its lower end occupies a plain anterior to the normal, so that a line joining the centres of the malleoli looks anterior and is directed more inward than in the normal condition. The scaphoid bone is found articulating with the inner surface rather than with the anterior end of the head of the astragalus, and in some cases an articular facet is found on the scaphoid where it articulates with the tibia and there is frequently a firm ligamentous attachment between the scaphoid and the inner malleolus



FIG. 2.—A case, 10 yrs. old, corrected by tenotomy.

which constitutes a marked obstruction to the rectification of the varus. Sometimes a separate synovial membrane lines the false joint thus formed between the tibia and the scaphoid.

The facet for articulation of the scaphoid is rather underneath and internal than at the anterior part of the head of the astragalus. The cuneiform bones follow the direction which has been assumed by the scaphoid, and are distorted in shape according to the amount of pressure they have withstood. The entire inner border of the foot when measured from the inner malleolus to the anterior extremity is sometimes not more than half the distance from the external malleolus to the extremity of the little toe. The cuboid bone is displaced inward and the anterior extremity of the os calcis constitutes a part of the walking surface which may be readily outlined by palpation.

The os calcis is drawn from a horizontal position to one approaching a vertical and is rotated on its long axis. This rotation is favored by the tendo Achillis being inserted more toward the inner aspect of the bone than in a normal foot. The external border of the os calcis is sometimes elongated to the extent of one-sixth its own length and curved on its outer aspect thus accounting partially for the incurration of the distal portion of the foot.

The cuboid bone maintains its association with the os calcis but is generally dislocated downward as well as inward and follows the trend of the anterior part of the foot. The cuboid generally deviates little in shape from the normal but there is sometimes a slight increase in the length of its external surface.

The scaphoid is generally much changed. Posteriorly it may present two facets, the inner articulating with the internal malleolus and the outer with the inner aspect of the head of the astragalus. The internal surface is often not more than one-third the thickness of the external. The greater part of the scaphoid lies internal to the astragalus instead of in front of it.

The deviation from the normal shape of the astragalus is very marked. It is tilted forward on its transverse axis, so that only the hinder part of its upper articular surface is in contact with the tibia, and the part which corresponds usually to the anterior portion of its upper arti-

cular surface projects beneath the skin of the dorsum of the foot. The body of the bone is deeper in front than behind; the posterior facet for articulation with the os calcis is increased in



FIG. 3.—Corrected by tenotomy and *brisement forcè*.

extent to nearly twice the normal size. The external border of the neck is much elongated and convex from before backward, the neck being directed obliquely inward beyond the normal degree and its inner border is very short.

In the more severe varieties the normal depression on the dorsum of the foot just in front of the fibulæ will be occupied by an irregular mass of bone which is the astragalus placed so far forward that the bones of the leg behind are not resting on this bone but upon the os calcis—this resulting from long continued contraction of the tendo Achillis. In such cases the astragalus is so altered in shape as to be unrecognizable.

Both the ligaments and tendons are shortened on the inner border and plantar aspect and relatively lengthened on the outer border and dorsal aspect. The normal longitudinal arch of the foot is shortened and twisted and its anterior pillars moved inward. The inferior calcaneo-scaphoid and the plantar calcaneo-cuboid ligaments and the various slips of the tendon of the tibialis posticus are all shortened. The plantar fascia also, which serves as a tiebeam between the extremities of the pillars of the arch and even the

skin of the plantar surface and internal border are much shortened. By reason of the foot being so much extended the tibialis anticus is put on the stretch and helps to keep the inner border of the foot elevated. The abductor hallucis is shortened in a marked degree, also the flexor hallucis, and the long flexor of the toes; in fact, even in a mild case of the deformity there is no structure of the foot which is not modified by its abnormal relationships and alterations of function.

The position of the posterior tibial artery is worthy of careful observation. Even the normal artery is in danger when it is necessary to cut the structures about the inner malleolus; and sometimes the vessel is drawn away from its proper relationships. In the dissected foot which is here presented, which was taken from a hydrocephalic infant, it will be seen that the posterior tibial artery lies directly between the tibialis posticus muscle and the tibia.

*Etiology.*<sup>3</sup>—Various theories have been propounded setting forth the causes of club foot, but up to the present no general concensus of opinion has been reached. The theories which have met with a certain amount of favor are:—

- (1) The dynamic or spasmodic muscular contraction theory.
- (2) The mechanical theory.
- (3) The arrest of development theory.
- (4) The defect in the germ theory.

*Diagnosis.*—The determination of the existence of this deformity is seldom a matter of difficulty. In infancy there is sometimes a spasmodic condition of the tibiales which cause the foot to simulate this deformity. Manipulation, however, by the mother or nurse with massage, for a short time, soon restores the foot to a normal condition.

The magnitude of the deformity varies much at birth, depending greatly upon the natural formation of the foot. If the child be of stout build and strong bone the foot is likely to be short and the deformity hard to correct. On the other hand, if the child be of slender build, and the foot long and bones in general rather small, the deformity, though quite as marked in degree, is much more easily corrected. The degree of resistance varies much from the mildest ones in which complete correction can be at once made and retained by the hand to those in which resistance to cor-

rection is offered by greatly deformed bones, shortened ligaments, muscles, fasciæ and skin, to such an extent, even in infancy, as to entirely preclude the possibility of rectification without cutting, lacerating or prolonged stretching of the above structures.

The difficulties in the way of rectification are greatly increased with age. In walking, the weight is borne in such a manner as to confirm the foot in its abnormal position. Movement at the astragalo-crural joint becomes less, a bursa develops where the foot comes into contact with the ground, and in the adult corns, ulcers, and sometimes sinuses not only make walking very painful or impossible, but also introduces complications which stand in the way of the surgeon when treatment is to be adopted.

*Treatment.*—Cases of club-foot vary greatly in the amount of deformity, and in the difficulty that opposes the surgeon's efforts to correct. When the foot is very short and chubby the course of treatment is rendered much more difficult. In some instances the foot may be placed in such a position as to correct the varus without any for-



FIG. 4.—Three years elapsed before photo showing correction was made.

cible manipulation. The equinus can seldom or never be corrected without prolonged treatment or operation. <sup>3</sup>Operative treatment for the correction of club-foot is of comparatively recent date.

From the time of Hippocrates the treatment consisted in the use of manipulation and bandages, or fixed apparatus and hygienic measures. The more severe cases of the deformity were regarded as hopeless malformations, and were the opprobrium of surgery. In the year 1784 Thilenius advised section of the tendo Achillis, which was done by an open wound, and gave a good result. In 1804 Sartorius divided the same tendon, but the result was less successful. Other operations of a similar kind, performed at a later date, were followed by suppuration and sloughing of the tendons.

Great advance was made by Stromeyer, who, in 1834, advised making the external wound a mere puncture, thus gaining for himself the credit of introducing the method of subcutaneous section. This method was soon established and adopted as a safe and reliable method of treating club-foot in Germany, in France and in England. To Dr. Little, who himself suffered from deformity of the foot, is due the credit of having appreciated the value of Stromeyer's method of treatment before the profession of England, the valuable results of his experiments.

A further advance in the operative treatment of this condition was made when the principles

were adopted that were first scientifically formulated by Sir Joseph Lister.

The treatment of these cases must vary according to the age of the patient and the conditions present in the deformed foot. In a child the bones are to a large extent cartilaginous while the ligaments, tendons, fasciæ, and softer tissues are more yielding than in the adult; consequently in children under two or three years of age the use of the knife is seldom necessary, though a wise employment of operative measures may greatly shorten the time and lessen the difficulties of treatment. In children beyond this age and in adults there are few cases that can wisely be treated without the employment of the knife.

For the purpose of treatment the deformity should always be considered as consisting of two elements, first and chiefly, a deformity of the foot *per se*, second, an abnormal relation of the foot to the leg. In all cases it is better that the deformity of the foot should be entirely corrected before any effort is made at rectifying the deformity which exists at the astragalo-crural joint. By proceeding in this manner the prominence at the outer and dorsal aspect of the foot over the cuboid and os calcis may be regarded as a fulcrum over which may be pried the distal portion of the foot as one end of a lever while the os calcis in continuation with the leg bones is the other portion of the lever. In this way a powerful mechanical advantage is gained in the correction of the varus.

In dealing with infants and young children an anæsthetic may be administered and the distal portion of the foot having been grasped by the hand of the operator it is strongly deflected outward and a covering of absorbent cotton having been placed upon the foot and leg as far as the upper part of the tibia a retentive dressing is applied. It is necessary in this case to see that the prominences, *e.g.*, the head of the first metatarsal bone and the bend at the os calcis and cuboid bones are carefully and deeply padded so as to pre-

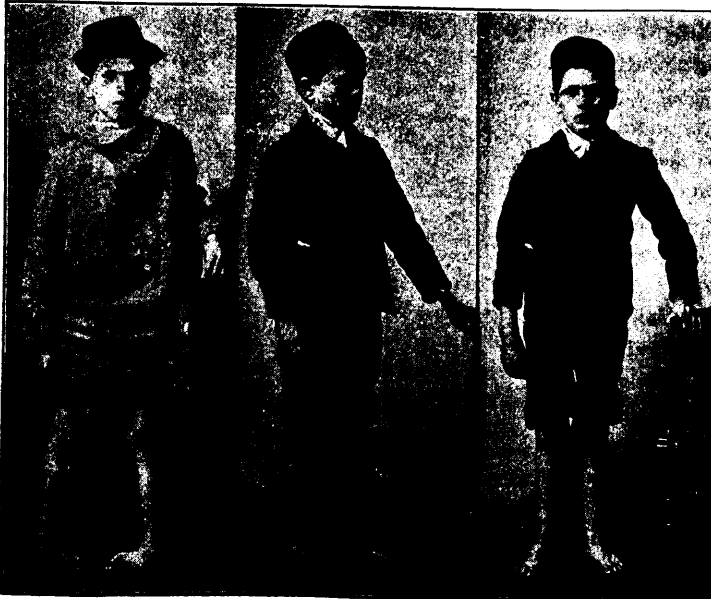


FIG. 5.—Corrected by open incision.

vent abrasion. The most eligible of the fixed dressings thus employed is plaster of Paris.

The success and satisfaction attendant upon treatment will depend much upon the quality and preparation of the dressing employed. The plaster of Paris should be of the highest grade, that which is used by dental surgeons (sold as F. F. plaster). It should be so preserved that it will not be exposed to the air or to moisture. The bandages are made by tearing into strips of a necessary width some light, open meshed material. For this purpose the writer has found what is sold in Canada as book-muslin the most satisfactory form of web as foundation for the plaster. In the United States, surgeons employ what is purchased in the shops as crinoline. This should be torn into strips varying from two to five inches in width and from three to six yards in length, the smaller being used in the treatment of infants and children while the larger are found more satisfactory in dressing the feet of the adult.

Various machines are used for rolling the bandages, embodying the plaster as the rolling is done. The work, however, may be quickly and satisfactorily accomplished by rolling with the hands, spreading the plaster on the web, and rubbing in evenly with the edge of a table knife or druggist's spatula. The bandage should then be wrapped in paper and kept in a tin box ready for use.

In manipulation of the foot of a child, with a view to making correction, it is well to bring only the softer portions of the surgeon's hand into forcible contact with the parts that are to endure most pressure, *e. g.*, the head of the first metatarsal bone and the prominence over the cuboid and astragalus. If some minutes are occupied in moulding the foot into shape, and if the correction be carried during manipulation, further than it is intended to retain the foot in the dressing, the likelihood of causing abrasions or sloughing is rendered much less. Pressure with the tips of the fingers or with one or two fingers upon the plaster, while it is setting may be productive of unpleasant results, causing ulceration of the parts beneath. Constant watchfulness is necessary, but, when due care is exercised, the utmost confidence may be felt that no harm will result from pressure.

The dressing applied should be left on for a period varying from one to several weeks, and having been removed the foot should be left without dressing for several days, massage to be employed and the foot frequently manipulated so as to stretch the shortened structures at the inner side. This may be accomplished by an intelligent nurse or mother without creating any alarm in the child, thus favoring the development and healthful condition of the foot.

A second dressing is applied in the same manner as the first, the foot having been so everted as to carry the correction further than was done on the first occasion. After a week or more this dressing is removed and the case treated as before. These dressings are repeated from time to time until the varus is quite over-corrected and the distal portion of the foot is strongly everted.

If the child has been walking, and for this or any other reason the speedy correction of the deformity is desired, more forcible manipulation may be employed while using an anæsthetic from time to time and the over-correction of the varus be more speedily effected. Time, however, is an important element in the satisfactory correction of this deformity, as relative atrophy and shortening must result in the tissues of the outer side of the foot, while lengthening and growth must occur in those of the inner side, if the remedial measures are to be followed by an ideally successful and permanent result. In his earlier experience the writer frequently performed tenotomy especially of the tibiales at the commencement of his treatment, but now finds it quite unnecessary in most children under three or four years old.

Though the manipulation and dressing as above



FIG. 6.—The Day Shoe.



described nearly always causes the child to cry vigorously at the time if done without anæsthetic, yet the evidence of suffering passes away quickly, and, from the first, the child sleeps and rests as if nothing unusual had occurred, and, in at least one instance in a girl of four years, complete correction of a well marked deformity was effected, the foot, however, not being short nor very difficult to replace, without any crying of the child except at the first dressing.

It is quite unnecessary that at any stage of the treatment abrasion should occur if care is taken in manipulating the foot to bring only the soft parts of the operator's hand into contact with the foot, and if evenly distributed padding, with due attention to the prominent parts of the foot, may be used.

In the management of these cases in infants, the inversion and inward torsion of the foot should be well over-corrected sometime before the period when the child may be expected to walk, so that treatment may be adopted for the correction of the equinus, which depends largely upon the abnormal relationship which exists between the parts at the astragalo-crural joint.

In correcting the equinus the deformity which demands our attention is dependent upon the great increase in the depth of the anterior portion and the thinness of the posterior portion of the astragalus, upon the shortening of the tendo Achillis, the flexor longus digitorum, flexor longus hallucis, tibialis posticus, posterior annular ligament, fascia and skin at the back of the foot and ankle. In many instances this deformity may be satisfactorily and permanently corrected without the use of the knife, but much time is gained, and the patient is saved from suffering by subcutaneous section of the tendo Achillis. This tendon presents the chief obstruction to rectification, and when it is cut, nearly all cases may be so flexed in the direction of the dorsum of the foot as to bring the plantar surface up to an angle of  $90^\circ$  or less with the axis of the leg. The manipulation and dressing at this stage of the treatment are conducted as in the former part. The unexperienced, however, may easily fall into error and apply his dressings in such a manner as to cause abrasion in front of the ankle. As soon as the application of plaster of Paris is commenced, the foot must be held in the position it is intended to

remain in after the plaster has hardened. If the foot is permitted to remain extended while the bandages are being applied, and then the foot is flexed before the plaster hardens, undue pressure is thus made in front of the ankle which may cause extensive sloughing.

It is quite unnecessary to have brought the treatment to this stage until the time has come when the child may be expected to walk. The weight of the child and the action of the foot in walking constitute a most important factor in the rectification of the deformity and the restoration of normal function. There is a great difference between a child recumbent and a child walking.

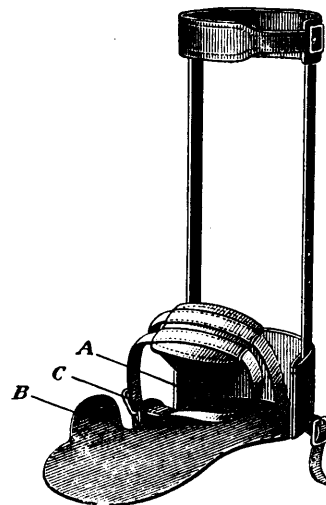


FIG. 7.—The Night Shoe.

A child in arms is yet free from the complications caused by falling of the weight of the body on the foot as it is retained in its abnormal position. If previous to this period the foot has been so changed that when the child begins to walk, the plantar surface comes into contact with the ground, then the weight of the body is changed from a deforming to a correcting agent.

During this period of treatment, *i. e.*, the period antedating the time when the child walks, various mechanical means in the way of club-foot shoes have been employed, but in the opinion of the writer there is no means of correction so effectual and satisfactory as that above described. The fixed dressings referred to, do no harm in producing atrophy or in any other way, if sufficient time is permitted between dressings for massage.

<sup>6</sup>When, however, correction of the varus and

equinus has been fully made, the time has come when mechanical appliances may be advantageously employed. Though other mechanical means than that referred to in the fixed dressings may be quite unnecessary for the rectification of the deformity, yet for the retention of the foot in its new position, and for the prevention of relapse, effectual mechanical appliances are essential. The shortened tissues of the inner side, when stretched so as to permit even of over-correction, long manifest their elasticity and a disposition to invert the foot. Also where the weight of the body does not fall upon the arch of the foot as in walking, but where the anterior portion of the foot is deflected inward, it manifests a tendency to resume its original position, the heel being drawn up, and the anterior portion of the foot depressed. This is the case especially at night when, the patient lying in bed, the bed-clothes draw the foot downward toward its old position of deformity; hence there is necessity for mechanical means to be employed to retain the foot in its corrected position, both in the day-time while the patient walks about and also at night.

To prevent relapse in the day time the most successful means is employed when a boot is properly constructed. The last should be broad, and should differ from an ordinary last in being everted at the part which corresponds to the mid-tarsal joint. A model for making lasts of this kind may be obtained by taking a good last made for a normal foot, sawing through its inner border at the part which corresponds to the medio-tarsal joint putting a wedge of say, one half or three-quarters of an inch into the cut thus turning the anterior part of the last outward; the lasts which are made following this model will be suitable for the construction of a proper boot. The boot should always fit accurately and should be made of firm leather. The ordinary heel-counter should be carried forward at the outer margin as far as the base of the fifth meta-tarsal bone and a resisting counter should be put in at the inner margin opposite the head of the first meta-tarsal bone. The sole of the boot and the heel should be projected latterly outward and should be built thicker than the heel and sole at the inner margin. In this way when the patient puts his foot down upon the ground the foot is made to turn into a position opposite to that in which it was found

originally and the forces at work through the agency of the boot are made to counteract the tendency to relapse.

The appliance used at night is an exceedingly simple one, consisting of a foot piece made to fit correctly the plantar surface of the foot and attached at an angle of say,  $80^{\circ}$  to a leg piece which reaches to the upper portion of the calf, a heel guard being attached to the lower part of this leg-piece and extending upward four or five inches. A strap passes over the instep and holds the heel well down into the angle between the foot piece and the leg piece, thus keeping the foot in its relation to the leg at an angle of  $70^{\circ}$  to  $80^{\circ}$ , during the night. At the same time a strap may pass over the dorsum of the foot and between the foot and the sole plate and through a loop at the inner margin in such a way as to lessen the natural tendency to incurving of the foot at the mid-tarsal joint. These appliances are shown in Figs. 6, 7 and 8, and on the patients who are here exhibited.

