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CANADA

# MEDICAL JOURNAL

ORIGINAL COMMUNICATIONS.

*Lectures on the Pathology and Treatment of Joint Diseases.* By LOUIS BAUER, M. D., M. R. C. S., Eng., &c.

## VI.

TREATMENT OF THE SEQUELÆ OF JOINT DISEASES—*Continued.*

If we consider the small proportion of accidents connected with brisement forcé, and the large number of operations I have successfully performed, they scarcely command our notice. But even this insignificant number of accidents may be reduced by still greater precaution, and during the last two years I have successfully avoided them entirely, and hope to do so for the future. Whenever I have reason to suspect infirm-epiphyseal connections, I do not attempt to break up at once the intra-articular impediments, but do so in three or four different times and secure each time the gain by appropriate mechanical appliances. The safest way however to break up adhesions of this description is by extension and not by flexion, as I have before advised. The latter is more efficacious but more dangerous in producing diastasis.

In protracted cases of false ankylosis, we are likewise necessitated to repeat the forcible extension several times before succeeding in giving the extremity the full benefit of a straight position, and we may succeed at a third or fourth repetition when the first attempt proved very inauspicious. This is especially the case when peri-articular scar-tissue complicates the mechanical difficulty.

After the brisement forcé has been performed, the extremity should be firmly surrounded by a well applied flannel bandage, with ascending tours, from the periphery towards the interested joint, and the latter with tightly applied strips of adhesive plaster spread on Canton flannel, over which the flannel bandage is continued to the body.

The extremity is then placed in a well adapted and well padded iron splint, and thus secured, kept at rest for several weeks, until the last vestige of soreness of the joint has disappeared.

When the patient is perfectly free from pain or other symptoms, he may be permitted to leave his bed, and walk, but even then the limb should be supported by the same instrument which I have recommended for the after treatment of inflammation of the knee-joint. (Vide Figs. 11—12.)

Most patients content themselves with a straight, useful and stiff knee-joint. But very few insist upon the re-establishment of motion. In this case all those measures have to be adopted which I have detailed under the treatment of stiff-joints. To realize a full share of mobility under these circumstances is a therapeutic object of considerable difficulty, and should not be entertained without due deliberation. The number of cases in which I have succeeded in re-establishing motion is very small, and in two only perfect. If we consider that in most of these cases the articular cartilages and the synovial lining are destroyed, and that the intra-articular fibrous tissue passes from bone to bone, and from wall to wall, we should not be surprised when success attends but rarely these efforts. Moreover, the intra-articular fibrous tissue again rapidly unites with the same articular surface from which it has been torn, and this is an additional difficulty in the re-establishment of free motion.

When osteophytes unite the bones between which the joint is formed, there is of course no mobility, and the firmness of the joint simulates that of true bony union, although the previous history of the case may suggest the character of the abnormal connection. The *brisement forcé* is after all the only safe diagnostic test. Fortunately the osteophytes are not true bony structure, and possess neither its elasticity nor its firmness. These bony splints are rather fragile, and break readily with a crackling sound as if true bone was giving way.

The presence of osteophytes does not in any way interfere with the *brisement forcé* and its ulterior results, the after treatment, nor is it materially affected by them.

In extensive and complete osseous union of the knee-joint, *brisement forcé* is of course ineffective. Rhea Barton's operation alone is calculated to meet the emergency. Although originally proposed for the relief of ankylosis of the hip-joint, its author conceived the practicability of the operation in the same morbid condition of the knee-joint. In 1835, he, for the first time, performed the exsection of a wedge-formed piece of bone from the knee, and the result attained was highly satisfactory. The wound closed in two months, and in five and a half months the patient resumed his avocation as a practising physician.

The second operation of this kind was resorted to by Prof. Gibson, of Philadelphia, and likewise terminated favourably, the patient being capable of walking, without crutches, five months after.

The third operation Dr. Gordon Buck successfully performed at the New York City Hospital, in 1844. The patient subsequently sustained a fall from a ladder and fractured the new union; recovery ensued without any untoward accident.

Since then the same operation has been repeated by Mutter, Bruns, (Tubingen,) Heuser, B. Langenbeck, Reid, Robert, Post, (New York,) and others. As far as I have ascertained, but two cases proved fatal (Bruns and Post;) the balance recovered with useful extremities. The technicalities of Barton's procedure may be found in every work on operative surgery.

The late Prof. Brainard, of Rush College, has, some years ago, suggested weakening the inter-articular substance by drilling it in various directions through a small wound, and then to fracture the rest. How many operations have been made according to this plan, I do not know, but its application signally failed in a case of one of our most accomplished surgeons, (Prof. Gross.) and a chisel had to be resorted to, which was driven through the bony connection.

A similar proceeding had been proposed by Prof. Shuh, of Vienna, as early as 1853, but did not meet with the approval of German surgeons.

Whether the recently introduced so-called osteoplastic operation of B. Langenbeck has been attempted in true ankylosis of the knee-joint, I am equally ignorant, but apprehend that a simple separation of the articular faces by drill or saw will scarcely suffice to give a good form to the extremity, the new bony substance being an impediment; and, therefore, I would prefer, of all the methods suggested, that of Rhea Barton, which has proven itself both effective and comparatively harmless.

The indications for and the technical execution of *brisement forcé* are in most others joints the same as at the knee-joint. But in reference to the hip-joint the operation is subject to some modification, with which I shall now occupy your attention.