Allow me to emphasize just here that the appliances described are not intended to be employed for the *correction* of club-foot, but only to *prevent relapse* in a foot that has been fully corrected.

There are classes of cases which are more difficult to treat than those above described. Where it is found impossible or impracticable to correct the deformity by manipulation, the tenotome should be employed for the cutting of tendons or bands of fascia which stand in the way of rectification. There is a large proportion of cases that may thus be treated making the incisions subcutaneously. The tendons most demanding this section are the tibialis posticus, the tibialis anticus, and the tendo Achillis. The plantar fascia, a portion of the internal lateral ligament and the inferior calcaneo-scaphoid ligaments also require section in a considerable number of cases. The tibialis posticus and tibialis anticus are best cut by an incision that is made anterior to the internal malleolus quite close to their insertions. The tendo Achillis should not be cut until the varus has been fully corrected. In cutting this tendon its narrowest part should be sought after, which is at a short distance above the point of its insertion. Here the tenotome should be introduced at its inner margin so that the point may be directed away from the posterior tibial artery. The knife

may be introduced deeper than the tendon so as to cut toward the surface or may be introduced between the skin and the tendon so as to cut inward. The internal lateral ligament and also the calcaneo-scapoid may be cut through the opening made in reaching the tibialis posticus. In cutting the plantar fascia it is well to introduce the tenotome at its inner margin as close to the tubercle of the os calcis as possible. By so doing the knife is made to pass behind the plantar arteries and cutting may be done freely without any fear of hæmorrhage. The same precautions should be taken to secure an aseptic condition of the foot before making these subcutaneous sections as if an open wound were being made.

The next class of cases is such that rectification cannot be made even when tendons and fasciæ are cut subcutaneously. Here the simplest and most satisfactory method is that which is known as "Phelps' Open Section." Phelps himself begins the operation always by cutting the tendo Achillis and then rectifying the deformity as much as possible. Personally I much prefer to commence by making an incision as he describes a little in front of the internal malleolus, extending downward and forward in the concavity at the inner margin of the deformed foot as far into the plantar surface as may be necessary. Through this incision are cut all the structures which will stand in the way of rectification. There may be especially enumerated the tibialis posticus, the tibialis anticus, the fascia at the inner border, the internal lateral ligament, the abductor hallucis, the short flexor, the plantar fascia, the long flexor of the toes and the calcaneo-scapoid ligament. It must not be assumed that all of these structures are to be cut as soon as the incision is made. In many instances the deformity may be corrected when only the skin and the superficial structures have been cut. At each stage of the operation when any obstructing band has been incised an effort should be made with the hand to place the foot in a correct position. If this can be done no further cutting is required. However, if the foot cannot be placed in a corrected or rather an over-corrected position then further section is needed. It is claimed that some cases cannot be corrected even in this manner. If so, the next step is to make a linear section through the neck of the astragalus. Should it still be impossible to fully

correct the foot then a wedge-shaped piece should be removed from the outer aspect of the os calcis. Personally I have not found it necessary in more than one case to make a section of bone to correct any deformity of the foot.

The dressing of this wound is an important matter. In my first case I packed the wound from the bottom so as to control hæmorrhage. In this case healing occurred leaving a deep hollow at the inner margin of the foot, and other cases I have seen where a deep scar remained extending to the bone. I now dress over the wound leaving it without any filling. I find it quite possible to leave the dressings on for a period of two weeks or more without having any considerable elevation of temperature and on removing the dressings, frequently find the wound healed and the surface even. Hæmorrhage in this operation is very seldom troublesome. The vessels and nerves may be seen and avoided. After the dressing of the wound a plentiful layer of absorbent cotton is placed about the foot and limb as high as the knee and the limb incased in plaster of Paris.

When it is thought that the wound made at the inner border and plantar surface of the foot has sufficiently healed, then section of the tendo Achillis should be made, and the equinus corrected. In my experience there are few feet that may not have this portion of the deformity well corrected when complete section of the tendo Achillis has been effected. The foot must now be forced into a fully corrected position, *i. e.*, to say into one in which the plantar surface will make an angle of 80° or less, with the axis of the leg, and must then be retained in the fixed dressing for some weeks.

After section of any of the tendons or structures above named, there need be no hesitation in drawing the segments of the cut tissue as far apart as the circumstances require. It is not uncommon, for example, to draw the segments of the tendo Achillis an inch and a quarter away from each other. If asepticism has been carefully secured union will be good, and the gap will be thoroughly filled in.

There remains still another class of cases. That in which the equinus cannot be fully corrected after section of the tendo Achillis. When the anterior portion of the articulating surface of the astragalus is so broad that it cannot be wedged in between the malleoli it may act as a fulcrum,

and if too great an amount of force be employed the entire foot be dislocated forward in its relation to the leg. This accident occurred with me in one case. Under these circumstances it is considered justifiable to remove the astragalus.<sup>6</sup> The removal of the bone has been favorably reported upon by several Americans, notably Morton, of Philadelphia, and has also been frequently performed in Germany. Koenig, however, has recently asserted that instead of removing the astragalus he prefers to persist in efforts made at short intervals to force the astragalus into the proper position.

Bone operations of all kinds on the foot, are to be avoided if possible. They maim the foot to an extent that is done by no other method. The foot in congenital varus is always short and imperfectly developed, and by the removal of a section of bone from the outer border the foot is made still shorter, and its growth is possibly interfered with. On the other hand, the open section at the inner border of the foot, or the subcutaneous section of obstructing bands of tissue, so that the foot may be corrected by manual force, permits of a lengthening which is greatly of advantage both in appearance and usefulness. With increased experience I am more and more disposed to employ a greater length of time, and to put forth greater efforts to rectify the deformity by manual force, as much as possible avoiding cutting operations where the circumstances do not urgently demand that they be employed. I find that the less cutting that has been done the more perfect the form and function of the foot, that is to say, where the treatment of the case has been sufficiently persevered with to secure eventually the complete correction of the deformity. I show some cases here to-night in which voluntary motion at the ankle-joint is through an arc of 60 degrees, and in whom the plantar surface makes an angle of less than 80° with the axis of leg. In these cases the position of the feet must be regarded as most satisfactory. It is questionable whether any person seeing some of these children walk, or even examining the foot, would suspect that ever they were cases of club-foot.

Even when the deformity in the foot has been quite corrected, and when the relation of the foot to the leg at the astragalo-cuboid joint has been set right still there is in some cases disagreeable

pigeon-toe manifested. This is due to the twist in the leg bones, by which the external malleolus is carried further forward than normal in its relation to the internal. This may be corrected by osteotomy of the leg bones, and then setting the segments in such a position as to correct the pigeon-toe. In children, however, I prefer to wear an appliance which is here shown, which consists of a band passing around the pelvis with which is connected at the side by a hinge-joint a bar which passes down to about the middle of the thigh, and then continuing downward is a coiled steel spring which is attached to the boot. Now, when the appliance is put on, and the boot so twisted as to have a tendency to turn the toe outward, it will induce in the patient the habit of turning out the toe, and eventually will in children evert the foot in its relation to the leg, that is to say, it exerts a force tending to untwist and therefore correct the deformity in the leg bones.

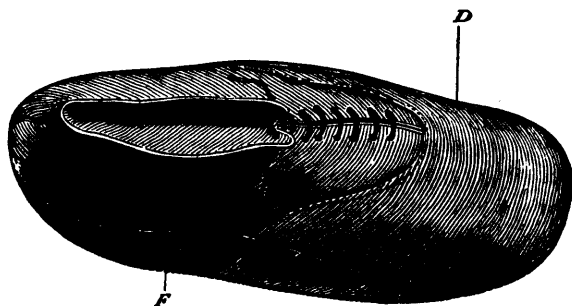


FIG. 8.—Showing day shoe.

The question is sometimes asked, when the treatment of club-foot should begin in an infant. My reply is that attention should be given to the subject as soon as the child is born. The mother or nurse should be instructed to grasp the foot in the hand and to evert the foot, that is to twist it toward the correct position. This manipulation should be repeated several times a day. It has the effect of not only correcting the deformity, but also of increasing the development and mobility of the foot. If this plan be intelligently followed until the child is 8 or 9 months old, some cases can be completely corrected so that the active interference of the surgeon is not demanded. Other cases which are more resistant although not entirely corrected by this treatment, will be so much improved as to lessen very greatly the difficulties and insure much better results in the

end. The active interference of the surgeon should begin at such a time as will enable him to have the foot over corrected when the child learns to walk. It is a great disadvantage to allow the child to walk on an imperfectly corrected foot. By so doing the weight of the body acts as the deforming agent, whereas if the foot has been over corrected, the weight of the body and the employment of the foot become means not only to prevent relapse but also to increase the degree of motion. It is useless to have corrected the foot a long time before the child may be expected to walk, as the foot so corrected must be retained in that position by some appliance or fixed dressing.

The employment of mechanical appliances for the correction of this deformity is not to be recommended. With the exception of the coiled spring for correcting pigeon toe, I never employ any mechanical appliance to rectify the deformity. Their use is limited to the time when the deformity has been fully corrected or over-corrected, when they are employed to prevent relapse.

Notwithstanding the fact that so many unsatisfactory results have been obtained in dealing with these cases as to have made them the opprobrium of surgery, yet there are few patients whom we are called upon to treat, where results that are more pleasant both to the surgeon and to the patient are to be obtained. If the parents of a child will follow instructions, and will not grow weary in what is necessarily a prolonged course of treatment, the surgeon may confidently look for such a result as will permit a return to function and form so nearly approaching the normal as to leave no trace of defect to the ordinary observer.

The child should not pass from observation as soon as the deformity has been corrected; but should be under the supervision of the surgeon for several years afterward. Though club-foot shoes and other appliances are not to be recommended as means of correcting the deformity, yet their employment afterward is essential to success. The difference between a defective and a perfect result when the patient is seen in after years, depends largely upon the careful management of the case subsequent to rectification of the deformity.

Age is not a serious barrier in the way of treatment. Satisfactory results are obtained in cases who have attained the age of forty years; and there seems no good reason why patients should not have this deformity corrected at even a later time.

14 Bloor St. W.,  
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- 1 Deformities of the Foot, Walsham and Hughes, 1895.  
Hartley—*N. Y. Med. Rec.*, Aug., 1894.  
Hoffa—*Lehrbuch der Orthopädischen Chirurgie*, 3rd Ed., p. 660.  
Bradford and Lovet, *Orth. Surg.*, p. 450.  
Young, *Orth. Surg.*, p. 325.  
2 Walsham and Hughes, page 68.  
3 Ashurst *Internat. Enc. Surg.*, Vol. VI., p. 1004.  
4 *Transact. Amer. Orth. Assoc.*, Vol. V. pp. 164, 220, 232.  
5 Judson, *Trans. Amer. Orth. Assoc.*, p. 206, Vol. V.  
6 McKenzie, *Trans. A. O. A.*, Vol. V., p. 203.  
7 *N. Y. Med. Rec.*, Nov. 29th, 1890, p. 583. *Bost. Med. and Surg. Jour.*, 1892, c. xxvi: p. 308.  
8 Morton, *Med. News*, July 12, 1890, p. 25.  
*Lancet*, March 16, 1889.  
*Annals Surg.*, Aug., '93, p. 248.

## SURGERY

IN CHARGE OF

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## ON THE MANAGEMENT OF CASES DURING THE PERIOD IMMEDIATELY FOLLOWING OPERATION.

BY SIR THORNLEY STOKER

When I last had the honor of addressing you from this chair, I took occasion to apologize for speaking on a vulgar instead of an obscure or novel subject, and I am again disposed to use my opportunity to a like effect. I do not presume to address myself particularly to the more senior portion of my audience; but there are a large number of the younger members of the Academy present, and to them I venture to say something about a subject which exercised me much in my younger days, which does so still, and which is important because of its very commonness, and worthy of attention because it is sometimes overlooked.

I refer to the management of patients during that often-time critical period between the performance of a surgical operation and the moment at which, the risks consequent on it having passed, the patient becomes free from immediate and non-particular danger. This is the period occupied by two conditions of depression common to any or all operations, and therefore to be considered by themselves, apart from special dangers proper to individual surgical procedures. They are (a) shock and (b) exhaustion consequent on vomiting.

They may not be present, or being present, may vary in duration from a few minutes to several days. Their intensity cannot be foretold; they may be but slight or may be grave even unto death, and nothing in the condition of the patient, the nature of disease, or the character of operation can afford any reliable evidence as to their possible severity. They may be serious in those who are vigorous, and unimportant in those who are weak; the very young and the aged may suffer from them but slightly, and persons in middle life may be in peril; they may follow the most trivial operation and be absent from the most severe.

Those who have had experience in surgery know how often they meet surprises in the immediate consequences of operation. Sometimes the experience is the pleasant one of finding the treatment

borne better than was expected; sometimes it is the sad one of danger following an operation when it was not looked for. The lesson we learn is never to neglect during and after operations every detail which can lessen danger by diminishing the chances of shock or exhaustion, and which can assist subsequent reaction.

The causes which tend to produce shock are numerous, and for the most part obscure. There are many states of enfeebled health, of particular debility, and of other recognized conditions which predispose to it. But there are unseen and often unexpected circumstances which may lend themselves to its production. Operative measures should, therefore, never be approached without the most careful general examination of the patient, and the most thoughtful consideration of his physical position. It is impossible to formulate exact laws in this direction; these perceptions are largely matters of experience, and only time and clinical study can develop them. But from long observation we know that such considerations of the general state of a patient about to be submitted to operation are often overlooked or disregarded, and I suppose most of us have had bitter regret of our want of perception.

In addition to general matters concerning the patient there is one particular which is proper to the surgeon, and in which great error is common—I refer to the undue prolongation of operations. Two circumstances have, in our generation, lent themselves to this: one is the facility afforded by the use of anæsthetics; the other, the extreme care, conservation, and attention to detail, begotten by the introduction of antiseptic methods. There is no one circumstance which so tends to the production of shock and to the exhaustion produced by subsequent vomiting as prolonged anæsthesia. I have had this impressed on me by severe lessons, and I am satisfied that we should watch ourselves very closely in this direction, and sacrifice detail and conservative measures in instances where they demand the unsafe prolongation of anæsthesia. I can look back on cases where I regret the time spent on an operation; for instance, the only example of elected operation for the radical cure of hernia which has ever proved fatal in my practice was one in which, in my anxiety to con-

serve the testis in an extremely complicated rupture, I prolonged the dissection to such an extent as to produce shock, from which the boy never rallied. I know now that had I removed the organ, I could rapidly have concluded the treatment and saved the patient.

What I have said of the production of dangerous shock is largely true of exhaustion immediately following operation. Given the conditions, known and unknown, which predispose some patients to it more than others, prolonged anaesthesia, with its often attendant vomiting, is its most usual provocative. We will generally see post-operation vomiting proportionate in severity and persistence to the duration of anaesthesia.

So much for causes of shock and vomiting: what of the means of avoiding them, and of relieving them if they occur? It is a truism to say that prevention is better than cure, and it will be seen from what I have said that a due despatch in the performance of operations, and a consequent shortening of the period of anaesthesia is the most important direct measure to attend to. To an audience like this I need not elaborate this part of my subject; indeed, I could not if I would, for there are a hundred various conditions and circumstances which must guide us, and their knowledge and application are among the matters which make the difference between one surgeon and another, and which lend themselves to our successes or contribute to our failures. Shock and vomiting are so much due to the same causes, and so subject to the same remedial measures, that it is difficult to consider them apart. I have learned to rely on three agents only for the relief of shock: (1) Heat; (2) alcohol; and (3) morphine or opium. Concerning the first of these, we generally find that if the surface of the body can, by the use of hot applications, be brought to a wholesome warmth, the danger has been overcome. If to the use of hot water, contained in bottles, or, better still, in small India-rubber bags, we add rubefacient applications of mustard to the extremities, about the region of the solar plexus, or over the heart, we have a valuable armament for the inducement, not only of heat, but also for the production of a physiological stimulation.

If these measures fail, or response to them is too slow, alcohol must be resorted to. It should be given by the rectum, not only because vomiting may exist, or may be induced by the introduction of stimulants into the stomach, but also because when shock is present the stomach has little or no power of assimilation. The possible necessity for rectal stimulation and alimentation after operation is one of the reasons why the bowel should always be thoroughly cleared before any procedure, however slight, in which anaesthesia is to be employed.

Failing by these measures to induce reaction,

opium or morphine has to be resorted to. If rapid effect is sought, morphine is the most useful agent, and it is also that which best controls vomiting. But where there is no vomiting, and where the stimulating effect of the drug is our chief aim, opium itself is to be preferred; it must be given by the rectum. No rules can be laid down for the dosage in these cases, beyond the two points that are to be borne in mind: first, that opium is tolerated in large quantities by persons suffering from shock, very much as those bear it who have lost much blood; and, secondly, that it must be given intelligently, that is to say, given watchfully, dose following dose, until the due effect is produced. The value of morphine given hypodermically, or of opium administered by enema in all cases of depression due to shock, cannot be overstated. I can look back on lives lost after operation from shock and exhaustion, which greater clinical experience and more courageous use of morphine or opium would now enable me to save. If it be sought to study the effect of opium as a stimulant, it cannot be better seen than by watching its effects in the shock and collapse following extensive burns. I have to thank the help afforded by modern nursing developments for much wholesome change of opinion in these matters. It has only been since the introduction of trained women to the bedside, with their watchful intelligence and careful skill, that I have learned properly to deal with cases after operation. That intuitive faculty, amounting to what used to be miscalled an "instinct," and which is the special property of women, finds its best expression in the study and management of difficulties like those I speak of.

Of the treatment of the usually more persistent condition of vomiting, with its attendant exhaustion, much need not be added to the limited list of measures employed in the treatment of shock. Warmth, rectal stimulation, and the hypodermic syringe again find their use. If to these I add rubefaction, or occasionally limited blistering over the stomach, I have enumerated all the means I find most excellent. The host of drugs recommended to check vomiting are, in my experience, worse than useless; they are not only ineffectual, but they add seriously to the gastric disturbance. One measure, introduced of late, we are trying in the Richmond Hospital. I mean the use, for some hours after operation, of a mask charged with vinegar. We are not yet in a position to speak definitely about this treatment, but it seems to give promise of success in cases where chloroform has been the anaesthetic. The rationale of its action is simple; the chloroform which is exhaled by the lungs is decomposed during expiration into chlorine and formic acid. The chlorine, by its irritation of the trachea and larynx, is probably the cause of vomiting, and being taken

up by the acetic acid, is rendered harmless. But so far as present experience carries us, the hypodermic use of morphine is the cardinal remedy for the species of vomiting of which I speak. It must be used intelligently, fully, and fearlessly, and will exercise its effects both as a stimulant and as a gastric sedative far beyond those of any other remedy.

If it be conceded that it is useless to introduce stimulant or aliment into the stomach of a patient suffering from shock, it will be granted that it is not only useless but improper when vomiting is present; and here a previously cleaned rectum serves its owner well. Stimulants associated with such nutriment as can be readily absorbed should be periodically introduced. It is generally found that vomiting any more than shock does not persist with a warm surface, and therefore the three remedies I have indicated should be employed in the same sequence as in shock; first, heat; second, rectal stimulation and nourishment; third, morphine.

The distressing symptom of thirst is one which gives great trouble. There is nothing I have learned to discredit more thoroughly for the relief of thirst than ice. It increases thirst both directly and by the induction of vomiting. The emesis it produces is due to the quantity of water the sucking of ice insidiously introduces into the stomach. Nothing should be put into the stomach in these cases, so that ice is not only useless, but hurtful. Thirst is best relieved by frequent rinsing of the mouth with hot water, and by the occasional introduction of two or three ounces of warm water into the rectum.

In what I have said I have avoided speaking of details and methods; I have remembered that, although some of us are younger and less experienced than others, all of us in this room are educated in the factors of surgical science, and I have therefore tried to be suggestive rather than didactic, and to avoid details except in so far as they were necessary to the elucidation of principles.

If I may reduce to formulæ the matters I have referred to, I would put them thus:

1. That the tendency to prolong operations must be carefully guarded against, as it is a grave cause of danger.

2. That in the treatment of shock and vomiting following operation we get no help from the stomach, and must rely on the rectum as its substitute.

3. That heat, alcohol, and opiates are our best remedies; and that the latter are well borne, and must be intelligently used to their full effect.

4. That drugs of the class ordinarily used to check vomiting are of little or no use in the cases under consideration.

5. That ice does not relieve thirst, and does harm by introducing water into the stomach and so provoking vomiting.—*Br. Med. Jour.*

## CANCER.

BY EARNEST LAPLACE, M.D., LL.D.

I wish, to-day, to give you a few general thoughts on cancer—an affection of such dread to all who are acquainted with it; so difficult to diagnose and treat—cancer, the bugbear of the medical student, especially when called on to distinguish between it, sarcoma and other growths. To begin with what we know about cancer. The word cancer means simply a crab, so named by the ancient pathologists from its eating or gnawing. At the present time it means nothing else than an hyperplasia, or excessive development of the cells in a particular part of the body. Now, these cells may either grow on the surface and bulge out or they may grow on the surface and dip into the tissue. According as they do one or the other, they are benign or malignant growths. Let us say, by way of illustration, it began on the surface of the skin in the epithelium. You all have been out rowing, and have noticed how callous your hand would become and how here and there was a "water blister." The oar acts as an irritant to the skin, and a congestion and hypernutrition is the result; the epithelial cells proliferate, accumulate in one spot, and there is a tumor or callus, under which may be found blood-serum, which, being absorbed, leaves the thickened epidermis.

On the other hand, the man is a smoker and smokes a pipe. The pipe always rubs the same spot. That man comes from a family of cancerous ancestors, and has a suitable soil or predisposition to cancer, if the chances are given for an irritant to enter the tissues. The man may have an abrasion on the lip; the pipe irritates it and causes an hyperæmia. Furthermore, there is another element that comes in, and this is a micro-organism. I cannot prove to you that this is the case, nor can I show you the germ, but it is allied to the germs that we know are the cause of other affections. In the case of the thickened epidermis of the hand, and when we have a corn on the foot, we have an irritant acting from without; but in epithelion, the irritant—a germ—acts in the tissues and causes the growing epithelium to be pushed down, and causes it to infiltrate into the tissues, while in the corn it is simply an accumulation of the epithelial cells on the surface. The ordinary corn or callus is an epithelioma in the true sense of the word, but time and usage have determined us not to call this an epithelioma. Now let us return to our smoker.

The pipe has irritated the crack or abrasion of the lip. The man is of a carcinomatous diathesis; just what a diathesis is we do not know, but he has the chemical condition within him which makes him a suitable soil to develop cancer. Such a condition is tuberculosis, that springs from



grief or exposure. Many thousand people smoke a pipe and do not get cancer, because they do not have the diathesis. As a result of the irritant, the cells proliferate and there is produced a chemical substance called toxin. This increases the irritation on the inside and causes the proliferation to continue. The cells do not accumulate on the surface, but infiltrate into the subcutaneous tissue, muscles and periosteum. These cells proliferate wherever the germs exist to irritate them. Remember, then, that in a corn the irritant comes from without, while in epithelioma the irritant is a germ which acts from within. So much for epithelioma, and this leaves out of consideration a whole class of tumors in which the process is identical, whether on the surface of the skin or beneath it. Laying this aside, let us consider that character of growths presented by fibrous tissue, which includes all fibromata, sarcomata and scirrhus cancers.

The processes of nature are blind, and she acts just as she is forced to act. When we have an amputation, the large flaps are open and a dreadful gap has been made. The surgeon cleanses the wound, renders it aseptic, sews it up and trusts to nature to cure it. All the elements that are concerned in cancer are brought to bear here, and grow and heal the wound. The element that nature puts into a malignant cancer she puts into the process of healing wounds. In a cut or wound, as a result, a clot forms in the mouth of the vessels and checks hæmorrhage. The blood is still being forced into the vessels, and in these vessels are small mouths or stomata against which a white blood cell fits. The cells enter into the stomata and, by an hour-glass contraction, escape from the vessels as leucocytes, giving us the phenomenon of diapedesis. The leucocytes are destined by nature to grow into fibrous tissue by their elongation. When millions of these leucocytes are exuded into the wound, we say it is covered with healthy granulations. These soon fill the wound, and it is found that those which fill the bottom of the wound have become fibrous; above this come the spindle-shaped and on top the round cells. Finally, all that remains to complete the healing is to cover it with epithelium. If, for some reason, the leucocyte had not grown, but had been killed, it would have undergone fatty degeneration and given us a pus cell. You must retain these steps and follow them closely if you wish to get an accurate notion of the development of cancer.

You will find nothing but fibrous and epithelial tissues in cancer, but they are arranged differently from the normal tissues of the body. Sarcoma is a variety of fibroma. Just as epithelioma is a variety due to the growth of epithelial cells, fibroma is due to the growth of fibrous cells. In fibroma there is an exudation of cells from a vessel, which undergo the same changes that they do in

the healing of an ordinary wound. If you make sections of a fibroma and examine them with a microscope, you will find cells of different ages, representing the round, spindle and fibrous cell, all in the same tumor. When you find the fibrous cells in excess, it is a fibroma; when the spindle cells predominate, it is a spindle-cell sarcoma; and if the round cells are in excess, it is a round cell sarcoma. A fibroma and a sarcoma are really the same thing, but the sarcoma grows much more rapidly than the fibroma. A fibroma cannot become a fibroma until it has undergone the same process of growth as a sarcoma, only much more slowly.

The carcinoma develops either as the soft encephaloid or hard scirrhus in the glands. Just as we have the epithelioma on the surface, we may have a growth of endothelial cells in a gland, giving us the encephaloid (brain-like) cancer. When the mass is simply composed of endothelial cells with a very small amount of fibrous tissues and without structure, it is the encephaloid. A scirrhus is nothing else than a combination of the encephaloid and fibrous tissue in which the fibrous tissue predominates. It is much harder than the encephaloid, but the process of development is the same. The epithelial cells are inclosed within fibrous cells, forming alveoli.

We next come to consider the mucoid and amyloid cancers. Nature can do nothing more than I have stated, and these cells, growing under abnormal circumstances, die and, being contracted upon by the fibrous tissue, undergo amyloid, mucoid, or calcareous degeneration, giving us these forms of cancer.

*Metastasis.*—To my mind the very best proof of malignant growths being due to a micro-organism is the element of metastasis—that element by which a growth, if not properly removed, will break out anew in the same or another place, as only one germ is required to develop it. A tumor may be thoroughly removed, but, if a neighboring gland be affected, what can be plainer than that the poison has travelled along the lymphatics and developed? Here is an idea I wish to submit to you that will take away any absolute or stereotyped rule, and that is, when to pronounce a growth benign and when malignant. Why call the one growth benign and the other malignant?

The thickened epidermis on the hand is benign because the irritant that produced it was outside of the body and can be removed. The epithelioma is malignant because it returns; the irritant in the tissue has not been completely removed. There is one more growth and that is the lymphoma. A lymphoma is nothing more than a fibroma in some of whose cells are deposited fat globules. The oil in the cell has simply pushed the nucleus to one side. A fibrous cell does not possess the power of infiltration like the epithelial, and is self-limiting.

and movable, as a rule, and benign. True cancer is immovable because it infiltrates.

Here is a man who had epithelioma of the penis that was removed a year ago, and now he comes back with a similar growth in the groin. What I wish to call your attention to is this fact: If you cut into this tumor and prepare microscopical slides from the different portions of the tumor and give them to a pathologist to examine, he will give this report: One section contains epithelial cells all over it. And he would pronounce it an encephaloid. If another section made from the thickened skin were given him, he would say epithelioma of a malignant type. If I cut still farther up he would say sarcoma; and if lower down he would say fibroma. This illustrates the great caution necessary in making a diagnosis. If the glands are involved it is a carcinoma. If the epithelial tissue is involved it is an epithelioma. All these types can be and are present in the same growth.

The nature of a cancer, therefore, depends upon the nature and arrangement of the cells in the particular section examined, remembering that the element of benignity or malignancy simply refers to whether the irritant, which is the cause of the growth, has been completely removed from the system or not.

The therapeutics of cancer is, to say the least, in a very unsettled state. Many as may be the remedies for the local treatment of cancer, these only act by the local destruction of infected cells—at times successfully removing them, while at other times causing an infiltration of tissues by the added irritative process. Hence, the conflicting reports as to the efficiency of all caustics, pastes, etc.

The real and efficient treatment must depend upon altering the nature of the tissues so as to make them resist or in other ways be unsuited to the development of what may be the cause of this disease. Until such a preventive or alterative treatment is found, we must acknowledge that the treatment of the disease is still to us a hidden secret.

The advancing steps of bacteriology and experimental pathology offer the only hope in this direction. Already we have learned by these methods the inoculability of cancer, demonstrating, as it were, positively its infectious nature. And inasmuch as the prevention and cure of other infectious diseases have been found, so must the same lesson bring us to the discovery of what would be a great boon to humanity—the cure of cancer.—  
*Medical Bulletin.*

## COCYGDYNIA, REMOVAL OF THE COCCYX. — CLINICAL LECTURE.

BY E. E. MONTGOMERY, M.D.

The second patient you also saw one week ago. She presents the following history: She is 33 years of age, married, father and mother living, and in good health. She has three sisters and a brother, all of whom are living and well. She had the common diseases of childhood, small-pox at 11, rheumatism, pneumonia, and grippe. Menstruated at 9, was regular until 12, when she says the flow stopped for two years. After this period she was regular. She was married at 18, and has had seven children, the youngest is 6 years old. Instruments were used during the first labor, when she was badly lacerated, also during the last. She has had one miscarriage. Twelve years ago while working, she slipped and struck the coccyx against the corner of a lounge, which caused a fracture. This united without treatment, but projected somewhat forward. She had a subsequent injury some two years ago, since which she has suffered much distress. The history of this patient is interesting from several points of view. In the first place, she gives a history of menstruating at 9 years of age. This is an evidence of precocity, as women usually do not menstruate until from 13 to 17. It is well to remember, however, that there are cases upon record in which menstruation has taken place during the first year of the life of the individual, and the child at three years of age has been fully developed, showing all the evidences of a developed woman.

Pain in the coccyx is not an infrequent symptom, and may occur as a result of conditions independent of the coccyx itself. In this patient the trouble is undoubtedly due to the injuries she has received, as there is a history of two injuries, and as we introduce a finger into the rectum and move the coccyx with it, we recognize a distinct grating of bone, as if two bare surfaces were in contact. Pain may also arise from an inflammatory condition of the sheath of the muscles attached to the coccyx, or in those of the ligaments, from thickening of the periosteum of the bone, or in some cases as a reflected pain from diseased conditions of the uterus. It is not an infrequent thing to find a patient complains of pain in the coccyx or anus as a result of a retro-displacement of the uterus. So, too, we find similar conditions in what is known as painful metritis, where the cervix is large, heavy, projects backward and is situated low down. Such patients complain of pain in sitting, also in walking, and moving

about. The pain of coccygodynia is felt directly in the bone and in the muscles about it. It may occur from sitting or from walking, or change of position of the patient in bed, so the patient who has had a recent fracture and suffers from inflammation produced by it, may be confined almost to one position, and be unable to change it without giving rise to a great deal of distress. In such cases, the act of defecation is attended with pain. The coccyx is most frequently injured by a fall or blow, in which the person strikes upon some object which impinges directly against the bone. It may be produced, however, in labor, where labor takes place in individuals late in life, after the bone has become more or less ankylosed. The treatment of the condition will depend very much, of course, upon the cause producing it. Thus, if we find it is due to uterine disease, an effort should first be made to counteract and remedy that, in the hope that in so doing, the irritation in the coccyx will be relieved. It has been recommended that subcutaneous incision be made, separating the muscles and ligaments from the bone. The plan of treatment, however, is rather ineffective, and consequently is not frequently resorted to. The only operation in serious cases that affords any certainty of relief, is the removal of the coccyx. This procedure consists in making an incision over the coccyx about one and one-half inches in length, extending from just above its articulation to the extremity of the bone, the lower surface of the bone is laid bare, its extremity is pressed against, rendering tense the posterior common ligament, which is cut through, opening the articulation. Having separated the articulation, we then grasp the bone with a pair of forceps, and usually this can be done by passing them between the bone and the sacrum, and the muscular and ligamentary attachments are cut close to the bone. In doing this in this patient, we have wounded a branch of the middle sacral artery. This is seized with a hæmostat, and we pass the sutures around the surfaces so as to secure this vessel, in the first suture. The lower end of the sacrum was somewhat roughened and bare. I propose to cut a portion of this away with the rongeur and push the periosteum over the extremity. The wound is then closed with sutures, passing the sutures around the entire surface so as to prevent the possibility of the formation of a cavity in which hæmorrhage will occur. Having closed the wound with sutures, we now wash it carefully before coating it over with collodion; place over it some gauze which is also sealed down with collodion. The gauze will be held in place by strips of plaster and a bandage. The catheter will be used for the patient for

the first few days, after which she will be directed to lie upon her face to evacuate the urine, in order that in this way the dressing shall not be spoiled. This patient should recover without any unpleasant symptoms and be well at the end of two weeks.—*Med. Fortnightly.*

APPENDICITIS AND RHEUMATISM.—In *The Lancet*, Dr. G. A. Sutherland advances a theory which, if true, may perhaps prove that the constitutional treatment of appendicitis is as important as local and surgical measures. The vermiform appendix is rich in lymphoid or adenoid tissue, which suggests the possibility of its being the centre for the production of leucocytes or lymphocytes. Elsewhere in the alimentary canal the importance of adenoid tissue is fully recognized, and the action of the lymphocytes produced there has been fully explained. According to Berry's researches, the function of the appendix is, (1) leucocyte producing, and (2) secretory. Leucocytes he considers useful in the destruction of micro-organisms and the absorption of proteids. Such protective power would be of great service, for processes of decomposition going on unchecked in the cæcal region would probably result in symptoms of auto-intoxication that would be extremely common. Usually regarded (appendicitis) as a purely local condition, due to such local causes as catarrh, concretion, cystic dilatation, etc., the author thinks it also quite possible that the vermiform appendix may be acted upon by poison circulating in the blood and thus become acutely or chronically inflamed. Rheumatism may be such a poison. The term "abdominal tonsil" has been applied to the appendix; and there are in reality many points of resemblance, both anatomical and pathological, between the tonsils and the vermiform appendix. If the former constitute the "first line of defence for the alimentary canal," the latter may be regarded as the second line of defence. Rheumatism affects adenoid tissue elsewhere. Why not here? While purely local or mechanical causes of appendicitis do exist, there may be others. And, in certain cases, the pathology may be this: The presence of a constitutional poison producing inflammation of the lymphoid tissue in the appendix, depriving it of its normal protective functions, and thus inducing a condition that permits the entrance of micro-organisms and a resulting septic peritonitis or appendicitis.—*Med. Rec.*

ANTITOXIN TREATMENT OF SYPHILIS.—Dr. Vievrovsky has been employing antitoxin serum in the treatment of syphilis, in the Moscow Military Hospital, and claims to have observed most satisfactory results.—*Med. Rec.*

## MEDICINE

IN CHARGE OF

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### THYROID GLAND AND FEMALE ORGANS OF GENERATION.

For a hundred years the thyroid gland has been presumed to be connected by some means with the generative apparatus of females. We hear of Catull and Mercuriales who looked upon the diagnostic measurement of the throat to determine the vaginity or defloration.

In Goethe's epigrams we find similar references made to this diagnostic symptom. Meckel considered the thyroid gland to be similar in many respects to the uterus, while Osiander has written a treatise on the enlargement of the throat during the gravid state.

The accumulated statistics of goitre have shown that this disease preponderates in females ranging from 80 to 90 per cent. We also meet with myxœdema, morbus basedowii, more frequently in the female than in the male. The altered condition of the thyroid is forcibly shown in the activity of the physiological function of the genital organs at the time of puberty. Goitre has also been observed in early menstrual inauguration and has even been attributed to it; the transitory swelling of the gland is often prominently noticed at the menstrual period. Wagner has pointed out similar phenomena in the animal creation and affirmed that two-thirds of the cases observed by him had enlargement of the thyroid when gravid. Freund records fifty cases in his practice which he had carefully examined by measurement, and found forty-five of them had increased from one-half to one and a half centimetres. With this increase of the gland we have frequently asthma associated, which sometimes becomes dangerously intense. Wolfner observed a softening of the trachea during pregnancy, and also relates cases where struma in the gravid condition increased, and had to be extirpated. In the etiology of myxœdema the thyroid gland plays an active part. The disease basedowii occurs more frequently in those who have borne children. As has been already observed, the thyroid gland increases during pregnancy and rapidly recedes in volume during the puerperal condition, the latter occurring within twelve or twenty-four hours. A similar change of this kind has been observed in the gravid con-

dition when the person attacked is suffering from morbus basedowii, which rapidly recedes after confinement.