Before entering upon the practical consideration of the subject, a short recapitulation of the anatomical condition of the joint, left by hip disease, will not be out of place. Like the knee-joint, this articulation presents the three forms of ankylosis. Of these the true or bony ankylosis is certainly of very rare occurrence judging from the few specimens of this character which can be found in the most complete collections of morbid anatomy. I do not think that I have seen more than two cases during a practice of nearly thirty years duration. Osteophytes are often met

with in the neighbourhood of the hip joint recovered from morbus coxarius. Fibrous ankylosis is unquestionably the most common result of that disease, and we find it generally complicated with malposition of the thigh, arising from muscular contractions.

I have had repeated opportunities of thoroughly examining the anatomical status of joints thus changed. In the first place I have found the acetabulum enlarged in a posterior and superior direction, giving it almost the shape of a figure eight; the new accession being the smaller part. The cartilaginous covering of the acetabulum proper had almost entirely vanished, and upon the accessory portion none whatever could be detected. In some instances the femur was riding on the remnant of the acetabular margin separating the two articular segments, and for this purpose had a corresponding groove which gave it an accurate fit.

Of the femur, the head had been entirely lost in every single instance, and the neck more or less shortened.

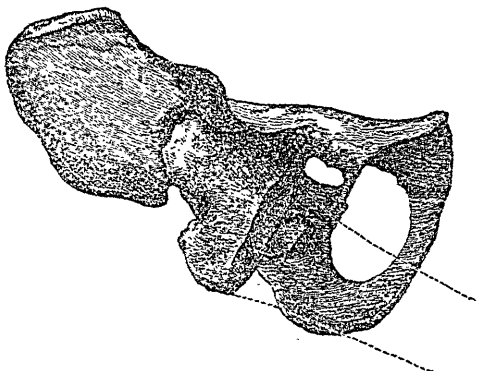
The intra-articular fibrous adhesions fastened the end of the femur to the articular surface of the pelvis, permitting a slight degree of mobility. The capsular ligament was more or less comprised and identified with the intra-articular fibrous structure, and could only in one case, and to a slight extent, be separated therefrom.

In two instances fibrous bands obviously of a neoplastic character strengthened the connection of the femur with the pelvis. The osteophytes arose from the neighbourhood of the acetabulum, were short and thick, forming no organic connection with the femur and would have offered no impediment to the *brisement forcé*.

From this short sketch we may arrive at an approximate estimate of the prevailing anatomico-pathological conditions which *brisement forcé* has to contend with.

Buehring was the first who extended the usefulness of *brisement forcé* to the hip joint, and made strenuous efforts to correct the co-existing deformities. The means employed by him were, however, so defective that but imperfect results were attained. He already adverts to several cases of failure and disaster; in one he reproduced the original disease to which the little patient eventually fell a victim. And I have to place an instance on record, in which by a fall, *brisement forcé* was effected and subsequently followed by the return of the disease, terminating fatally. The case happened with a lad of Swedish extraction, about sixteen years of age. The original disease had taken its course through several years, terminating in fibrous ankylosis of the joint and malposition of the femur, when the patient was about ten years old. Aside from the existing impediment to locomotion, he had not been troubled for six years, when

he fell down stairs and thus forcibly broke the existing adhesions. Violent suppuration followed the accident, and destroyed life by pyaemia. Having secured the specimen (Fig. 15), I had the rare opportunity of satisfying



(Fig. 15.)

my curiosity in a pathological point of view. It is astonishing to me how little destruction has been effected by the late suppuration. All the adhesions have been of course carried off, and the bony surfaces in contact with each other are osteoporotic, which is probably the normal condition in connection with the formation of fibrous adhesions. The caput femoris is of course destroyed by the original disease, but the neck has suffered no changes by suppuration since its articulating surface accurately fits in the socket.

I have mentioned these two cases for the purpose of showing that brisement forcé of the anchylosed hip joint is a proceeding not altogether devoid of danger. Nevertheless it is a legitimate operation if performed with due precaution, but the most brilliant results cannot compare with those attainable at the knee and elbow joints.

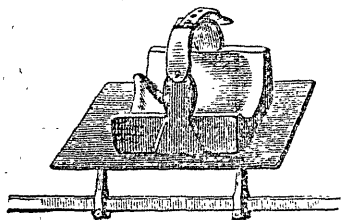
The previous division of the contracted muscles is to be insisted upon. Myotomy is not only harmless and indispensable to a satisfactory result, it lends also protection against the recurrence of the previous morbus coxarius; and I feel persuaded that Buehring would have had better chances to save his patient had he not omitted that initiatory operation. A few days after the operation we may then proceed to loosen the joint. The patient is to be placed upon the table in the recumbent posture, and when under the full influence of chloroform his pelvis is held by an assistant grasping both sides, with the thumbs upon the anterior superior iliac process of the ilium, whilst the operator presses firmly his foot against the corresponding tuber ischii. Thus prepared, he takes hold of

the affected extremity, and with a firm, steady, but gentle traction, extends and abducts the limb. Gentle motions and rotations may be combined with the traction, but they should never be made so powerful or free as to destroy the existing adhesions. We ought to be contented with a good position of the extremity, and not to risk the lives of our patient for the sake of more or less free motion.

In adults there is less danger of recurring disease, and their limbs bear a freer handling.

The fixing of the pelvis is obviously very important to the ulterior results, and the hands of an assistant fail particularly then to fix the pelvis when the thigh is considerably flexed upon the former, for this and the purposes of after treatment, a special apparatus is needed.

Buehring, and subsequently B. Langenbeck, have constructed such apparatus, but they are costly, complicated, cumbersome and inefficient. After various changes and improvements I have succeeded in constructing an apparatus which meets all the requirements, besides being cheap and simple, and may be attached to a plain camp bedstead. The apparatus which I submit to your inspection is much more costly than is neces-



(Fig. 16.)

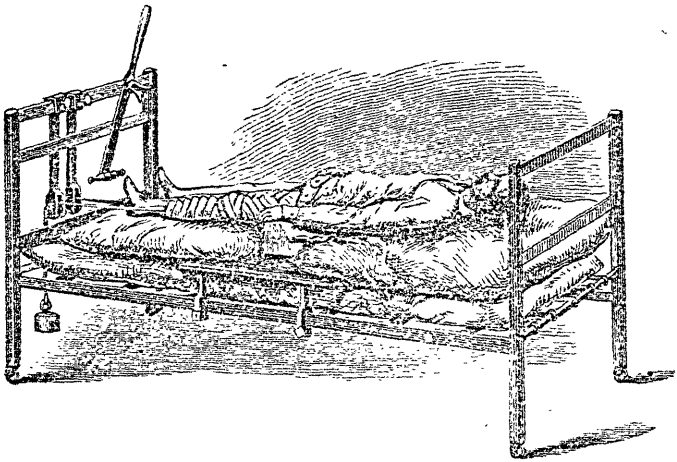
sary (Fig. 16). The essential part of the contrivance is a wooden block accurately adapted to the posterior half of the pelvis, inclusive of the tuber ischii. Any wood carver can make it if you furnish him a plaster of Paris cast. This block is simply lined with chamois, and, if well

adapted, the patient can lie in the same for months with the same convenience and ease with which a gum plate with artificial teeth may be worn. When the patient is placed in this block he is fastened down by stout leather straps and buckles, in front and across the pelvis. This block is fixed to a plate of sheet iron by means of screws from below; and the iron plate, by means of four bolts, to the frame of the bedstead. Thus you have a simple and complete fixture of the pelvis which lies closely upon the mattress. (Fig. 17.) All that remains is an iron frame at the foot of the bedstead, and two pulleys to shift upon the frame.

This apparatus should be in readiness when proceeding with *brisement forcé*, and if need be, may at once be used in place of the table and in preference to the manual fixing of the pelvis.

If you should not succeed in completely extending and abducting the extremity, you may defer the completion and in the meantime keep the limb in the same position in which your first attempt left it, by pulley

and weight, or if you have completely succeeded, the after-treatment may at once be fairly commenced. In these cases extension comes in for its profitable employment. Without myotomy and brisement forc e it is more than worthless because dangerous; in combination with those pre-



(Fig. 17. See page 294.)

liminaries it is a most useful auxiliary. Extension with the aid of my apparatus is certainly most efficient and powerful, since the pelvis is completely fixed, and the patient totally prevented from assuming an accomodating position.

I have used it with great benefit in a large number of cases, and know no better substitute.

Two or three months will suffice to render the newly acquired position stable; then you may allow locomotion with the assistance of my portable hip apparatus, with or without crutches as required.

The true bony anchylosis of the hip joint finds its relief in Rhea Barton's operation. I have never had occasion to perform it, and can therefore offer no suggestions drawn from personal experience, but it would seem to me that the attempt at establishing an artificial joint at the line of division is unwarrantable for two reasons: 1st. An artificial joint could never give a sufficient support to the superstructure of the body. 2nd. It inevitably protracts the suppuration with its impending danger of pyæmia.

Sayre, a few years ago, performed this operation, as he alleged with success, but his patient nevertheless died a few months after from pyæmia.

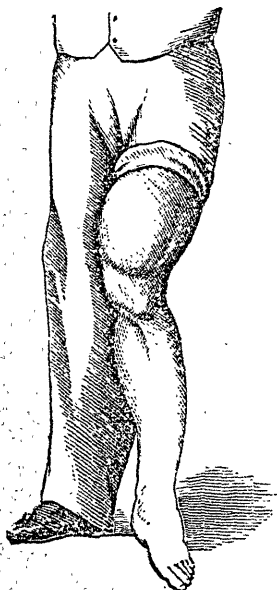


The specimen derived from the case, did not sustain the assertion of that gentleman, no cartilaginous covering, synovial lining or a new capsular ligament having been formed.

Now, gentlemen, I have arrived at the end of our discourse and will finish with relating a few interesting cases. Some of them present peculiar and exceptional clinical features, others may serve as types of their class. Your attention has been most gratifying to me and I feel sincerely thankful for your magnanimous indulgence.

### CASE I.

*Hygroma bursale traumaticum, of eight years standing, fibrous ankylosis of left knee joint with flexed and inverted malposition. (Fig. 18 and vide fig. 12.)*



(Fig. 18.)

A young man (Packner) twenty two years old, solicited my professional services in the following case: When at the age of 11 years he sustained an injury to the left knee, which gave him trouble for three years, not materially impeding, however, his locomotion. His general health having materially suffered, his father, a sea-captain, was advised to take the patient on a voyage and give him the benefit of sea-air. On ship board he repeatedly met with falls and slight accidents without being aggravated. One day whilst driving a nail into a plank, the hammer struck him heavily just above the left knee-joint and caused a painful bruise, soon followed by intense agony and swelling.