The climacteric period is fruitful in producing atrophy of the thyroid gland although goitre is recorded to have often occurred at this period, whilst myxœdema and morbus basedowii are not uncommon. Mathieus had the origin of the diseases in view when he advocated dismemberment by castration and extirpation of the uterus for the radical cure of these diseases.

It is yet undecided whether dysmenorrhœa will produce goitre, but it would seem from evidence that when there is a low pressure in the menstrual period the enlargement is reduced. In tubercle the gland is not hypertrophied, and the two are rather opposed to each other. Lândau has shown a seeming connection between dysmenorrhœa and myxœdema. Many theories have been put forward as to the origin of goitre, besides the generative apparatus, but in all some connection may be traced. Freund presumed that the connection with the genitals was through the circulation. Another theory is the poisonous condition of the gravid state, which excites the gland, and functionally enlarges it. Buschan considered symptomatic morbus basedowii arose from genital affections, while other authors attributed it to nervous affections. In goitrous individuals it is assumed that these organs are more excited, and it has been observed in animals that thyroidectomy arrests the development. Steinberg agreed with Fischer in the relation between morbus basedowii and the genital organs, and emphasized the erotic condition. He related a case of morbus basedowii that had greatly improved after confinement. The effects of menstruation on the gland are not so clear. Khane thought that the connection of the gland was more directly associated with chlorosis, as struma parenchymatosum was a usual accompaniment.—Austrian Correspondent, *Med. Press.*

ACNE ROSACEA.—Doctor Cantrell freezes the part with rhigolene or ethyl chloride, then freely scarifies with a five-bladed knife, *Med World*. He believes this the best treatment, and asserts it gives prompt relief.

### THE TREATMENT OF THE NOSE AND THROAT DURING MEASLES AND SCARLET FEVER.

The objects to be accomplished are to thoroughly cleanse the mucous membrane, to render the secretions alkaline, to render inert the bacteria which may be present, and finally to lubricate the mucous membrane and protect it from rapid evaporation. In cleansing the nares, use a simple one-bulb atomizer, which is coarse and free, in order not to blow a lot of air into the nostrils, or it may be poured from a teaspoon, a dropper, or a Dessar's nasal douche cup. Cleansing solution: Seiler's antiseptic tablet, one tablet; cocaine, four grains, and water two ounces. Oily protective: liquid albolene or hydrastol, a preparation of hydrastis with oil of cinnamon and other aromatics, one ounce; menthol, thymol, or eucalyptol, one grain; and spirits of chloroform, one half drachm. One-half per cent. cocaine may be added by first dissolving it in oleic acid (one grain of alkaloid to the minim of the acid). For acute zymotic coryza of children: eucalyptol, six minims; cocaine, five grains; oleic acid, five minims; chloroform, one drachm, and hydrastol, two ounces; or thymol, two grains; terebene, five grains, and hydrastol, one ounce. For catarrhal laryngitis: chloroform, one-half drachm; menthol, five grains; camphor, ten grains, and hydrastol, enough to make one ounce:—spray down into the larynx several times daily. If a powder is desired as a protective, use the compound stearate of zinc combined with boric acid, ten per cent.; menthol, two per cent.; cocaine, four per cent., etc. If there is a croupous exudate, use peroxide of hydrogen, preceded by a spray of one per cent. solution of cocaine, and followed with an oily protective. For epistaxis, the application of peroxide of hydrogen is excellent. The inhalation of warm, medicated steam is valuable, and one-half to one drachm of any of the following mixtures may be added every two or three hours to the boiling water: tar, one ounce; and alcohol, four drachms. Or: carbolic acid and cresoline, of each two drachms; and eucalyptol and balsam Peru, of each four drachms; Or: gum camphor, one drachm menthol, two drachms; oil pine needles, two drachms; eucalyptol, two drachms; and oil of tar enough to make two ounces. Or: eucalyptol and thymol, of each one drachm; carbolic acid and benzoic acid, of each thirty grains; and terebene, enough to make two ounces.—*Am. Med. Surg. Bull.*

PICHEVIN believes that the curette is of high value, but the more it is employed the more its dangers must be borne in mind.

### STORY OF A WOMAN WHO MAKES HER DOCTOR HER CONFIDANT.

This is a story told by one woman, who declared she was an idiot, to a dear friend: You will remember, perhaps, that when I had a touch of bronchitis last winter, we sent for Dr. Payenuff. He called at our house four times, I believe, and after I was comparatively well I visited him at his office three or four times more, and then he discharged me, pronouncing me sound as a dollar. The entire course of treatment did not extend over a period of more than four weeks, but it was long enough to give me a taste of the pleasure there is in having a regular physician. Really, if you've never had the experience, you can't imagine what a luxury he is. He comes high, to be sure, but he is well worth his cost. Well, I staid away two months, and then I trumped up some imaginary ailment, and commenced dosing myself again. That was six months ago, and I have been calling on him regularly once a week ever since. I'm on my way home from his office now.

"When you see how the case stands, you cannot wonder I am disgusted with myself. I am not sick, and he knows it, and he also knows that I know he knows it, but week after week we enact the same farce of counting pulse-beats, taking temperature, spying out, by means of a microscope, a thin white coating on my tongue, and various other little by-plays which are a doctor's stock in trade, for all of which I pay him at the rate of \$3 a visit.

"He returns the compliment by giving me some harmless prescription that couldn't hurt a baby. My visits are never prolonged to more than 15 minutes, but during that time I tell him more of my personal history than my husband has learned in the last 15 years. It's strange, but a woman will talk freely to a doctor about things she wouldn't even hint at to any other living being. He knows the exact coloring of every phase of my life. My domestic relations, my social ambitions, artistic triumphs and failures, spiritual welfare and mental peculiarities are alike known to him. Joys and sorrows, secrets of the past, ideas of the present and hopes of the future, which have hitherto been kept inviolate from human knowledge, are spread out before him as an open book.

"And that isn't the worst of it. He doesn't want to hear it. I know he doesn't. Many a time when I have been in the midst of some narrative I have caught him looking at me in such a bored, yet half-surprised way, that I could have bitten out my tongue with vexation, yet I was carried on by some resistless current and couldn't stop for the life of me till I had finished my story.

"I am 36 years old and am supposed to have a fair share of common sense. I have been married

15 years, I have a good-looking husband, and I love him devotedly, but my confidence in him stops at a certain point. Before Dr. Payenuff, however, who is old and homely and crusty, and whom I couldn't even endure were he not a doctor, I lay my soul bare as though he were a Shinto priest and I a young novice ready for my first confession. Of course, I am angry with myself. Who wouldn't be? But that is all it will ever amount to. I know now as well as I can know then, that this time next week I will go through the same performance, and will, in all probability, tell him about this very conversation with you. What do you think of me, anyway?"

Her friend laughed.

"You're a goose," she said, "to get roiled up about a little thing like that. Since you have taken the initiative, I will respond by confessing that I am guilty of the same thing. As you said a while ago, a doctor is an indispensable luxury, and every woman who knows her business is bound to have one."

#### ALCOHOLIC NEURITIS IN OLD AGE.

In the last number of *Brain* Dr. Maude publishes a brief account of a most interesting case. The patient, who was a robust country gentleman of sporting habits, and used to an out-of-door life, had taken stimulants in considerable excess for at least twenty years. Even eighteen years ago no unusual daily allowance was half a gallon of beer, a bottle of sherry, and eight or ten liqueur glasses of "neat" whisky. His favorite drink was beer, and even in the summer of 1894, although over seventy-five years old, he would often consume two quarts of beer, a bottle of sherry, and half a bottle of whisky in a day. He had had no serious illnesses except broken bones from riding accidents and a fractured humerus at the age of seventy-three from a fall down stairs one evening after dinner. During the year 1894 his great muscular power became much impaired, and towards the end of the year he began to complain of severe darting pains in the left lower limb. A few weeks later the hands and feet began to swell rather suddenly, the skin became thin and glossy, while there were small ecchymoses over it. A similar condition was present on the insteps of both feet, while the calves and thighs were cedematous and the muscles shrunken. The knee jerk could not be elicited, and the pupils were small and did not react to light. The heart sounds were somewhat feeble, but they were regular, and there was no sign of dilatation. Without any previous marked change in his symptoms he died suddenly after a few minutes' dyspnoea about two months after the onset of the symptoms. Dr. Maude considers the case to have been one of peri-

pheral neuritis, and directs attention to several interesting points, such as the advanced age of the patient, the excess of his alcoholic indulgence, and the absence of mental change; the fact also that he was essentially a beer-drinker is interesting, with reference especially to the views of the late Dr. James Ross as to the kind of alcoholic beverage most likely to produce neuritis.—*The Lancet*.

THE MIGRATION OF THE CROTON BUG (*ECTOBIA GERMANICA*).—In the last number of *Insect Life*, Mr. L. O. Howard reports upon the peculiarities of migration of certain water-bugs in our Southern cities, whereby new houses are suddenly overrun. The following observation was made at Washington, D. C.: One dark and drizzly day, late in 1893, a friend came to me and stated that he had just seen a remarkable sight on D Street, near the Department grounds. A vast army of cockroaches, according to his story, was crossing the street. A few hours later I visited the spot and found that the bulk of the army had disappeared, but that many stragglers still remained. According to the statement made to me, the army issued from the rear of an old restaurant fronting upon Pennsylvania Avenue, and marched across the muddy street, undeterred by pools of water, ash heaps, and other barriers, directly south to the front of the building opposite.

This building was a machine shop, and at the direction of the foreman several of the men took brooms and swept back the advancing horde. They swept until their arms were tired, but were unable to stem the advancing tide. The foreman then directed that a line of hot ashes from the furnace be laid along the brick sidewalk. This proved an effective barricade. The foremost cockroaches burned their antennae and their front legs and the army divided to either side and scurried down into the area ways of adjoining buildings in which they disappeared. The march is said to have continued for two or three hours and many thousands of the insects crossed in this way. A moment's glance, after arriving at the spot, showed me that the insect was the croton bug and that nearly all of the individuals were females carrying egg cases.

I called at the restaurant and found to my surprise that no house cleaning had been going on, and that no especial effort had been made by the application of insecticides to rid the establishment of the roaches.

It seems then to have been a true migration, a development of the true migration instinct in the croton bug. The restaurant had become overpopulated, perhaps not for its actual denizens but certainly for the thousands of about-to-be-born young. The maternal instinct originated the migratory instinct and the army by one common

impulse started on its journey for more commodious quarters. The darkness of the day is significant, and there is no reason to suppose that similar migrations do not frequently occur but undoubtedly under ordinary circumstances at night. This is the way that new houses become infested.—*Jour. Am. Med. Assoc.*

**TREATMENT OF SMALL-POX BY EXCLUSION OF THE CHEMICAL RAYS OF DAYLIGHT.**—In September of last year Dr. J. Moir, drew attention in our columns to this treatment of small-pox, and we have since received communications on the subject from Dr. Moir, Dr. Finsen, and Dr. Feilberg. Dr. Finsen has recently published an interesting historical account of the Red Light Treatment of Small-pox, the scientific basis on which it is founded, and the method of carrying it out. Dr. Feilberg states that he was at first very sceptical as to the influence of red light on small-pox patients, but nevertheless, tried its effect on several unvaccinated children suffering from small-pox, and was surprised at the favorable course which the disease took. The vesicles did not suppurate, there was no secondary fever, and no permanent pitting resulted. The essential point for the success of this treatment, according to Dr. Feilberg, is that the patients should come under treatment during the early stage of the disease, shortly after the vesicles have appeared; if the seventh day has been reached suppuration can hardly be avoided. Another important point is that the exclusion of the chemical rays of daylight must be complete and continued until the vesicles have quite dried up. Dr. Moir, whilst admitting that Dr. Finsen bases his treatment on a scientific basis, and notwithstanding the extreme ability displayed both by him and Dr. Feilberg and the care and fairness shown by them in their papers, is still doubtful as to whether their explanations are correct. He admits that he criticises without experiment, but though he has not used identical treatment yet he has given trial to somewhat similar experiments. For instance, he used to employ a solution of collodion and castor oil on the exposed parts to prevent suppuration and pitting, also, for similar reasons, iodine and glycerine solution, the latter particularly apparently meeting Dr. Finsen's chief requirements; but as the result of these and similar trials he still believes that the only distinction to be depended on as to the extent of suppuration and pitting is the presence and quality of the successful vaccination.—*Lancet.*

**TREATMENT OF ACUTE BRONCHITIS OF INFANCY.**—Dr. Perrier directs that in the very acute forms of bronchitis in children the chest should be rubbed with oil; warm drinks should be given, particularly hot milk. Sometimes, if there is much

oppression, it is well to apply a thin and light but mild mustard plaster. If the stomach is loaded with partially digested food an emetic of powdered ipecac, 1 to 2 grains, and syrup of ipecac, 1 ounce, may be given, in the dose of a teaspoonful every ten minutes till the desired effect is produced, and if the fever is high 1 or 2 grains of the hydrochlorate of quinine may be given in a little coffee. The air of the room should be moderately warm and moist, but it is most important that the ventilation be good. As the disease progresses, if bronchial secretion becomes very profuse, the following prescription may be used:

R—Oxide of antimony. . . . . gr. ss.  
Syrup of senega. . . . . ʒ ij.  
Syrup of acacia. . . . . ʒ ij.

M. Sig. A teaspoonful every two hours.

Or this may be replaced by

R—Terpine hydrate. . . . . gr. ij.—iv.  
Brandy. . . . . ʒ ij.  
Syrup of cinchona. . . . . ʒ ss.  
Syrup of orange. . . . . ʒ ij.

M. Sig. A teaspoonful every two hours.

Often an emetic will aid in relieving the lungs of mucus. During the day a little additional brandy or red wine may be given as a stimulant. In those cases in which frequent attacks of bronchitis follow one another it is useful to give the child warm baths, followed by cold sponging, and this, in turn, by active friction of the skin in drying the body. Malt extract should be given with each meal, and a teaspoonful of the following prescription ordered three times a day:

R—Arsenate of sodium, . . . . . gr. j.  
Distilled water. . . . . ʒ vi.

M. Sig. A teaspoonful after meals.

If, notwithstanding these measures, the child fails to improve, it must be taken to a dry climate.—*Therapeutic Gazette.*

**GRIEF FROM A MEDICAL STAND-POINT.**—The nervous system requires complete rest after blows caused by sorrow. Recent medical observations show that the physical results of depressing emotions are similar to those caused by bodily accidents, fatigue, chill, partial starvation, and loss of blood. Birds, moles, and dogs, which apparently died in consequence of capture, and from conditions that correspond in human beings to acute nostalgia and "broken heart," were examined after death as to the condition of their internal organs, and it was found that the nutrition of the tissues had been interfered with, and the substance proper of various vital organs had undergone the same kind of degeneration as that brought about by phosphorus or the germs of infectious disease. The poison of grief is more than this to a man. To urge work, study, travel, the vain search for amuse-

ments, is both useless and dangerous. For a time the whole organism is overthrown, and temporary seclusion is imperative for proper readjustment. Grief cannot be ignored, neither can it be cheered up. It must be accepted and allowed to wear itself away. Readjustment comes slowly. Sorrow, grief, and all great misfortunes should be regarded as conditions similar to acute infectious diseases, which they resemble in result; and, later, as convalescence from such diseases. Seclusion, rest, sleep, appropriate food, fresh air, sunshine, interests that tax neither mind nor body, these are requirements in this case of illness.—*Charlotte Medical Journal*.

**THE MICRO-ORGANISM OF MEASLES.**—Joseph Czajkowski (*Centralbl. für Bakt. und Parasit.*), again contributes a further addition to our knowledge of the bacillus which he previously described as existing in the blood in measles. The bacilli in the blood vary in length from one-half micromillimeter to the diameter of a red blood-corpuse, and in cultures grow into long threads. They stain well with all the aniline dyes, and in the longer forms a part of the protoplasm often remains unstained. They lose their stain by Gram's method. They grow best in bouillon or sterile serous fluid from the abdominal cavity, in which a whitish, fairly heavy sediment is formed, which in older cultures becomes yellowish-gray. The cultures have no characteristic odor. Rabbits were always immune to the bacteria. Mice died from septicæmia three or four days after inoculation with small quantities of the culture, the bacilli being obtained again in pure cultures from the liver and spleen.

The author believes the bacillus described by him to be the specific cause of measles.—*Medicine*.

**THE BIBLE AS A CARRIER OF INFECTION.**—An amusing incident is reported in the *Lancet* as occurring recently in a Sussex Police Court. The Rector of Graffham and East Lavington, the Rev. Rowley Lascelles, was concerned as witness in a trespass case which was heard recently before the Petworth magistrates, Major Sir Walter G. Barttelot, Bart., being in the chair. Mr. Lascelles asked to be sworn in the Scotch fashion, whereupon the following colloquy ensued:

*The Chairman.*—I should like to know, Mr. Lascelles, why you, a clergyman of the Church of England, object to kiss the Book?

*The Rev. R. Lascelles.*—I have a strong objection to kissing the Book in these days of infectious diseases. I should be happy to kiss it if I may turn it inside out.

This was done, and Mr. Lascelles having been sworn in the usual fashion, the chairman went out of his way to remark in an undertone: "He is afraid of catching an infectious disease from

the Bible." A later witness when he was sworn, piously remarked: "Although I am only a lay man, I am not afraid of catching infectious diseases from the word of God." The *Lancet* suggests that if certain combinations of words and letters are a safeguard against contagion, we would better drop isolation and return to the use of phylactives. The pious gentlemen who thought the parson showed a want of faith, would probably have been themselves unwilling to kiss a French novel in an equally filthy condition, but the idea of contagion being carried by a Bible! How preposterous!—*Boston Med. and Surg. Jour.*

**SUBSTITUTION.**—Dr. C. F. Tucker, of Syracuse, N. Y., January 9th, 1896, writes: Some time ago when I was doing a country practice at Jordan, Onondago County N. Y., I wrote Messrs. Battle & Co. that I could not get the uniform results from bromida that I had previously. They sent me a 4 oz. sample and that was all right, and I still have on hand a little of that particular sample.

The party who had dispensed my prescriptions, after I had expressed my opinion very strongly confessed that he had purchased a considerable quantity of a mixture at less price, said to contain exactly the same ingredients, and had been dispensing that when bromida was prescribed.

After that I had no more trouble, and I can truthfully say that you can find it in my emergency case, office, and in my regular "grip" always, and I have never seen anything but perfect satisfaction attending its use, and I have given it to patients of all ages and about every condition.