From that time to the period when I took charge of his case, the patient had never been free from pain and uneasiness,

and his haggard, anxious, and desponding appearance bore the unmistakable evidence of severe and continuous suffering. The affected articulation was so tender as to be utterly useless for locomotion; in fact he would not even stand upon the extremity with a mere fraction of the bodily weight put upon it. Hence crutches were requisite, between which the extremity was suspended.

The wealthy father had of course successively consulted the best sur-

geons he could find, both in Europe and on this continent. They had all agreed in their counsel that amputation was the only remedy.

On examining the affected extremity the following clinical points were elicited :

1. An ovoidly shaped, smooth and throughout, hard tumor, "9 × 4," inches located immediately above the knee-joint. Its base was broad, abrupt and immovable. There was no tenderness or discoloration about the tumor ;

2. The joint was ankylosed but allowed a trifle of motion, which was, however, very painful at its inner circumference ;

3. The quadriceps muscle of the thigh was displaced to the outside of the tumor ; the patella lodged upon and adhered to the external condyle of the femur ;

4. The tibia occupied an angle of 150° with the femur, and was so turned on its axis as to evert the toes ;

5. Besides there was a slight inflexion at the knee between the two bones which gave it a knock-kneed appearance ;

6. The biceps muscle was considerably shortened and therefore very tense ;

7. The temperature of the knee-joint, more particularly at its inner aspect, was not much raised ;

8. In fine the affected extremity was moderately attenuated.

The tumor was obviously accountable for the existing articular trouble and malposition. It had raised up and gradually displaced the extensor muscles of the leg. The latter derived additional physical power from acting, as it were, around a pulley, being converted into a flexor, rotator and adductor muscle of the knee. The tibia had yielded to the abnormal traction. The torsion of the joint had set up inflammation of the synovial lining, eventuating in fibrous interarticular adhesion of the articular faces. Reflex contraction of the biceps muscle had ensued. Thus, by the succession of mechanical effects, a most complicated morbid condition had been brought about in course of time, traceable to no other cause than the tumor. The still existing inflammatory action at the inner circumference of the knee-joint, may be ascribed to the abnormal position of the extremity, being diagonal through the femur and bearing the weight of the body upon the internal ligaments.

But the all important diagnostic question centered itself upon the nature of the tumor ! The apparently very hard texture suggested bony structure. For ostoid, the tumor was too hard and smooth, and had existed far too long a time to sustain the suspicion of a malignant growth. Periostitis would have circumvented the femur, and not

exhibit a broad and flat base. Bone abscess would have distended the femoral tube in all directions and at that size would have become softened. The hardness and smoothness of its surface precluded the idea of an osteo-sarcoma.

The evidently traumatic cause, the gradual increase, the regular form of the tumor, and the anatomical region, pointed directly and conjointly to the distension of the subcrural bursa. Yet there was no fluctuation, and that ominous hardness was left unaccounted for. Notwithstanding the discrepancy, I commenced most carefully to explore my ground with the hope of detecting fluctuation; for the rather indefinite supposition suggested itself, that *the resistance of the vagina femoris* might render the tumor both hard and obscure its fluctuation.

At the inner and lower aspect of the growth, a branch of the saphena magna perforated the aponeurosis and dipped into the depth. There I felt some elasticity and very indistinct fluctuation, sufficient evidence of fluid, at any rate, to warrant explorative puncture. The patient, a very intelligent young man, having realized the probable character of his case, and deriving new hope from the proposed proceeding, readily consented to the exploration.

After having made the necessary preparation, I proceeded next day, with some professional friends, to the patient's dwelling. I met with but little encouragement for the operation, either on the part of colleagues or the relatives of the patient. The former dissented *in toto* from the suggestive diagnosis, and the latter presented the authority of the best surgeons of the country as objection to any other proceeding short of amputation of the thigh.

The trocar being inserted, about  $\frac{5}{8}$  xiv of a straw-coloured and alkaline fluid was withdrawn, whereupon the tumor collapsed. On careful examination, the empty sac and its contours could still be discerned; but, of course, the previous hardness had entirely vanished.

Having thus verified the diagnosis, I proceeded with the second part of the programme, *in dividing the outer hamstring, breaking up all articular adhesions, and in fully extending the extremity*. A few minutes served to change the condition of the patient, and infuse him and his friends with new hopes for the future. It could hardly be anticipated that pressure alone would suffice to prevent the re-accumulation of the bursal fluid. In order to close up the old depot, I was induced to inject tincture of iodine.

That operation was followed with violent inflammation and suppuration of the bursa. When, at last, the cavity had closed, the quadriceps muscle was so firmly agglutinated to the thigh-bone, that it seemed indifferent

whether the articulation of the knee-joint was re-established or not. The patient, desirous for active life, declared himself quite contented with a straight, useful, and painless, though inflexible extremity, with which he is now able, according to a recent letter to a friend, to walk his forty miles a day, by peddling in California.

The presented photograph fig. 12 is the appearance of the patient at his discharge. At that time I supported his extremity with a straight apparatus, with which the patient now dispenses.

That the hardness of the tumor was simply caused by the constraint and resistance of the vagina femoris, will be admitted without further dispute. And we noticed the *same symptom* in the case of Mr. A., one of the great hotel proprietors of New York. We need hardly say that the correct treatment of Mr. A.'s case depended likewise on correct discernment of the tumor, about whose character and structure conflicting opinions and apprehensions had been advanced.