I have used it in the last stages of pulmonary tuberculosis, and in severe cases of chronic bronchitis, in delirium tremens, etc., and I always use it when I want a certain hypnotic.

I have used it in doses from two minims up to two and three drachms. It is one of the mixtures of so-called treacherous chloral that never, thus far, caused alarm. I have been familiar with bromida since away back in the 80's, when I was a clerk in a drug store, and since I have been practising, I still regard it as a reliable old friend, and so it has proved on many occasions.

*The Youth's Companion* of Feb. 13th publishes an unusually valuable article for young men, by the Lord Chief Justice of England, on "The Bar as a profession." Sound advice, taken from a long and varied experience, and wise encouragement are given to young and prospective lawyers. It is as readable as a story, yet will bear careful study. Each issue of *The Companion* contains one or more articles of exceptional value, written by the ablest men and women of the age.



## NOSE AND THROAT

IN CHARGE OF

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## RHINOLOGICAL DON'TS.

## WHAT NOT TO DO IN NASAL AFFECTIONS.

- Don't speak of nasal catarrh as a disease. It is a symptom of irritation of the mucous membrane lining the nasal cavities, and has various causes.
- Don't make a diagnosis without a careful anterior and posterior rhinoscopic examination.
- Don't forget that the nose is meant to breathe through, and that complete or partial obstruction means mouth breathing and all its dangers.
- Don't fail to examine the nasal cavities in all cases of asthma, hay fever, deafness, and chronic cough.
- Don't forget to cleanse the nasal cavities before making an examination or medicinal application. Medicated sprays or insufflations into the cavities lined with inspissated mucus are applied to the mucus and not to the membranes lining the cavities.
- Don't forget that all diseased conditions of the nasal mucous membrane will sooner or later produce middle ear disease; and that they may produce asthma and other reflex affections.
- Don't permit a patient to use cocaine under any circumstances.
- Don't use cocaine except for diagnostic or operative purposes.
- Don't forget that a five per cent. solution of antipyrine will contract the blood vessels, that its action is prolonged far beyond that of cocaine, and that the patient will never contract the cocaine habit by using it.
- Don't use cocaine in acute rhinitis. An antiseptic cleansing solution, followed by a spray of five per cent. solution of antipyrine, and small doses of quinine and belladonna internally, is the treatment indicated.
- Don't use irritating applications to the nasal mucous membrane in hypertrophic rhinitis. Cleansing is of the first importance in the treatment of this condition.
- Don't forget that cleanliness in the *sine qua non* in the treatment of atrophic rhinitis. If it be neglected, all other treatment will fail.
- Don't fail to operate and restore the calibre of the nasal passages in all cases of stenosis causing total or partial obstruction of nasal respiration.
- Don't hope to relieve catarrhal symptoms if stenosis exists, unless you correct the stenosis.
- Don't treat chronic hypertrophy of the tissues covering the turbinated bones with astringents. Destroy a portion of the tissue with the galvano-cautery if the hypertrophy is anterior. Remove it with the Jarvis' snare if it is posterior.
- Don't treat hypertrophy of the turbinated bones with the cautery. Remove a portion of the entire length of the bone with a saw if the interior is affected; with the wire écraseur if the middle is affected.
- Don't use force in using a saw. Simply guide it and allow it to do the cutting.
- Don't fail to open an abscess of the septum at the earliest opportunity. You may thereby prevent destruction of the cartilage and deformity of the nose.
- Don't remove polypi with the forceps. Use a wire écraseur and cut through the pedicle by turning the screw. Don't pull.
- Don't straighten a deflected septum by fracturing and replacing until you have prepared the nasal cavity on the concave side for the encroachment on its calibre. The inferior turbinated bone on this side is generally hypertrophied; in which case a portion of its entire length should be removed.
- Don't be in too great haste to plug the nose in cases of hæmorrhage after. The most copious hæmorrhage will usually cease within fifteen minutes.
- Don't attempt to arrest epistaxis not due to traumatism by astringent injections. Find the bleeding point and touch it with the galvano-cautery.
- Don't forget to examine for adenoids in the pharyngeal vault by introducing the finger through the mouth up behind the soft palate.
- Don't attempt to treat adenoids by astringents or caustics. The Gottstein curette and the Quinlan forceps will remove them thoroughly. The finger of the operator, introduced behind the soft

palate into the pharyngeal vault, will not only locate accurately the smallest growth, but will determine when all are removed. Don't leave the smallest particle behind.

Don't neglect the tonsils in cases of mouth breathing pointing to nasal obstruction. If they are enlarged remove them with the guillotine or destroy them with the galvano-cautery.

Don't neglect constitutional treatment in syphilis of the nose. Tertiary syphilis, the form usually met with, requires large doses of the iodide. Locally, the best treatment is iodoform in spray.

Don't rely exclusively upon topical means in treating affections of the nose. Tonics are always indicated when the general system is at fault.—*Texas Med. Jour.*

INTRA-LARYNGEAL INJECTIONS IN SOME DISEASES OF THE LARYNX AND BRONCHI.—Dr. Adolph Bronner says that local remedies most readily cure disease of the mucous membrane of the larynx and bronchi, and also relieve the irritation and cough. We know that large quantities of nearly any non-irritating antiseptic fluid can be safely injected into the bronchi, and that it is readily absorbed there. A menthol solution not only relieves the cough, but has also strong deodorizing and antiseptic properties. The author generally uses a 5 to 20 per cent. solution in paroline. If about 20 per cent. of water or rectified spirits is added, and the solution well shaken before use, it mixes with the secretion in the bronchi much more readily. When the expectoration is very offensive and copious, he adds 10 to 50 per cent. terenene or 2 per cent. oleum pinente, or 3 per cent. europen. In cases in which there is not much secretion, 2 or 3 per cent. of bicarbonate of soda or boric acid, or 3 to 15 per cent. of tincture of iodine may be used. In cases of purulent bronchitis or bronchiectasis, several injections may be made at one sitting. It is well to precede the first few injections by the application of cocain solution. In cases of bronchitic asthma, menthol is likely to cause great irritation. It is important that the first few injections should cause as little inconvenience as possible, or the patient will not call again. The patient is told to take a few deep inspirations and then to say "ah." The syringe is then introduced and the fluid injected. By pointing the end to one side or the other we can inject the fluid into the right or left bronchus. The solution should be kept in Pasteur flasks, or thin glass bottles, and thoroughly sterilized. Most of the cases that the author has treated, have been of laryngeal disease, chiefly tubercular or atrophic laryngitis.—*British Medical Journal*, October 26th, 1895.

NASAL AND PAST-NASAL CATARRH.—J. Bannan, M.D., Washington, D. C., (*Archives of Pediatrics*) says: "I have always followed the advice given by Henoch to treat the nose of an infant, even if it should be only a few days old, if it has a cold in the head and does not breathe perfectly, with a two per cent. solution of nitrate of silver applied with a brush. There are, no doubt, other agents which will also give satisfaction, but the nitrate of silver solution has always proved absolutely inoffensive, even with the youngest babies. Care must be taken, of course, not to have the brush overloaded with the fluid, so that it can drop into the larynx."—*Alkaloidal Clinic.*

THE RELATIONS EXISTING BETWEEN THE SEXUAL APPARATUS OF THE FEMALE AND AFFECTIONS OF THE LARYNX.—A 31 year old women, with extensive tuberculosis of the mucous membranes, became so short of breath as to demand a tracheotomy. At the last moment, the operation was postponed, on account of abortion. Eight days later, the patient breathed easily, and the swelling of the membrane had completely receded.—*Rev. de Laryngol.—Centralblatt f. Chirurgie*, No. 43, 1895.

TUBERCULOSIS OF LARYNX.—Thost, in the *Monatschrift f. Ohrenheilk.*, February, 1895, reports six cases of spontaneous healing of laryngeal tubercular ulcers in patients in whom the hereditary and personal histories had given a favorable prognosis. The following is a clipping from the *Medical Week*: By experiments on patients in the wards of Dr. N. Simanovsky, professor extraordinary of laryngology at the Military Academy of Medicine at St. Petersburg, Dr. A. Spengler has ascertained that parachlorophenol (*The Medical Week*, 1894, pp. 330 and 552) is an excellent remedy in the treatment of tuberculosis of the larynx. Of twenty-six patients suffering from this affection who were treated by chlorophenol, ten recovered completely and in the others there was more or less marked improvement.

IN ACUTE CYSTITIS—

- R.—Potass. citratis, . . . . . 4 drs.
- Sp. chloroformi, . . . . . 2½ drs.
- Tr. digitalis, . . . . . 80 drops.
- Infus. buchu, . . . . . ad. 8 ozs.

Sig.—Two tablespoonfuls three or four times a day (Fothergill). The following suppository may be introduced high up into the rectum :

- R.—Iodoformi, . . . . . 1 gr.
- Ext. hyoscyam, . . . . . 1 gr.
- Ol. theobromæ, . . . . . 14 grs.

M. et ft. suppos. j.

—*London Med. Times.*

## OBSTETRICS AND GYNÆCOLOGY

IN CHARGE OF

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Professor of Obstetrics and Gynecology, Trinity Medical College;  
Gynecologist Toronto General Hospital; Physician to the Burnside Lying-in Hospital.  
205 Simcoe Street.COMPLICATIONS OF LABOR OCCASIONED  
BY OPERATIONS FOR THE FIXATION  
OF THE UTERUS.

Attention has recently been called to complications of labor in cases in which the uterus had been suspended by adhesions following abdominal section, or after suture of the uterus to the walls of the vagina. Among the most recent and interesting of these communications is that of Graefe (*Monatsschrift für Geburtshilfe und Gynakologie*, 1895, Band ii, Heft 6). The patient was aged thirty-eight years, and a multipara. She was brought into the clinic because of prolapse of the cord and death of the child *in utero*. Upon examination the uterus was found firmly contracted upon the child, and danger of rupture of the uterus threatening if attempt at version had been made. The patient had been operated upon for suspension of the uterus following the removal, by the vagina, of a subserous myoma. In view of the condition present, the abdomen was opened and the uterus amputated, the stump being left at the lower end of the wound. The patient died an hour and a half after operation. On post-mortem examination the anterior wall of the uterus above the internal os was found adherent to the vagina. The right broad ligament was very greatly stretched, and contained a rupture which opened the pelvic cavity into the vagina. Through this rent fatal hæmorrhage had occurred.

Graefe also reports the case of a patient, a multipara, in whom a dislocation of the uterus could not be successfully treated by a pessary. The uterus had been fixed to the vagina in accordance with Mackenrodt's method. The fœtus was in transverse presentation, the wall of the uterus greatly thinned, and the fœtus very plainly to be felt. The condition seemed favorable for a rupture of the uterus; in addition, the patient was seized with eclampsia, and had several convulsions. The abdomen was opened and the child removed; the uterus closed by suture. Both mother and child recovered.

In the *Archives de Tocologie*, 1895, No. 11,

Goubaroff reports the case of a patient who had been operated upon for retroversion of the uterus by anterior suspension. Her fœtus was in transverse presentation, and labor was impossible without assistance. To avoid the danger of rupturing the uterus it was determined to deliver the child by Cæsarean section. On opening the abdomen a band of adhesion was found between the uterus and the inner surface of the anterior abdominal wall. The veins of the broad ligament were very greatly enlarged. The child was readily removed and the uterus closed. Very firm adhesions were found between the uterus and the interior wall of the abdomen. The operation was successful in saving the lives of mother and child.

In the *Monatsschrift für Geburtshilfe und Gynakologie*, 1895, Band ii, Heft 5, Mackenrodt discusses the influence which suspension of the uterus has upon labor. He finds that the most firm adhesions develop between the uterus and the wall of the vagina, holding the uterus in a pathological ante flexion. A normal pregnancy and labor are only possible when the adhesions following the operation gradually loosen spontaneously. If this is not the case, abortion will occur, or a critical condition develop during labor, threatening rupture of the uterus, with loss of mother and child. Should pregnancy and labor be successfully endured, it is very probable that the retro flexion would again develop. In cases where the uterus has been brought by operation into marked ante flexion, the tubes are usually forced downward and backward, and becoming pathologically adherent, conception is less likely. It is a better operation to suspend the uterus by vaginal fixation, because it is possible for the adhesions to loosen spontaneously more easily, and danger of hæmorrhage and sepsis is less. These remarks apply especially to vaginal fixation of the uterus through the fundus.

When, on the contrary, vaginal fixation is performed through the interior of the uterus, the conditions are more favorable for future conception and normal pregnancy and labor.—*Am. Jour. of Med. Sciences.*

**SURGICAL TREATMENT OF CANCER OF THE BREAST.**—Sanderson says: It is a matter of fact that efferent lymphatic vessels run from the axillary glands through the apex of the axilla into the posterior triangle, and, after forming connections with the glands therein, finally enter the thoracic duct on the left side and the right thoracic duct on the right side. Moreover, superficial lymphatics from the skin covering the mamma track up over the clavicle to these same glands in the posterior triangle. It is laid down that in primary malignant disease of the breast the axilla should be cleared out (after removal of the breast), whether the glands be visibly infected or not. Why? Because the fact that they are not affected macroscopically is no proof that they are not affected microscopically. And yet, in the face of the anatomical facts quoted above, it is not the usual custom or practice to go further. If it is wrong to assume that the axilla is free from disease because it shows no sign to the naked eye or finger, it is equally wrong to assume that the posterior triangle has escaped. If it is right and peremptory to clear the axilla, it is also right and peremptory to clear the posterior triangle. Still more is it inconceivable how the triangle can be left untouched if the axillary glands are found to be clearly affected at the time of operation. It may possibly be objected that it is not feasible or is difficult to clear the posterior triangle. To this it can be replied that by a flap operation, done a week or ten days after the primary operation, a clean dissection can be made of the whole posterior triangle, that it is not difficult, and that it is quite feasible. A flap formed by a long incision down the sterno-mastoid muscle meeting an incision along the clavicle is detached as far back as the anterior border of the trapezius; this exposes the triangle, and the contents can be systematically removed with a little care and patience. By such means the acknowledged principle would be carried out as far as possible, and if the principle is right it seems incumbent upon the surgeon to strive to apply it thoroughly in practice and not to be content with stopping half-way.

**THE EXTRAVASATION OF BLOOD IN TUBAL PREGNANCY.**—James Oliver states that during the evolution of a natural pregnancy there results not only an augmentation in the size of the blood vessels of the uterus, but a hypertrophy of the tissues of this organ generally. When, however, the fecundated ovum develops in the Fallopian tube it seldom happens that any vigorous local growth is excited by its presence, although the blood vessels in the involved tube become greatly enlarged. Apart from any intrinsic disease, the integrity of a blood vessel depends greatly upon the manner in which it is supported by the surrounding tissues. When, therefore, the pressure exerted by the Fal-

lopian tube against a growing ovum is insufficient to support the correlatively enlarged blood vessels, they rapidly become thinned, and rupture with extravasation of blood takes place on the slightest provocation. When the developing ovum is located in the cavity of the uterus we are accustomed to believe that accidental hemorrhage from the maternal vessels never takes place until after the fourth week of pregnancy. Whether this belief be correct or not, it is evident that in tubal pregnancy accidental hemorrhage from the vessels in the mucous lining of the Fallopian tube may occur as early as the seventh or the tenth day after impregnation. In ectopic pregnancy, therefore, blood may be extravasated from the maternal vessels before the chorionic villi become vascular—a phenomenon which happens during the third week of pregnancy when the chorion becomes incorporated with the allantois. The paroxysmal attacks of severe pain which are sometimes experienced in cases of tubal pregnancy are due to these effusions of blood, and, although the primary hemorrhage occurs always whilst the ovum is living, subsequent hemorrhage may nevertheless happen after this body has died. Rupture of the Fallopian tube itself, which has gradually become more and more thinned, may be induced by the first or any succeeding extravasation of blood; and as this accident may occur as early as the fourth week of pregnancy, before the chorionic villi have begun to participate in the formation of a true placenta—for the ovum is everywhere placental at this period—the breach in the continuity of the tube is not, in all cases at least, attributable to a thinning at the placental site or to a penetration of the tube by the villous processes. A portion of the external hemorrhagic discharge—vaginal—which is observed in the early days of some tubal pregnancies comes directly from the ruptured vessels in the tube.

**DELIRIUM AFTER GYNÆCOLOGICAL OPERATIONS.**—Doleris (*Nouvelles Archives d'Obstet. et de Gynec.*) has prepared an instructive memoir on the appearance of acute more or less maniacal delirium after "minor" gynæcological operations and plastic surgical proceedings. In one case no operation was performed, but the patient worried continually about surgical relief, till a maniacal attack came on. Two fatal cases occurred in Doleris' experience. In both the patient was vicious, plethoric, alcoholic, and syphilitic. One was very rich and luxurious; she took great quantities of ether. After an operation from the uterine side for the cure of suppurating tubes, violent delirium set in with ioterus and no fever. Death occurred on the sixth day; complete asepsis was proved at the necropsy. The second patient was a servant at a beershop. Very large sclerosed ovaries were removed. Fatal delirium ensued; neither vomit-

ing nor fever were observed. In six instances the patient recovered. The curette and dilator, etc., were used in one for diseased appendages, after Doleris' principles. There was delirium for a few days. The same phenomenon was seen in a patient on whom he operated for prolapse and cystic cervicitis, and on a third also treated for these affections; this case was alcoholic. In a case of procidentia, the patient being 52 years old, symptoms of melancholia had been seen before a plastic operation for procidentia. Afterwards she was troubled for a time with acute delirium and ideas of persecution, etc. A nervous young Syrian woman had fits of violent fear after an operation on the cervix. Lastly, a stout phlegmatic woman had acute delirium and insomnia after an operation for prolapse. No other neuroses of the kind have been noted by Doleris in the course of about 2,000 similar operations.—*Br. Med. Jour.*

MEDIEVAL GYNÆCOLOGY.—Dr. W. S. Robertson gives (*Edinburgh Med. and Surg. Jour.*) the following description taken from the works of Father Mayster Alexis, of Pimont, who lived in the latter part of the sixteenth century. The tampon and postural method were evidently well known at that time: "To heale a woman that has the matrice out of her natural place. Take a flint stone that hath been alwaies in the earth and not taken the aire, and put it in some basket covered in a great fire, and when it is verie hotte put it in a little tubbe or barrell, and wet it with vinegar cast upon it, and cause the woman to stand over it to receive the smoake or parfume of it, and then let her goe to bed. Ye shall after this take the juice of Rue and make a little rounde ball of cotton, whereunto ye shall tie a threede, and then dippe the said ball in the saied juice of Rue, and put it into the mouth of the matrice, the whiche will incontinent take the ball and drawe it in, and then it will return into his natural place again. But you must binde and tie the ball sure and well, least peradventure it should remaine within. After this an ointment is to be applied to the reynes of her backe, and laye hotte towe upon it, and then swaddle her as women do young infantes. And so she must be laied in her bed with her bellie upwarde and her heade lower than her buttockes. This must ye doe from night to night three times, and she shall be healed. She must also eate hot things in operations, as pigeons and hennes, with spices and other like things.—*Med. Rec.*

BLEEDING FROM VARICOSE VEINS OF THE VAGINA AND VULVA AS A COMPLICATION OF LABOR.—Thiele (*Deutsche medicinische Wochenschrift*, 1895, No. 50) reports the case of a multigravida who was seized with hæmorrhage from the vagina. On examination the source of bleeding was found to

be varicose veins in this region. The hæmorrhage became severe, and was checked with the application of ice and iodoform-gauze tampon. Repeated transfusion of saline solution was also practised. The patient came into labor, and was delivered spontaneously of a dead child. Profuse bleeding from the vagina and urethra occurred. The patient made a slow but uninterrupted recovery.