## CASE II.

*Traumatic diastasis of the lower epiphysis of left femur. Remarkable deformity and malposition of the knee-joints. Abnormal lateral mobility. Total resection. Recovery.*

Francis Shaw, a lad of fourteen years, of Irish descent, and endowed with robust health, presented himself in October 1860, at the clinic of the Brooklyn Medical and Surgical Institute. He came at the instigation of a surgical instrument maker to get my advice with reference to the feasibility of a mechanical apparatus to steady and support his limb, and to render it useful for locomotion. He stated that he had acquired the deformity when but seven years old, and that ever since the trouble had increased, and that then he was unable to use his extremity to any purpose. To the best of his memory he received a blow at the knee-joint with an iron rod, which gave him pain and disabled him for a short time. A physician had been called in soon after the injury, but finding no undue mobility or deformity he pronounced it a simple contusion, and advised rest and cold fomentations. These directions were followed for three weeks, when the patient resumed his walk.

Since that time dates the impediment. In the erect posture, the patient throws his whole weight upon the sound member, when balanced between two chairs a three inch block is required to equalise the length of both extremities, as may be seen in the adjoining diagram (Fig. 19). The left limb is peculiarly knock-kneed, the thigh being adducted, the leg abducted and everted, and laterally both forming an angle of  $120^{\circ}$ . This position alone would have been quite sufficient to render locomotion infirm

and defective, but as it was, the limb became totally useless by the relaxation of the knee joint. At the moment the patient rested upon the affected extremity, the leg became still more abducted and everted, and the angle with the thigh could easily be reduced to  $80^{\circ}$  and less. Both



(Fig. 19. See page 299.)

articular faces moved with undue freedom over each other, and the tibia could be freely rotated upon the femur, the scope of eversion being, however, greater. This abnormal condition was due to some remarkable anatomical changes in the configuration of the joint. The articular surface of the femur had an oblique direction, from below and inward to up and outward, the two condyles were absent, and the bone terminated below as a segment of a sphere, of which but a part was appropriated for articulating purposes, the patella and the quadriceps muscle were drawn out of position towards the outer aspect of the extremity. The tendon of the biceps muscle occupied the popliteal space. In every other respect the limb presented the ordinary condition, except being slightly attenuated.

Before the patient had applied to our institution he had presented himself before the surgical staff of the New-York City Hospital, who had come to the conclusion to advise mechanical support which was, however, entirely out of the question. On the other hand Francis Shaw had arrived at an age which made him desirous of entering upon some business, and therefore insisted upon some means to render his limb serviceable. There was nothing left but the exsection of the knee joint or amputation of the thigh; for no orthopedic treatment could be relied upon to materially alter the anatomical status.

I could not hesitate to decide in favour of exsection, since both the constitution of the lad as well as the bony structure concerned, were in a most auspicious condition. The operation was performed on the 9th of October. I had to remove quite a large piece from the femur so as to obtain a rectangular surface; but a very thin slice was taken from the tibia, the patella was likewise removed. The bones were then brought in close proximity and kept in position by softened iron wire, and the

wound united by silver wire in fine, the limb was secured in one of the iron splints (vide fig. 10) which left the knee-joint itself free of access. Recovery followed rapidly, partly by first intention. The bone wire was removed on the twenty sixth day after the operation, and at the end of the second month the patient was up and about, and accompanied me on crutches to a neighbouring gallery to have his photograph taken. Represented in (Fig. 20.)

On the 28th Feb. 1861, I exhibited Francis Shaw at the New-York Pathological society, when his conditions were as follows: integuments, completely cicatrized; firm union of the bones by short fibrous tissues admitting but of scanty motion; moderate enlargement of the circumference; circulation and temperature normal; deficiency in length two inches; correct position of the foot. With a heel of two and a quarter inches, pelvis and shoulders stand square. His locomotion was, aside from the stiffness of his knee, unimpeded.

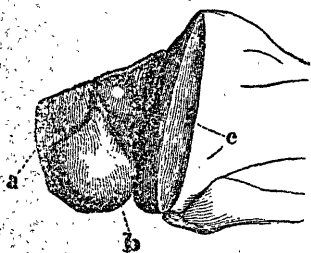


(Fig. 20.)

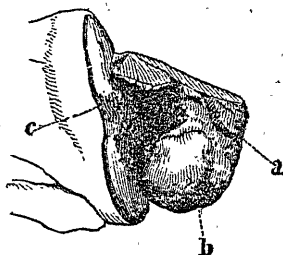
You may imagine that the diagnosis of the case must have been per-

plexing, when the most distinguished surgeons of New-York signally failed to realize it, nor could I lay any claim to a clear understanding of the proximate cause in the premises before the operation, yet I have the gratification to say that the views I had first formed and expressed to my class, did not fall short of the reality.

That the injury to Francis Shaw had produced no fracture was self-evident from the previous history so clearly related. Nevertheless the continuity of the femur must have suffered in such a manner as not to disturb the form of the limb, nor give rise to any undue mobility. With diastasis of the lower femoral epiphysis these conditions are compatible. Had the patient quietly remained in bed for six or eight weeks, there is no doubt that the subsequent trouble would have been averted. But in rising prematurely, the soft agglutination of the epiphysis with the shaft gave way and allowed the former to turn gradually round, and with it dislodge the entire joint. In the newly acquired position the undue pressure upon the external condyle of the femur had gradually diminished its size until no trace was left. And the internal condyle became the terminating end of the femur. The fragments of bone removed by the operation (fig. 21 and 22\*), render this reasoning at least plausible if not conclusive.



(Fig. 21.)



(Fig. 22.)

## CASE III.

*Morbus Coxarius in its third stage. Consecutive Abscess connecting with the joint.—Complete prevention of malposition.*

George D., ten years old, of good constitution and general health, descending from healthy parents, and one of nine children who are enjoying perfect health, came twenty months ago under my treatment. His

\* a. Epiphyseal line.

b. Internal condyle of femur.

c. Slice of tibia.

Fig. 22, represents the posterior view.

left hip-joint was then very tender and immovable, the extremity was slightly bent upon the pelvis, abducted and rotated with eversion of the toes. The pelvis was lowered at the affected side, and the spine consequently inclined the same way. On examination under chloroform it was found that the hip-joint was almost immovable, allowing but slight flexion and extension, but no adduction and rotation whatsoever. The tensor vaginae femoris and the pectinæus muscle contracted.

There was but a moderate fluctuation at the joint. In addition to this I was informed that the patient complained of pain at the knee and violent nocturnal paroxysms. The limb was moderately attenuated. Although the boy had manifested the symptoms of morbus coxarius but a very short time, he gave evidence of constitutional suffering, looked pale and thin. A fall directly upon the left hip, was assigned as the ostensible cause of this disease.

These symptoms strictly coincided with the second stage of morbus coxarius.

The treatment was initiated with leeches to the affected articulation. The contracted muscles were thereupon divided and the patient was placed in the wire apparatus, and thus rest and position of the extremity insured.

The immediate effect of this treatment manifested itself in complete repose and immunity from pain, both structural and reflected. This treatment was continued for six months, when again a thorough examination was instituted. There was almost complete mobility, without crepitus; no fluctuation about the joint; the limb occupies a rectangular position to the pelvis. There was no pain on pressure or motion. The constitutional appearance of the patient was notably improved, appetite and rest were perfect.

Presuming that the disease had been effectually arrested, I allowed the patient one hour's locomotion per day, with the hip splint and crutches, and this time to be gradually prolonged provided no active symptoms should recur. During the balance of the day and the night, in the recumbent posture, and the limb again secured as before. There was no reason to alter the plan, and at the end of another six months he enjoyed his full freedom and went regularly to school, crutches and portative apparatus, as well as the wire apparatus during the night, being continued.

About four months ago, an abscess formed over the place where the tensor vaginae femoris had been divided, and was attended with the ordinary signs. It was punctured, evacuated, and its walls kept compressed by flannel bandage; since then it has three times refilled and again been punctured. Each time the wound closed. The matter drawn from the

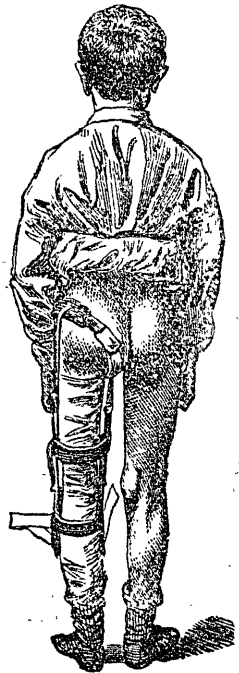


abscess was rather thin and somewhat soapy, containing, however, no structural detritus of any account, and particularly no elements of bone. I am rather undecided as to the nature and meaning of the abscess, and have no means of ascertaining whether it connects with the joint or is the consequence of suppurative bursitis. There is indeed not a single symptom indicative of the joint being implicated, although the possibility cannot be denied. But the fact that the punctures close and form no sinuses, is rather against articular suppuration. It is at best therefore an open question.

On the other hand I have seen these abscesses often form at the same location, and subsequent to the division of the tensor vaginæ femoris. Not unlikely these abscesses grow out of an injury to the bursa of that muscle, and would have no great pathological import. If this version should prove true, the diagnosis of this case should be modified accordingly. From the general aspect of the case, I expect perfect recovery at no distant time. The diagrams (figs. 23—24) represent the present



(Fig. 23.)



(Fig. 24.)

status of my patient in as far as the position of the affected limb is concerned, and it will be observed that form, position, and length are normal, not even the circumference of the limb differs materially with its fellow.

## CASE IV.

*Malposition of the right limb with more than four inches shortening, the result of now extinct Hip Disease.*

Harry M., eleven years of age, came under my charge in the following condition. The right extremity considerably attenuated; the thigh without its proper contours; extreme adduction and inversion; pelvis tilted up and rotated backward; corresponding deflection of the spine; gait very awkward and limping, in spite of a four inch heeled boot; trochanter major protrudes considerably, and exceeds by three quarters of an inch a line drawn between the anterior superior spinous process of the ilium and the tuber ischii; insignificant mobility of the articulation, without a trace of abduction and rotation.

These impediments were the consequences of morbus coxarius, since eighteen months entirely extinct.

Although of slender build, he had enjoyed perfect health, and been a very active boy up to the very time when he was suddenly struck down with that disease.