He also reports the case of a multigravida with valvular heart-lesion, who was taken with severe bleeding from the varicose veins of the labia. While the midwife in attendance was cleansing the patient the left labium ruptured, and profuse hæmorrhage followed. The child's head was perforated, and at once extracted during very severe hæmorrhage. Bleeding continued until the uterus was completely emptied. The ruptured veins were then closed by suture, and the patient made a prolonged recovery.

DELAYED PUERPERAL INFECTION.—Dolérís points to the established fact that the bacilli of infection may be temporarily innocuous until some incident again arouses their former virulence. Thus it comes that an infection which has been latent for weeks or months suddenly flares up with surprising intensity. He refers to cases of mild puerperal infection which during the puerperium gave either very slight or no symptoms at all. Weeks later, owing to some influence unknown, the latent bacteria are again aroused to activity and produce serious symptoms of puerperal infection. Infection may also occur some time after labor or puerperium, which may still have a puerperal character, because the sexual organs have not regained their former condition and still possess a special morbid receptivity.

A CONTRIBUTION TO THE PHYSIOLOGICAL ANATOMY OF PUERPERAL ECLAMPSIA.—The various organs of two cases of eclampsia were subjected by Leusden to a minute microscopical investigation. He gives his results as follows: I have found nothing which indicates the infectious (bacteria) origin of puerperal eclampsia. The probability is that a toxic substance circulating in the blood is the cause of the eclamptic attacks. The changes in the kidneys are the principal organic lesions. The placental giant cells which are found in the lungs are neither a cause nor a result of eclampsia. The embolism of these cells is only an accidental coincidence. Even the most careful searching failed to show emboli containing liver cells. The minute necrotic changes in the parenchyma of the liver, present in both cases, could not be connected with the cause of eclampsia. The hyaline (fibrous) thrombi of the lung and liver capillaries are the result of secondary changes (uremic?) which occur independent of eclampsia.

**TOTAL ABDOMINAL HYSTERECTOMY.**—Richelot (*Presse Med*) advocates complete abdominal hysterectomy for uterine fibroids, as operations in which a pedicle or stump is left have many disadvantages—for example, hæmorrhage from or suppuration round the stump. He operates as follows: After the uterus has been pulled out through the abdominal wound, the next procedure depends on the number and position of the fibroids. If they are numerous or contained in the lower segment of the uterus, it would be folly to attempt to place forceps on the distorted broad ligaments. In such atypical cases he practices a preliminary removal of every fibroid which is in the way. Those with a pedicle are cut off with scissors, the interstitial ones enucleated, and lastly, the large fibroids in the lower segment are enucleated or removed piecemeal through a median incision. The uterus then becomes flaccid, and can be raised out of the true pelvis, while the broad ligaments can be depressed at will. The hysterectomy proper then begins. Standing at the woman's left side, he opens the anterior cul-de-sac, guiding the incision by the finger of the right hand in the vagina. There is no danger of infection if anti-septic precautions are taken. The advantages of opening the anterior cul-de-sac alone are (a) the tumor need not be pulled forward; (b) there is no dissection of or bleeding from the posterior edge of the vagina; (c) saving of time. Next, large curved pressure forceps, such as are used in vaginal hysterectomy, are applied to the broad ligaments by the following method, which is said to be very easily carried out. Standing at the woman's right side he makes a narrow opening with blunt-pointed scissors in the broad base ligaments, close to the cervix and just above the vaginal insertion. This is well above the ureter. The forceps are then introduced *per vaginam*, and their posterior blade is made to pass through the opening made in the broad ligament. They can then be passed upwards and made completely to grasp the ligament with the uterine artery, which are never too high to reach if the inferior segment is free, or if a preliminary enucleation has been practiced. This done on each side the uterus is detached by cutting through the posterior insertion of the vagina. This usually causes considerable hæmorrhage, which the author completely stops by pressure forceps introduced *per vaginam*. As regards dressing he introduces plugs of iodoform gauze through a speculum, which accurately fill out the vaginal wound. The abdominal wound is then sutured, and the operation is finished, the result being exactly the same as in a vaginal hysterectomy. The small openings made in the broad ligaments and the method of placing the forceps on the broad ligaments distinguish this operation from all others.—*Brit. Med. Jour.*

**THE TREATMENT OF GONORRHOICAL DISEASE OF THE UTERINE APPENDAGES AND THE PELVIC PERITONEUM.**—Lebedeff treated five cases of gonorrhœal pelvic and tubal disease by intrauterine injections of an alcoholic solution of alumol mixed with a solution of iodine and alcohol (alumol 2.5 grammes, solution of iodine and alcohol 25 grammes each). The injections were made with Braun's syringe. His conclusions were that (1) the treatment decidedly shortened the acute inflammatory stage of the disease, lowered the temperature, and lessened the pain; (2) it accelerated the absorption of inflammatory exudations; (3) the symptoms of endometritis became markedly less; purulent discharge changed to a mucous one; gonococci disappeared; hæmorrhages ceased.

**MYOMA OF THE UTERUS, WITH PREGNANCY ADVANCED FIVE MONTHS; SUCCESSFUL REMOVAL OF TUMORS AND UTERUS.**—Murdoch Cameron, in the *British Medical Journal*, 1895, No. 1823, describes a successful case of total extirpation of the uterus, pregnant five months, for myomatous tumors, which rendered labor impossible. Upon opening the abdomen a large, irregular tumor was seen, consisting of the uterus and a large fibroid of the interstitial variety. An elastic ligature was first applied, and the uterus and tumors amputated. The uterine and ovarian arteries were then tied, the tubes and ovaries removed, and a myomatous tumor blocking the pelvis was loosened from its adhesions and drawn up. The cervix was also separated from its connections, and the peritoneal flaps were stitched to the mucous membrane of the vagina. These ligatures were left long, and were drawn down into the vagina. The parts removed weighed twenty-seven pounds. The patient made a good recovery.

**SYMPHYSEOTOMY** was performed by Kenneth Cameron in a case with a conjugate of three and one-fourth inches and a living child of eleven and a half pounds delivered by forceps. There were lacerations of both anterior and posterior walls of vagina, which were sutured with silkworm gut. The pubic wound was brought together by six silkworm-gut sutures and covered with iodoform gauze dressing, and straps of adhesive plaster were applied tightly around the pelvis; these were augmented two days later by a broad belt of webbing tightly strapped. The patient made an uneventful recovery. The sutures were removed on the tenth day and all the wounds were found to have healed by primary union. She was allowed to get out of bed on the twenty-first day and to walk at the end of the fourth week. The symphysis seems now to be completely united, as no movements whatever can be felt. She walks well and is able to perform her household duties as well as ever.

# NERVOUS DISEASES AND ELECTRO-THERAPEUTICS

IN CHARGE OF

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## MULTIPLE NEURITIS FOLLOWING PREGNANCY AND CONFINEMENT: PARALYSIS OF THE FOUR EXTREMITIES: CURE.

BY DR. CHARLES VINAY.

The puerperal multiple neuritis arise generally after confinements; they are only rarely observed during pregnancy, and in this case they are accompanied by incoercible vomiting and assume a grave form sometimes fatal (by paralysis of the phrenic nerve). The case related by the author presents this particular and interesting condition that it relates to an intermediate variety, both in the time of its appearance and the gravity of the multiple neuritis, which exists between the two classical forms of this affection.

The patient was a woman thirty-eight years of age, pregnant for the eighth time, who during the first three or four months of this pregnancy had frequent hæmorrhages; in the course of the last two months she had suffered much from vomiting. Finally several weeks before her delivery she presented the first symptoms of multiple neuritis in the form of pains, burning sensations and a feeling of formication in the limbs, both upper and lower. The delivery was followed by some general trouble such as malaise, headache, fever for 48 hours, indications of a slight degree of infection, and on the fourth day all the symptoms pathognomonic of multiple neuritis appeared: pains, disturbance of sensibility, weakness and muscular atrophy of the four extremities, without implication of the bladder or rectum, diminution of electrical contractility and abolition of the reflexes.

However as the disturbance of sensibility and the wasting of the muscles was moderate and moreover as there was no distinct reaction of degeneration, the author concluded that he might give a favorable prognosis from the first, and in

fact under the influence of a treatment, which consisted in administering every second day a hypodermic of fifteen grains of ergotine, and in giving an electric bath for half an hour on the intermediate days to the legs only, the condition of the patient rapidly improved; at the end of two months she was considered cured. At this time the pains had disappeared and the upper extremities had recovered their normal action: there remained only a little weakness and some slowness in the movements of the legs.—Translated from the *Lyon Med.* by CAMPBELL MEYERS, M.D.

## USES OF ELECTRICITY IN THE TREATMENT OF INSANITY.

Electricity in the treatment of insanity has not received the attention that it deserves. Any measure, whether it be palliative or curative, should have an important place in the therapeutic measures of a hospital for the insane. During the time electricity was being advanced as a therapeutical agent it was thought that insanity offered a rich field to demonstrate the efficiency of the electric current. It was accordingly used, found wanting, and discarded. Doubtless the disappointment in its effects was due to the ignorance of its properties and also of the methods of application. Since those days it has often been used sporadically in various ways with varying results.

Electricity, as we know, is not an empirical remedy. This is conceded by authorities. It is recognized, however, and has been repeatedly demonstrated, that the two forms of current have certain well-defined laws.

Arndt states as follows: "Every electric current, however excited, of whatever quality, is calculated to remove mental disorders, but not every current is capable of removing every mental derangement. On [the contrary it may aggravate some forms and make them incurable."

Erb, in his statements, may appear too sanguine, but although his suggestions have been adversely

criticized, his directions for treatment are based on scientific studies.

Electricity is a valuable agent for suggestive therapeutics, and doubtless some of its benefits are dependent on this property, but that it has an effect of its own can not be doubted.

In the psychoses, electricity, as an agent for therapeutics, may be used with suggestion in connection with the treatment and without the use of such an agency.

Various modifications of the current are in use, but for all practical purposes the interrupted and continuous forms are alone essential. The determination for their individual use is founded on the usual indications in general disease, remembering that as yet we have no certain rules for their selection. Central galvanization, galvanization of the head, general faradization, alone or with peripheral faradization, are the most important methods. These combined with the so-called electrical massage will be found to meet the usual demands.

In reference to the forms of insanity benefited and the contra-indications I will say only a few words.

It is of course, in the primary insanities we expect it to act as a curative agent. Its remedial effect, however, may be obtained in many psychical disorders. My experience verifies the result of other investigators in this line, and I have, as far as possible, followed the methods suggested by them. As illustrating the benefit which may be obtained by appropriate treatment, I will give a few illustrations: Many of the vesanias, and especially those having a neurasthenic or hysterical basis, are accompanied by what are termed "cephalic sensations." In these cases galvanization of the head often produces speedy relief, and in many cases has a pronounced curative effect. Various muscular and visceral pains, also paresthesia, are, at times, benefited by some form of faradization, or, perhaps, central galvanization. Many female patients have definite points of spinal tenderness. An appropriate course of electricity is sometimes followed by a marked improvement. I mention these few symptoms merely to illustrate what a useful agent we have in the electrical current. I can not refrain, however, from mentioning one more property which is at times beneficial, viz., its tendency to promote sleep. It has been my custom for some time to have patients, after their treatment, resume a recumbent posture. It is surprising to find that some patients, who are habitually wakeful during the day or night, will secure a refreshing sleep. I might mention that this occurs without verbal suggestion. Whether it is due to natural exhaustion, or whether it is a quality of the current, I will not decide. Suffice to say that it is the opinion of all electro-therapists that electrical applications, and especially galvanization of the

head, may induce sleep. You will find in all your cases that it will be an advantage to secure for your patients rest and quiet for a specified time after all your treatments.

Certain forms of insanity, especially those dependent on toxic agents or organic changes in the nervous system, are accompanied by a change in the electric excitability of nerve or muscle. In these cases electricity may be of considerable benefit in diagnosis.

Electricity as a suggestive agent may also prove a valuable method of treatment. I have in mind not a few cases where verbal suggestion has been employed with the application with a marked improvement in the mental condition of the patient, the improvement not being obtainable by ordinary suggestive measures.

The efficacy of any method of treatment is based on the systematic use of the medicant and a recognized method of procedure. A collection of the results will then enable us to make appropriate deductions. The use of electricity is governed by the same principles, viz, a systematic use of the agent and a recognized method of treatment. In all the recent works on psychiatry, you will find reference to electricity and measures recommended for its employment. I therefore think it useless for me to detail the various methods in use.

Every suitable case should be individually considered, the treatment carefully selected, and the method conscientiously pursued.

For the convenience of the physician and also as a means of reference and compilation, I should suggest a method of recording such as I now show you:

CHART FOR RECORDING ELECTRICAL TREATMENT.

Name. . . . .	J. B.
Form of insanity. . . . .	Acute melancholia.
Method of treatment. Galvanization of head, 2-5 milliam.	
Interval between treatments. . . . .	Every second day.
Number of treatments. . . . .	Twenty.
Result and remarks. . . . .	Recovery in three months.

Remembering that electricity is a powerful stimulating and sedative tonic, according to the form of current used and the manner of application, we can make the following statements:

1. Electricity is of benefit in many forms of insanity, and in the primary insanities may promote recovery.
2. Systematic use is demanded, and, dependent on the effect desired, a varying length of time should elapse between applications.
3. The choice of the current is governed by the ordinary rules for selection in electro-therapeutical work.
4. Electricity is valuable as a diagnostic agent in insanity, as indicating an intercurrent or complicating disease.—Irwin H. Neff, M. D., in *Am. Jour. of Insanity*.



## TRAUMATIC NEURASTHENIA.

Dr. C. E. Nammack presented a policeman who, on October 12, 1892, had attempted to stop three runaway horses attached to a steam fire engine in the Centennial parade. He was successful in this, but although not physically injured, he received a profound psychical shock. One week later it became necessary for him to seek medical advice for the relief of pains in his chest. On the advice of Dr. C. L. Dana he went abroad, and remained there from June, 1894, to October, 1895. He had been perfectly well up to the time of this accident, and his family and personal history were excellent. He remained on police duty for some time, but found himself unable to attend to his work, even though his promotion to the rank of roundsman had rendered this less monotonous than formerly. The first symptoms noticed were diminished power of persistent application, and nervous irritability. Mental exaltation then became marked, and insomnia became most distressing. Hyperesthesia and paresthesia were not noticed. The principal subjective symptoms were pain over the heart and dyspnoea on exertion, profuse sweating and insomnia. Examination recently showed the pain and temperature senses normal, tactile sensibility impaired and hyperæsthesia wanting. Both visual fields showed the shifting type of contraction. Color perception was fairly good. There was no motor weakness of the eyes and no abnormal pupillary reaction. Smell and taste were not affected; station and gait were good; there was some tremor of the hands. The knee-jerks were slightly exaggerated. The heart action was weak and greatly accelerated by walking; there was no enlargement of the heart or valvular disease. Slight irritation of the skin led to persistent redness. His weight had fallen from 220 to 175 pounds. Micturition was not vigorously performed. The urine was normal. The sexual desire was weak, although the power was good. The diagnosis in this case, the speaker said, lay between traumatic neurasthenia, traumatic hysteria and simulation. The last was excluded by the absence of motive, of striking symptoms and of efforts to exaggerate slight symptoms. Hysteria was excluded by the absence of anæsthesia, contractures, spasms, etc., and of paroxysmal phenomena. The patient had had the benefit of skilful treatment and improvement had been slow but steady. Apparently hydrotherapy had benefited the patient the most. The case was interesting as being free from the usual complications arising from prospective lawsuits.

Dr. C. L. Dana said that when he saw this case he made the diagnosis of traumatic neurasthenia. The case was an interesting and typical one, and was chiefly of importance on account of the absence of the complications referred to.

Dr. Nammack, in closing, said that formerly considerable stress had been laid upon the condition of the visual fields as a differential point between traumatic neurasthenia and hysteria, but that now this had been pretty much abandoned.

IMPERATIVE CONCEPTIONS AS A SYMPTOM OF NEURASTHENIA.—(*Med. News*, January 11, 1896.) In the first of two cases reported by Dr. Diller, of Pittsburg, the onset was sudden, occurring in a business man who had been overworking for a long period. The attack took place during a theatrical performance while the patient was seated in the front row of the balcony. He was barely prevented from hurling himself over the railing. The second case was that of an engineer on a railroad. The man had complained for some time of the usual symptoms incident to nerve-tire, viz.: headache, vertigo, loss of endurance, irritability, insomnia, and general muscular weakness with twitchings. Finally so great became his fear of wrecking the train in his charge that he voluntarily resigned his position. Both of these cases recovered in about six months under a judicious combination of mental and physical rest.

INTERCOSTAL NEURALGIA.—A local application much used in the clinic of Dr. S. Solis Cohen for the relief of vague pains localized at different points upon the surface of the body, as well as in the treatment of *intercostal neuralgia* and the pleuritic stitches of chronic pulmonary tuberculosis, is the following:

Menthol,  
Chloral hydrate,  
Camphor,  
Equal parts . . . . . M.

Label—Apply to painful part with camels'-hair brush once daily, or as symptoms may indicate.

In this prescription liquefaction of the solid ingredients takes place when they are brought in contact. The resulting fluid is slightly stimulating, slightly irritant and decidedly analgetic. Should its too frequent application result in vesication its use is intermitted until the parts heal.