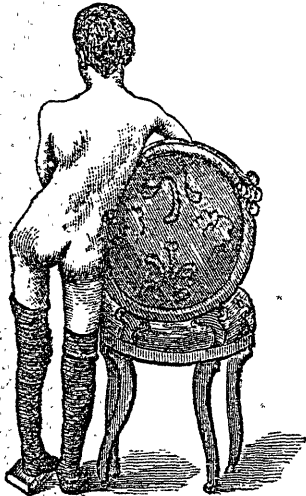
There is no morbid diathesis in the family; the father of the patient is even a very robust, muscular and active man, the very picture of health and manliness. In addition to this the patient has been, and is still, surrounded with the attributes of opulence and rational hygiene. The premonitory symptoms were but few, insignificant and of short duration. When at a boarding school in the country the patient was suddenly attacked with the most violent symptoms of morbus coxarius, which continued with unabated intensity for five months; then they almost as abruptly abated, leaving the patient in that deformed state which I have briefly sketched. But the shortening had steadily increased so as to require from time to time a higher heel to his boot. Even during the 6 months preceding the operation, the increasing shortening of the limb had been observed. He had, however, completely regained his standard of excellent constitutional health, and was as active as before. There were no local symptoms indicative of continued joint disease.

I have not been able to ascertain the cause of the original attack. There is certainly no pretence of constitutional causation, although the patient does not remember having met with any accident worth speaking of. I, nevertheless, consider myself justified in assuming the same, for the very activity of the patient seems to warrant such a supposition, still more so the violent character of the disease and its rapid course without suppuration.

The patient came under my treatment in the spring of this year, and remained four months with me. During this time I have divided suc-

cessively most of the adductor muscles; and at four different occasions, with the assistance of chloroform, broken down most fibrous adhesions, and by steady extension in the recumbent posture and repeated passive motions, I have succeeded in placing the affected extremity in a rectangular position to the pelvis, and extended and loosened the still existing fibrous impediments to such a degree as to allow moderate mobility of the articulation.

From the high position and prominence of the larger trochanter, it is evident, that the neck of the femur rides upon and is fastened to a new articular facet at the superior and posterior portion of the acetabular margin, where it still remains, and from which position I do not intend to displace it. At the end of the second month I allowed locomotion to the patient, supported by crutches and my first hip apparatus. It was at that time that the photographs (figs. 24 and 5) were taken. You may judge for yourselves of the material changes towards improvement which had been effected up to this time. Previous to his discharge, another photograph with the second hip instrument applied, was obtained, (vide fig. 7). In that position the pelvis has resumed its proper level, the extremity stands rect-angularly, within five eighths of an inch off the floor. The passive motions are still continued with due care, and daily lubrications are being made with phosphorated oil, to promote healthful innervation and nutrition.



(Fig. 25.)

The patient is directed to wear the hip instrument night and day until the changes of form and position become permanent, when a heel  $\frac{5}{8}$  of an inch higher than that of the other boot will suffice to ensure easy gait and locomotion.

These changes have been wrought within the short period of four months in a deformity and malposition which in former times were considered beyond surgical aid, and this case furnishes, therefore, an illustration of the grand progress in orthopædic surgery.

Brooklyn, N.Y., Clinton, corner of Warren street.

*Some Remarks upon Carbolic Acid as a remedial agent in the Treatment of Wounds.* BY W. CANNIFF, M. D., M.R.C.S., England. Formerly Professor of Surgery and General Pathology, Victoria University, Toronto, Ontario.

During the past year the Profession has been favoured by Joseph Lister, F. R. S., Professor of Surgery in the University of Glasgow, with several papers upon the subject of carbolic acid in the treatment of wounds. In this paper it is intended to offer some remarks upon the views advanced by Professor Lister.

His treatment of wounds by the application of carbolic acid, is based upon the discoveries claimed to have been made by M. Paster, namely—I quote from Lister—"that the septic properties of the atmosphere depends not on the oxygen or any gaseous combinations, but on minute organisms suspended in it, which owe their energy to their vitality—it occurred to me, says Professor Lister, that decomposition might be avoided by excluding the air, by applying as a dressing some material capable of destroying the life of the floating particles. The material which I have employed is carbolic or phenic acid, a volatile organic compound, which appears to exercise a peculiarly destructive influence upon low forms of life."

He recommends it in all forms of wounds, a weak solution in the incised wound, and in contused wounds, especially in compound fractures, in much greater strength. It is likewise used in the treatment of chronic abscess to prevent decomposition of the pus after an opening has been made.

To read Professor Lister's remarks, his inferences, one would almost think that a Paget had never written upon the *Healing Process*, nor a Hilton expounded the invaluable benefits of rest in the treatment of wounds and abscesses.

Before proceeding with my remarks I wish to make one broad statement, viz, that nature has endowed the system with the power to heal, to make extraordinary, as well as ordinary repair of tissue. In every case where there has been a solution of continuity, an effort is at once made to effect a healing of the breach. And the assertion is ventured that there exists a material, prepared solely for the purpose of healing; I refer to the fibrine of the blood. This point, which I believe has never been urged, never indeed stated, but by myself, I have endeavoured to make plain in my "Manual of the Principles of Surgery." Of course there are circumstances which will successfully hinder the natural process of healing. These may be local or general, and it becomes the surgeon's office to remove these untoward conditions, if within the bounds of possibility.