CHRONIC DRY NASAL CATARRH.—The following prescription is recommended by one who has successfully tried it for chronic dry nasal catarrh:

Liquid vaseline, . . . . . 1 oz.  
Sanmetto, . . . . .  $\frac{3}{4}$  oz.  
Glycerine, . . . . .  $\frac{1}{4}$  oz.

To be used as a spray three times daily through an atomizer, and to take internally Sanmetto in teaspoonful doses four times a day.

## PATHOLOGY AND BACTERIOLOGY

IN CHARGE OF

H. B. ANDERSON, M. D., C. M.,

Pathologist to Toronto General Hospital; Professor of Pathology Trinity Medical College, and in charge of the Trinity Microscopic Pathological Laboratory, Toronto General Hospital.  
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## PREFERENCE OF THE DIPHTHERIA-BACILLUS FOR THE TONSIL.

Evidently the bacillus flourishes best not only in the presence of oxygen, but in a current of air. And where in the entire alimentary canal can this requisite be met except upon the back part of the inner surface of the tonsil? Which is precisely the point of attack in 80 per cent. of our cases. It seems to be pretty clearly established that diphtheria almost invariably enters the system through the alimentary canal, either in the food or drink, or by labial contact, and the comparative immunity of the mucosa, of both mouth and stomach from attack has been a matter of surprise, for which, however, the absence of an air-current in these situations gives, at least, a plausible explanation. The mouth is, of course, frequently attacked, and the stomach in rare instances, but both almost always secondarily, after the germ has gained a vigorous foothold upon the ventilated surface of the tonsil. This demand of the germ also helps to explain its marked tendency to extend along the air-passages rather than the alimentary tube, and also the fact that its most vigorous and virulent growth occurs at the point where the air-current is most rapid, the interior of the larynx, the trachea, and especially upon the vocal cords. The extreme virulence and high death-rate from systemic poisoning and heart-failure of diphtheria of the nasal passages are also more easily understood. May not the special liability of the nerves of the palate-muscles in general, and azygos uvulæ in particular, to peripheral neuritis and paralysis after diphtheria, be partially due to their nearness on both aspects to surfaces swept by a current of air and hence peculiarly suited to the development of a virulent form of the toxins?

Fortunately, however, the tonsil is, to use a Hibernicism, not only the most vulnerable, but one of the best protected places in the body. For every dart nature seems to have a shield. And in this case the shield consists of the swarms of leucocytes poured forth by the gland. They cannot defeat the enemy in a fair fight upon a field of his own choosing, for they are sappers and miners

rather than riflemen, but they bravely bar his way into the heart of the country by a solid rampart of rank upon rank of their dead bodies. This is the famous and much-maligned "membrane," which happily in a large majority of cases is successful in mechanically cutting off the Klebs-Lœffler pirate from the base of supplies which he hoped to establish in the rich inland districts. When his forces have become enfeebled by starvation, the membrane craftily detaches itself and sweeps the invading army down with it into the war-like gastric districts, where the leucocytes have all the advantages of the situation; can massacre the bacilli at their leisure and eat them afterward.

This again coincides with the clinical observation—that so long as the membranes are well developed and *confined to the tonsils*, constitutional symptoms are usually few and mild, and reinforces the *old* teachings as to the danger of forcibly detaching the membranes, and the *modern* ones as to the harmfulness of too frequent swabbing. It also fits in with the fact that many of the most rapidly-fatal cases are attended by the formation of very little membrane, or of only a thin pellicle, as is usually the case in nasal diphtheria, where both the fixed cells and leucocytes seem simply overwhelmed by the virulence and rapid production of the toxins before they have time to form a membrane.—*Echoes and News.*

## IMMUNITY FROM ANTITOXINE.

That the immunity conferred by the antitoxine (passive immunity) does not protect over as long a period as natural immunity (active immunity) has long been known as far as animals are concerned. Cases showing the duration of this artificial immunity in man, are not, however, common. Henach has reported a case in which a recurrence of the disease occurred from 25 to 30 days after the use of the antitoxine, and Wolf-Lewin reports a case where a child who had apparently recovered perfectly after the use of antitoxine, developed symptoms of a fresh attack ten days from the beginning of the first one. In our case the patient was immunized on January 7th and contracted a

second attack of what was presumably diphtheria about three weeks later; it is true that the patient was not under observation during this second attack, but cultures made only a week later showed the diphtheria bacillus to be present in the throat. During this second attack no antitoxine was used, and yet a third attack occurred thirty-seven days after the beginning of the second. In this case, then, the period over which active immunity lasted would seem to be about thirty-seven days, whilst that over which passive (antitoxine) immunity lasted was only twenty-one days.

It seems highly probable that auto-infection occurs in most cases of croupous pneumonia and in many of streptococcus throat; it is also known that virulent diphtheria bacilli are occasionally found in the throats of healthy people. This case would seem to prove definitely that auto-infection does occur in diphtheria, as it was shown that the diphtheria bacilli were constantly present in the throat between the second and third attacks, the throat all this time presenting a perfectly normal appearance. It is only fair to conclude that when the immunity was worn out the individual became affected by the bacilli then present.

Although the patient was not under constant observation from January 7th, when the first attack began, until April 10th, when the diphtheria bacilli finally disappeared from the throat, yet cultures were made frequently enough to warrant the assumption that the bacilli were continuously present over the period between the dates specified. In an observation recorded in the *British Medical Journal* of which Sevestre speaks, the bacilli were obtained from the throat seven months after the disappearance of the membrane; but in this case the cultures were few and far between. The question of the survival of the diphtheria bacilli after the disappearance of the membrane is an important one from a prophylactic point of view, for we must admit the possibility if not the probability of individuals such as our patient transmitting the disease to others. Such a possibility once being established, the isolation of diphtheria cases would not be subject to any fixed law, but would depend on the demonstration of the presence or absence of the bacillus in the throat.—*Johns Hopkins Hosp. Bulletin.*

**ETHMOID DISEASE.**—Dr. Thrasher, of Cincinnati, considers that the middle turbinate bone is more frequently the seat of disease in so-called catarrhal cases than any other part of the nose and from its anatomical situation in the upper part of the nasal fossa, from pressure when in a swollen condition may cause all sorts of reflex phenomena. He advocates removal of the enlarged tissue with the cold snare, warning against the use of the cautery in this situation (with which

the editor agrees). He describes the principal symptoms as follows:

"1. Pain, generally referred to the infra or supra-orbital nerve, sometimes to the eye or orbit (more especially when the ethmoid cells are also involved), and occasionally to the ear. I have no doubt but some of the severe facial neuralgias for which excision of the nerve has been performed would have been better relieved by excision of a diseased middle turbinate.

"2. Nasal discharge, sometimes of exceedingly unpleasant character. The discharge from the cells themselves often irritates the membrane in front, giving rise to a sore and red nasal extremity.

"3. Obstruction to breathing and anosmia; but frequently the breathing channel is not impeded even in severe inflammation of the middle turbinate.

"4. Obstruction of the natural openings of the accessory cavities, notably the antral, frontal, and anterior ethmoid, occasioning in each case its own train of symptoms.

"5. External deformity of the nose only, and when the ethmoid cells are involved the eye is often misplaced by orbital swellings.

"6. Various reflex nervous phenomena."

**GNORRHŒAL PLEURISY.**—In a recent article Faitout reviews all the reported cases of this nature. As a result of this review he finds that, though a good many cases are reported, very few present sufficient evidence to be classed as gonorrhœal pleurisy. One case, however, reported by Bordoni-Uffreduzzi, seems to definitely prove that gonorrhœal pleurisy can occur. The case was one of a young girl, aged eleven years, who was assaulted by an individual with gonorrhœa. Some days afterward she was attacked with severe polyarthritis and later a double pleurisy developed. She also showed symptoms of endo- and pericarditis. Dr. Mazza, on examination of cover-slips from the pleural exudate, found numerous organisms morphologically resembling gonococci within the leucocytes. Furthermore, he was able by Wertheim's method to cultivate the organism and show that he was dealing with a pure culture of Neisser's coccus. The author comments on the need of further bacteriological investigation on this subject.—*Gazette Médicale de Paris*, October 5, 1895.

**DR. STEELE**, of Plaistow, reporting a case of erysipelas neonatorum successfully treated by anti-streptococcic serum remarks:—In the practice of the Plaistow Maternity Charity I have seen a fair number of cases of erysipelas neonatorum, but I have never seen one recover when the disease was so far advanced as in this case. I am convinced that the child's recovery is due to the anti-streptococcic serum. No other treatment of any kind was adopted.—*Brit. Med. Jour.*

# THE CANADA LANCET

A Monthly Journal of Medical and Surgical Science, Criticism and News.

*Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address, DR. J. L. DAVISON, 12 Charles St., Toronto.*

*Advertisements inserted on the most liberal terms. All Cheques, Express and P. O. Orders to be made payable to DR. G. P. SYLVESTER, Business Manager, 585 Church St., Toronto.*

AGENTS.—DAWSON BROS., Montreal; J. & A. McMILLAN, St. John N. B.; Canadian Advertising Agency, 60 Watling St. London. 5 Rue de la Bourse, Paris.

## Editorial.

### IN RE ROËNTGEN'S X RAYS.

It is the glory of medicine that it owns no patents and conceals no discoveries! In a less degree this is true also of general science. Had any man, other than a scientist, found out that radiant energy of a kind previously unknown could be put to practical use, his first proceeding would have been to file application for patents in all civilized countries. These obtained he would, through their aid and that of the capitalist, have started to join the ranks of the multi-millionaires.

Through the communism of our profession, in less than two months from the first announcement of what is incorrectly called "The new photography," physical scientists, physicians and amateur photographers everywhere are prosecuting the study of these new properties of light, along lines laid down by the Würzburg professor. Already signal advances have been made upon the original proposition and in the importance as well as in the priority of these advances, Toronto and Montreal take no inferior positions.

It is the purpose of the CANADA LANCET to present from time to time reports upon the methods which may prove most satisfactory in the application of this new departure to the purposes of medicine. At present we shall consider but a few points regarding the production of shadow pictures through opaque substances.

The algebraic symbol for an unknown quantity was selected by Prof. Roëntgen to indicate the radiant energies by which the taking of such silhouettes has become possible. Their discovery

and the beginning of their utilization has created more interest than any one innovation since Koch's lymph was boomed. The daily press has their means, and the public is being educated up gone daft over the possibilities opened up by to certain disappointment. It is the part of a wise conservatism to prove all things, and until this new energy has been harnessed and put more fully to practical uses a measure of reserve regarding its importance to medicine is commendable. Stripped of all sensationalism the facts so far established seem to justify this summary:—

If a current from an induction coil similar to the coils on Faradic batteries, but very much larger, be passed into a glass globe or tube by means of metal connections and if then the air be exhausted from the globe the electrical current produces in the evacuated tube the so-called "Geisler" light, which is visible to the human eye. As the exhaustion proceeds the light diminishes and at a certain point totally disappears. In its place the glass of the globe or tube becomes phosphorescent from the action of invisible rays from the cathode or negative pole. These phenomena have been known and studied since 1879.

The so-called cathode rays do not pass through the glass of the globe, and they are turned from their course by an electro-magnet, thus proving that they are not of the same nature as the luminous rays.

If the vacuum be produced in the highest degree, rays are produced which differ from cathode rays in that they do pass through the glass, that they are not deflected by a magnetic fluid, and that they pass in straight lines through material opaque to ordinary luminous rays. Covering the globe with black cloth in a dark room and placing within six feet of it a card coated with luminous paint, the card will glow with phosphorescent light, showing that the coating has been impressed in some way by energy penetrating the opaque covering. By chance, Roëntgen observed that this energy was capable of making an impression on an ordinary photographic plate in its holder, and with its covering slide of black card board not drawn. He also observed that opaque materials were penetrated in varying degrees by these rays. Wood, for example, offered less resistance to the rays than clear glass to the rays of ordinary light. Metal even in thin sheets,

afforded marked resistance. Flesh in masses not too thick, was easily penetrated, but bone not at all so. Substances placed between the globe so evacuated and electrically—energized, and a photographic plate in its holder, cast shadows, which, after the development of the negative, could be reproduced as ordinary prints. This is the sum and substance of the discovery, and the now familiar pictures of the human hand, showing the bones as deeply shaded, and the flesh covering them in half tone, can be easily understood.

In a similar way a ball lodged in flesh can be located by the simple process of placing the limb on, or in front of, the photographic plate-holder and sending the X rays from the glass globe through the limb. The bone and the ball will appear as silhouettes on the plate, after it has been developed.

With improved apparatus giving more powerful radiations, the method may aid in the diagnosis of gall or kidney stones, but beyond the help it can give in locating foreign bodies, its advantages to surgery are as yet problematical.

The terms shadowgraph, skotograph, xograph and radiograph, have been proposed for the prints from negatives taken by this method. The first of these conveys a different meaning in a simple form, the second and third are in language not "understood of the people," while the fourth is a hybrid word, radius being Latin and graphic Greek.

At present the cost of an apparatus of the kind above referred to, suitable for use in hospitals, would approximate \$50.

### ACUTE ARTICULAR RHEUMATISM.

From the days of Hippocrates, when the "humor" idea was prevalent, to the present time, the cause of the disease now known as acute articular rheumatism has frequently excited much discussion, but has so far eluded discovery.

Under the *humorists*, the idea, we can scarcely call it a belief, was that "an acrid humor was generated in the brain and distributed over the body." That was sufficiently hazy for even the most transcendental minds of the present day.

Our terminology has been, and is still extremely vague, and unsatisfactory as regards many ail-

ments coming under the general term rheumatics. All sorts of troubles take the name, either because they are painful, or are supposed to be produced by the action of cold. Thus muscular rheumatism, rheumatic gout, rheumatoid arthritis, are all misnomers, inasmuch as they have no relationship to true rheumatism, however convenient it may be to dub them rheumatic, on account of their painful nature.

But what is the essential nature of acute articular rheumatism? Fagge, writing a good many years ago, said that it presented the characteristics of an epidemic disease, though he still believed it was not due to an infective agency; but rather "to the greater or less incidence of cold upon the population in such a form as to be effective in producing chills." Which explanation is unworthy of the great Fagge, who, had he lived to the ordinary span of life, would no doubt have been in the first ranks of modern thinkers. Strümpell, as long as four years ago stated distinctly that it "is an infectious disease." Other observers in the past five years have adopted the same views, which, by the way, were first advanced by Hüber. The specific pathogenic organism or organisms which cause the disease have not yet been demonstrated, but all the clinical and anatomical peculiarities of the disease point to its being dependent upon an infective agent, though the disease is non-contagious.

From Norway and Denmark, where the disease is very common, important information has been received. In these countries notification of the authorities, of all cases treated has been carried on for some time past. The disease has certain well recognized congeners in the form of minor ailments, notably inflammatory affections of the throat, such as pharyngitis and tonsillitis; and certain cutaneous phenomena, among which the most common are, profuse perspirations, sudamina, erythema nodosum, and other forms of erythema, and urticaria.

Buss, of Bremen, showed in an elaborate paper the relationship of tonsillitis to acute rheumatism. He concludes that it is in the highest degree probable that it is in many, if not in the majority of cases due to pyogenic organisms which have lost some of their virulence, although there is evidence that the bacillus of pneumonia and the diplococcus of Fränkel have also the power of producing the disease. In his paper he has compared

acute rheumatism to ulcerative endocarditis and pneumonia, which were formerly believed to be due to a specific micro-organism, but in which it has been shown that various different micro-organisms are capable of producing the same group of symptoms.

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### CRIMINAL ABORTION.

Few medical men, especially in the early years of their practice, escape the temptation to earn large fees by inducing criminal abortion. Some friend has got a young woman of good and large family connections "into trouble." He applies to the doctor for help, urging the impossibility of marriage, and the certain disgrace and ruin of both himself and the "lady" if the matter is not attended to. Only one period has been missed, it would be so easy to do; so little risk of discovery would be run, and the eternal gratitude of the friend and his partner in crime would be certain. The doctor knows also, that if he does not assist, some one else, less conscientious, or at least less cautious, will do so, and earn the fat fee, etc. The tears and supplications of the fair sinner are sometimes added to other modes of entreaty, and occasionally the doctor yields.

In the great majority of cases the culprits escape with a few days or weeks of anxiety. But now and then, even with all the care and skill used, death comes to the unhappy young woman, and exposure and ruin to the doctor and his accomplice.

We believe that if all the cases of abortion brought on by doctors and others were known, the list would be appalling. Married women, with large or small families, often seek the aid of professional abortionists when their own physician refuses to aid them in avoiding an increase of maternal cares. The history of nearly every city and large town shows that, persons pursuing the nefarious calling of abortionists live and thrive by it.

Not one case in a thousand perhaps, comes to the courts. Many a woman is done to death, and the public is never the wiser, the family preferring to suffer her loss, rather than bring disgrace upon themselves.

Young women, and indeed married women, have as a rule very lax ideas as to the *sin* of

doing away with an unborn child, especially when *they* are personally concerned. If it is someone else's ox that is gored, that changes at once and completely, the complexion of the case.

Quite recently, at Warwick, in England, a midwife was sentenced to death for having brought about a miscarriage. The defunct woman had attempted in vain to induce a medical man to aid her, the midwife had done so, with the result of septicæmia and death in a few days.

It could not be shown that the midwife had used any "instrument," and she denied having used any. By "instrument" we suppose was meant one of metal or rubber, such as a sound or catheter, though why ergot or rue should not in law be considered an instrument, we are not able to discover.

The learned judge in summing up, held that if the intention was to commit a felony, and in carrying out that felony, death ensued, that was murder. The jury accordingly brought in a verdict of guilty of murder, and the judge passed the death sentence.

It should be the duty of the police in this and in all other countries to discover, and prosecute those abortionists, who, by their criminal practices, cause the death of many women.

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### TRINITY MEDICAL SOCIETY.

The final meeting of the above society for the session of 1895-96 was held in the College building, Spruce street, on the evening of the 18th Feb. The President, M. J. H. Allin, occupied the chair. Dr. J. T. Fotheringham opened the meeting with a paper on medical ethics. Dr. Shuttleworth followed with a paper on "Serum Therapy," which will be published by the society. Dr. Lamont then presented a case of stricture of the œsophagus for diagnosis and also the clinical history, P. M. report and specimens of a case of heart disease. Mr. Eagleson presented a case of congenital abnormality of the kidney, found in the dissecting room. Mr. Brereton closed the papers by relating the history and treatment of a case of leucæmia. These papers proved of such interest and instruction to the large assemblage of members present

that a vote of thanks was passed unanimously by the members to the above gentlemen. The papers being opened for discussion, the following gentlemen took part: Drs. Pepler, Anderson, Shuttleworth and Roberts; Messrs. Allin, McRae, Nyblett, McIntosh, Lapp and Clare. A vote of thanks was unanimously passed by the members to the officers of the society for the closing session. Mr. Allin and Dr. Roberts replied briefly on behalf of the officers. This brought to a close one of the most enjoyable and successful meetings of the society, which we trust may long continue its good work as prosperously as it has been done during the past year.

LONDON MEDICAL ASSOCIATION.—The following copy of a resolution passed at a regular meeting of the London Medical Association, held February 10th, 1896:

Moved by Dr. Ferguson, seconded by Dr. Arnott, and *resolved*, That the London Medical Association recognizes the services rendered to the medical profession by the Council of the College of Physicians and Surgeons of Ontario, in maintaining an efficient standard of medical education for students, providing for the registration of licentiates, guarding the rights of registered practitioners, prosecuting unlicensed practitioners, and erasing the names of practitioners guilty of infamous or disgraceful conduct in a professional respect.

This Association accordingly holds it to be the duty of every member of the College of Physicians and Surgeons of Ontario, promptly and loyally to pay the annual assessment fee, levied, in accordance with the provisions of the Ontario Medical Act, for the maintenance of the general expenses of the College; and it is further claimed that members of the College taking exception to any of the administrative acts of the Council should seek reforms by way of the medical electorate, rather than by attempting to withhold the payment of assessments authorized by the statute, and indispensable to the very existence of a Council.

Yet this Association begs to protest against By-law No. 69, passed by the Council on the 28th June, 1895, which suspends the penal clause of section 41 of the Amended Medical Act for Ontario until June 1st, 1896, then to come into force only "in case a sufficient amount of dues is not

paid in to cover the bank liability." This Association submits the said qualification is grossly unjust to members of the profession who have paid, or may pay, their assessment prior to June 1st, 1896, and affords a loophole to delinquents who are disposed to shirk payment of their fees. The Association recommends the Ontario Medical Council either to rescind said clause of the by-law, or, otherwise, to furnish every member on payment of his fee, a guarantee that no other member shall be permitted to escape payment of his legal indebtedness to the Council.

And *resolved* further, That a copy of these resolutions be forwarded to the Registrar and to the medical journals of the province.

A SPECIFIC FOR SPASMODIC CROUP.—Among the remedies for acute laryngitis suggested in a recent and elaborate contribution to the *Jour. & Am. Med. Assoc.*, Dr. Feum says: I am surprised that no mention is made of the oleoresin, improperly called "balsam" copaiba. I regard its employment as quite an advance on the antiquated ipecac, turpeth mineral, *et id omne genus* treatment, and for many years I have used it to the exclusion of all such. Preferably, it should be given in a full dose of fifteen or twenty drops to a child two or three years old, at bedtime, or immediately following the first hoarse inspiration or cough. This will generally carry the little patient through the night, or certainly until the early morning hour, when a recurrence of the paroxysm is often expected. *En capsule* is the best method of administration, for the purpose of disguising the unpleasant taste. The syrup of copaiba, prepared by rubbing the oleoresin with calcined magnesia, and adding oil of peppermint and simple syrup, is an eligible formula. Less so, is an emulsion with mucilage, yolk of eggs, or alkalies. The required doses, however, are so few, and time often of such importance, that I commonly extemporize a combination of the remedy with sugar or molasses. The element of fear of suffocation usually renders the little patient quite tractable, so that he gracefully submits to almost any form of medication at such times. I can yet recall, *ad nauseum*, the not infrequent doses of "hive syrup" of my youth.

In the presence of a severe attack, I give the copaiba *imprimis*, and then transfer the child, if

in a cold room, to the nursery or kitchen, where he is subjected to heat and steam. A shawl thrown over the heads of nurse and child, as well as over the tea-kettle, is a ready method. The first whiff of steam relaxes the spasm, if the remedy has not already done so, and the crisis is past. The child should be detained in a warm room for the two succeeding days and nights, taking similar or smaller doses each evening upon retiring, and, if thought best, a few drops at intervals during waking hours.

By this method, the system is not relaxed with a tendency to contract additional cold, and I am sure it will supply a long-felt want to paterfamilias if not to his progeny.

**REST IN CARDIAC AFFECTIONS.**—Dr. T. Lauder Brunton, *The Practitioner*, believes that as a remedial measure, rest frequently requires to be absolute. As a preventive one it may be relative. The amount enjoined must be carefully proportioned to each case, as in advanced mitral disease, when the power of the heart is failing, absolute rest gives satisfactory results, in that the circulation recovers its balance, the arteries become filled and the veins emptied, the dropsical effusion and venous engorgement of the organs disappear, and the patient recovers a fair amount of health. In cases of mitral disease incompetence may come about from :

1. Enlargement of the auriculo-ventricular orifice.
2. Thickening of the valves, or
3. Inco-ordinated action of the muscoli papillares.

In the first case it may be hard to say if this be the sole cause of the regurgitation, without any obvious disease of the valves, as some disturbance of the relationship between the muscoli papillares may tend to aid the regurgitation. In such hearts in growing boys and in chlorotic girls, comparative rest may be useful, and sometimes absolute rest may be almost essential. In some cases the former may be all that is wanted as a prophylactic measure. In chlorotic girls gentle exercise is advisable, but it must be carefully graduated, as exhaustion is likely to do harm. Massage must be useful, as it gives the patient exercise without putting any strain upon the heart. With a fatty heart gentle exercise may be advisable, as it may

be more likely to bring about a healthy condition of the heart than absolute rest. When in mitral disease cardiac tonics, even pushed to their utmost limit, fail to give relief, then absolute rest becomes of great importance. Massage is of great usefulness in clearing out the body waste, quickening the flow of blood through the muscles and relieving the œdema, and the patient gets the advantage of the exercise without overdoing the heart. It also allows the treatment to be carried out more easily than it would otherwise be, for it removes the feeling of weariness and irritability, faintness and unrest of the patient.

**DIAGNOSIS OF CHRONIC HYDROCEPHALUS IN EARLY STAGES, BEFORE ENLARGEMENT OF THE SKULL HAS OCCURRED.** *Boston Med. and Surg. Jour.* The difficulty in the diagnosis of hydrocephalus is naturally much increased when the collection of fluid in the ventricles has not yet led to enlargement of the skull. The diagnosis must then rest wholly on the clinical symptoms. Of these an exceedingly important one is the well-recognized spastic condition of the extremity muscles, which, however, varies within wide limits. This condition occurs not infrequently before the head has begun to enlarge, and especially in those cases in which an external hydrocephalus alone exists, or is accompanied by a collection of fluid in the ventricles. In cases of uncomplicated internal hydrocephalus the enlargement of the head is apt to occur at an early period in the disease, and so lead to an immediate correct diagnosis. Attacks of recurring eclampsia are of less importance than the more permanent spastic conditions. Congenital spastic rigidity of the limbs (Little's disease), is usually due to defective development or to diffuse sclerotic processes in the cortex, and may occur quite independently of hydrocephalus. Especially important in differential diagnosis are the following facts well stated by V. Ranke :

1. In congenital spastic rigidity the lower extremities usually are alone effected, whereas in hydrocephalus the arms are attacked as well, and at times even the muscles of the body.
2. The congenital spastic condition is usually first noticed when the child begins to walk ; the rigidity resulting from hydrocephalus, on the other hand, is for the most part an exceedingly



early symptom. 3. Accompanying eclamptic attacks are an indication in favor of hydrocephalus.

The differentiation of hydrocephalus from tetany is usually not difficult owing to the progressive tendency of the one, and the tendency of the other, after a lapse of two or three weeks, toward recovery. Furthermore, cases of tetany with spontaneous tonic contractures in all extremities are very rare, and when they occur characteristic positions of the hand (obstetric hand) make diagnosis easy.

**CHLOROSIS.**—The late Sir Andrew Clark recommends the following treatment for chlorosis, *Am. Med. Rec.* With careful attention to the diet and a tepid sponge, followed by brisk towelling both night and morning, he prescribes the following mixture, to be taken twice a day :

R—Ferri sulphat. . . . . gr. xxiv.  
Magnes. sulphat. . . . . ʒ iii.  
Acid. sulph. aromat. . . . . ʒ i.  
Tinct. zingib. . . . . ʒ ii.  
Infus. gentian comp. vel  
quassia . . . . . ʒ viii.—M.

Sig.—One-sixth part twice daily, about eleven and six o'clock.

"Occasionally this acid mixture produces sickness, dries the skin, and is otherwise ill borne." In such cases he prescribes the following alkaline mixture :

R—Ferri sulphat. . . . . gr. xxiv.  
Sodii bicarb. . . . . ʒ ii.  
Sodii sulphat. . . . . ʒ vi.  
Tinct. zingib. . . . . ʒ vi.  
Spt. Chloroformi . . . . . ʒ i.  
Infus. quassia . . . . . ʒ viii.—M.

Sig.—One-sixth part twice daily, at eleven and six.

Sometimes neither mixture agrees, and then he prescribes sulphate of iron in pill with meals and a saline aperient on first waking in the morning. By this plan Clark claims that nine out of ten cases of chlorosis recover in from one to three months, and by careful attention to the bowels, taking twice a week a pill composed of aloes, myrrh, and iron, the recovery will probably be permanent.

**SILVER NITRATE.**—With regard to the effect of nitrate of silver in minor ailments, there is no

more striking illustration of it than in those cases of weak, irritable stomachs which are characterized by intense depression of spirits, apprehensions, and failure of pluck or courage. *N. Y. Med. Jour.* In these cases a remarkable change takes place both in the functions of the stomach and in the tone of the nerve centers of emotion. To get the best results in these stomach cases, the nitrate should be dissolved in distilled water and taken on an empty stomach. Dr. Murray thinks that a distinct local effect on the mucous membrane, as well as the more remote effect on the nerve centers, by giving it in this form is produced.

**OTORRHOEA.**—A child, suffering with double acute inflammation of the middle ear, with perforation and free muco-purulent discharge from both ears, was brought to Dr. Randall's clinic during the first week in August. *Phila. Polyclinic.* The auricles were entirely covered with the discharge, and they had become macerated and eczematous from neglect. A knowing friend had warned the mother not to interfere with the discharge, "else it might strike in with fatal results." The parts were thoroughly cleansed with hot water and solution of hydrogen dioxide and Politzerization was done; after which boric acid was insufflated into the external canals, and ointment of yellow mercuric oxid applied to the eczematous auricles. This treatment led to speedy recovery.

DR. HENRY O. MARCY, of Boston, at the late meeting of the Mississippi Valley Medical Association, read a paper defending the Whitehead operation for hæmorrhoids. *Tri-State Med. Jour.* It was in the nature of a reply to the strictures cast upon the Whitehead operation by Dr. Edmund Andrews, of Chicago, in a paper read before the last meeting of the Illinois State Medical Society. Dr. Marcy believes that if in the statistics given by Dr. Andrews the names of the operators were mentioned most of the disastrous results will be found to have followed the work of incompetent men. His results had been excellent in those cases in which he had done the Whitehead operation, slightly modified by himself.

**NERVOUS SYMPTOMS AFTER CASTRATION.**—Faulds reports, *Brit. Med. Jour.*, seven cases in

which this operation was performed. In the first, hemiplegia occurred with death, four weeks after the operation, The second developed acute mania six days after the operation, and died ten days after. The third developed mania, and died on the twelfth day The fourth exhibited the same symptoms, with the same result—death. The fifth had no appreciable mitigation of the urinary trouble thirty days later. The sixth was one of single orchectomy. The patient died in a few days insane. The seventh a single orchectomy, developed distinct mental weakness, and death followed. The previous nervous and mental state is not given. In prostatics, this would be as potent a predisposing cause as it is in operation for cataract in the aged.

VITAPATHY.—One "vitapath" has been lately arrested and fined in Cincinnati for practicing without a license. Judge Dustin said in pronouncing sentence: "Men who knowingly go into a sick room and prevent anything being done for a dying man by silly incantation and laying on of hands, *Lancet Clinic*; *Med. Standard*, are responsible for his death and ought to be on a par with a murderer in the eyes of the law. God help the dying man who relies upon you or any of the so-called graduates of quackery. You speak of vitapathy being of a higher power than medicine and you say you ordain ministers at the same time you matriculate vitapathic physicians. Your methods are an insult to intelligence, their practice is a criminal abuse of ignorance and your college a disgrace to civilization."

THE New York School of Clinical Medicine has succeeded in introducing a modified form of the European manner of personal instruction, suited to the needs of busy American practitioners, who need brushing up in the specialties, but who can afford only a few weeks' time for the purpose. The method consists essentially in limiting the class to a very few students and having them act as assistants in attendance on the vast clinical material at the school's disposal. As soon as qualified, the matriculants examine, treat and operate on patients themselves, the teachers acting as assistants. The school itself as well as the hospital and dispensaries at which its teaching is

done, are fitted with everything to meet the requirements of most modern science. We most cordially recommend this plan of teaching to physicians going to New York for post-graduate instruction.

MR. WM. F. NICKLE has been appointed by the Ontario Government governor of the General Hospital, at Kingston, in place of the late Dr. K. N. Fenwick. Mr. Nickle is at present on his wedding tour in Europe, and is expected to return to Kingston within the next few months.

DR. JAS. THIRD, who has been appointed superintendent of the Kingston General Hospital, is a Trinity man, and a gold medalist of Trinity Medical College.

OBITUARY.—As we go to press we received the sad news of the death of Dr. Laughlin McFarlane, of this city. We will refer to him more fully in our next issue.

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### Books and Pamphlets

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A MANUAL OF SYPHILIS AND VENEREAL DISEASES; By James Nevins Hyde, A.M., M.D., Professor of Skin and Venereal Diseases, Rush Medical College; Dermatologist to the Presbyterian, Michael, Ruse and Augustana Hospitals; and Consulting Physician to the Hospital for Women and Children, Chicago; and Frank H. Montgomery, M.D., Lecturer on Dermatology and Genito-Urinary Diseases, and Chief Assistant to the Clinic for Skin and Venereal Diseases, Rush Medical College; Attending Physician for Skin and Venereal Diseases, St. Elizabeth's Hospital, Chicago. With 44 Illustrations in the text and 8 full-page plates in colors and tints. Philadelphia: W. B. Saunders, 925 Walnut Street. 1895.

This Manual has been prepared with the intent of meeting the special needs of the student and of the practitioner rather than of the expert. The aim has been to supply, in a compendious form, and with detail, all practical facts connected with the study and the treatment of Syphilis and Venereal diseases

The book contains over six hundred pages, one half of which are devoted to the study of syphilis; the other dealing with venereal diseases other

than syphilis. Treatment is discussed very much more fully than is customary in medical works in general, the various methods being described in detail, and from a practical and yet scientific standpoint.

**HISTORY OF ANÆSTHESIA OR PAINLESS SURGERY ;**  
By Wm. R. Hayden, M.D. New York : International Journal of Surgery Co. 25 cents.

The author has collected a good deal of evidence going to show that to Dr. Morton belongs the honor of having introduced anesthetics. To those who are interested the brochure will supply much matter for thought or argument on the old-new question of who discovered the surgical possibilities of ether. Massachusetts has placed Dr. Morton's name, second among those of fifty-three immortals (a goodly number by the way, for one state) that now adorn the dome of the State House. So that so far as Massachusetts is concerned the question is forever settled.

**MATERIA MEDICA AND THERAPEUTICS ; A Practical Treatise with Especial Reference to the Clinical Application of Drugs.** By John V. Shoemaker, A.M., M.D., LL.D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia ; Physician to the Medico-Chirurgical Hospital, Philadelphia, etc., etc. Third edition, Thoroughly Revised, Reset with New Type and Printed from New Electrotype Plates. Royal Octavo, Pages ix, 1108. Extra cloth, \$5.00 net ; Sheep, \$5.75 net. Philadelphia : The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

In this the third edition the author has combined the two volumes into one, which no doubt makes it more convenient for the reader. All the latest remedies are fully described, and new applications of old remedies. The subject of treatment by animal extracts, antitoxines, etc., has been fully and well written.

**THE ART OF COMPOUNDING ; A Text Book for Students and a Reference Book for Pharmacists at the Prescription Counter.** By Wilbur L. Scoville, Ph.G., Professor of Applied Pharmacy in the Massachusetts College of Pharmacy. Philadelphia : P. Blackiston, Son & Co. 1895.

Every one knows that a thorough knowledge of details makes all the difference between a dispen-

ser of elegant mixtures or those of an opposite character. Very slight differences in operations upon the same prescription make all the difference. The object of Professor Scoville's work is to supply such notes as would enable students to properly classify various prescriptions and to attach proper importance to details of manipulation. The work should be invaluable to students of pharmacy and to all dispensers.

**THE YEAR-BOOK OF TREATMENT FOR 1896 ; A Critical Review for Practitioners of Medicine and Surgery.** 12mo., 484 pages. Cloth \$1.50. Philadelphia : Lea Brothers & Co., publishers. 1896.

This old favorite is again with us. As heretofore it is a summary of the year's advances in all departments of medicine and surgery, presented in a classified form for ready assimilation and quick reference. In this the twelfth issue a lecture on tropical diseases has been added. The names of the contributors are a sufficient guarantee for the quality of matter found on its pages. It closes with a classified list of the best new books, a section on Medical Instruments and Surgical Appliances ; Pharmaceutical and Dietetic novelties, and an index of subjects placing anything in the volume instantly at command.

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### Births, Marriages, Deaths.

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*The charge for inserting notice of births, marriages and deaths is fifty cents each insertion.*

ORTON—At Guelph, on Sunday, February 2nd, the wife of Dr. Thomas H. Orton of a daughter.

BRYCE—At Homewood, Bracondale, on 21st February, the wife of Dr. P. H. Bryce of a daughter.

LOW—On Saturday, Feb. 8th, the wife of Dr. Low, Regina, N.W.T., of a daughter.

BEATTY—TRULL—At Brampton on Wednesday, Feb. 5th, 1896, A. C. Beatty, M.D., of Garden Hill, to Miss Sophia Trull, of Leskard.

ELLIS—At Portland, Maine, on Feb. 1st, Thomas Haran Ellis, M.D., third son of T. B. Ellis, Pembroke, and son-in-law of William Wedd, M.A., aged 27 years.

WADE—At Dunchurch, Parry Sound District, on Wednesday, 5th February, 1896, Dr. W. R. Wade, aged 32 years.

ATKINSON—On the 24th February, 1896, at Hamilton, John Sangster Atkinson, M.D., of Gananoque, Ont.

McFARLANE—At his late residence, 26 Gerrard-st. east, on Saturday morning, Feb. 29, Laughlin McFarlane, M.D., aged 56 years.