Take a simple incised wound, where the part has been divided without injury to the neighbouring tissues, on either surface of the wound. If the individual is in health that wound will readily heal by adhesion, however extensive it may be, if the surfaces be brought together and retained fully at rest. If anything intervenes between the surfaces of the wound, or if the part be not kept in a state of rest, they will not unite immediately. Such is the case whether the air is excluded or not, provided always that the part is retained in a physiological condition by the application of moisture and cold sufficient to prevent undue circulation of blood. I will relate a case which was under my own care. A man in good health, although addicted to slight intemperance, met with a railroad accident by which his hand was severed from his body. Amputation was performed three inches below the elbow by the circular operation. The integument forming the flaps was uninjured; but some of the soft parts had to be trimmed off, because of bruising; two ligatures were employed, and the stump closed by the introduction of sutures placed not more than half an inch apart, a few adhesive straps were also used, a bandage was then applied around the stump sufficiently snug to keep the parts immovable; the end of the stump was uncovered, except by the few adhesive straps. The limb was placed in a slightly elevated position, and cold water dressing applied, no pains being taken to exclude the air. About thirty-six hours after, every second suture was removed. The following day all but two of the stitches were taken away, and the day after all were abstracted, and adhesive straps alone continued to support the edges of the wound while the bandage was still snugly applied around the arm immediately by the end. Cold water was used to prevent exalted circulation, being applied by dipping a piece of folded cotton in the water from time to time, and laying it upon the part. It soon became evident that immediate union had taken place in the whole extent of the wound, not a drop of pus had formed, although there had been a continual oozing of *liquor sanguinis*. The two ligatures remained imbedded in the tissues for nearly three months before suppuration took place along their tract, which after another month resulted in their evulsion. Had acupressure, as recommended by Sir James Simpson, been practiced, this after-trouble would not have come. Now, here was a large wound, an amputation of a large muscular arm, no care was taken to exclude the air; on the contrary, the wound remained open, with the integument turned back for some time until the bleeding had entirely ceased. There was plenty of time for the air to deposit any number of organisms. Subsequently the surface of the wounds were left uncovered, and yet there was complete immediate

union. I will refer to another case in my own practice, in which resection of the ankle-joint was performed, and the unusual amount of two inches of bone was removed from the extremities of the tibia and fibula. A few days subsequent to the operation, a large portion of the integument—a cicatrix of a recent wound—sloughed away. From first to last nothing but water dressing was used. The wound in its whole extent was, from the first, left uncovered. The air was constantly circulating around the part, and after the slough came away it entered the large excavation every time the cloth was dipped in water, which was very often. Week after week the depth of the wound was exposed and the ends of the bones were daily seen, bathed with liquid fibrine, beneath which the work of repair steadily progressed. Eventually nature's work was complete, and the bones of the leg were rejoined to those of the foot. The air was ever present; yet only a very small quantity of pus was at any time elaborated, and this was at the bottom of the ankle where it was impossible to secure a free escape of fluid. Now, if air is so pernicious by the presence of low forms of life, why did it not in this case produce its disastrous effects? These two cases are here adduced to show that healing will successfully, and to a remarkable extent take place, when the air is directly and constantly in contact with the discharge continually poured out. The presence of air affects not the healing process; but if the air be foul, loaded with the animal poison derived from the decomposition of the discharge which is pent up by the application of numerous coverings and bandages, with the view of excluding the air, then the simple, but grand work of repair is stayed and the framework—the coagulated fibrine, is undermined and instead of material being poured out to effect repair, poison will be absorbed. And hence may follow serious blood poisoning.

But it is in cases of compound fractures, those cases of severe crushing or laceration where blood poisoning is more likely to follow that Prof. Lister thinks the carbolic acid is pre-eminently beneficial. For in these cases it would seem that the low organisms act with greater power. The fact is ignored that in these severe injuries, not only is there a wound but the tissues on either hand are crushed. The cells which go to make up the whole structures have suffered, and are in a low state of vitality, perhaps are dying, or already dead. With many it is a question whether life can be restored or not. Here nature has not alone to close up a wound but to give back life to tissue in a state of collapse. Instead of standing ready to pour out the fibrine to seal up the divided tissue, it has to wait itself for help. Some of the structures have been so far injured that restoration is impossible; they must die, and have to be sequestered from that which

is enabled to live. This all involves a more tedious and complicated process, and the circumstances of one, with such a wound, is far less hopeful. In these cases the dark grumous fluid wells slowly but incessantly from any side. Yet we are told that here is a favourable chance for the mischievous little animals floating in the air, to commit depredations.

Now it is respectfully submitted that it is the crushed tissues which give the dangerous character in these cases, and that the air carries no additional poison however much it may circulate. And it is difficult to understand how carbolic acid, even supposing it has killed the organisms, can help the unfortunate cells, which compass the tissues and which are bruised and bleeding. But this can be understood, that the ultimate particles of the system have the power to recuperate—to recover from a shock, somewhat the same as one who has been precipitated headlong among the debris of a falling building, and who lies stunned and, for a time, senseless. If, however, some of the tissues die and remain in the wound, because bandages have been so applied that air shall not enter, or if the position is unfavourable so that no fluid can flow out of the wound, then dead particles remain there to decompose and to be absorbed, thereby producing Pyemia, or some other blood poison. I can understand that carbolic acid, or a more potent caustic might by forming an eschar of this dying tissue tend to prevent that fatal result. But is this necessary? I have no hesitation in saying no. In a healthy subject, by placing the patient, *especially the part injured, in a proper position, so as to prevent an accumulation of fluid in the part, by applying judicious and general pressure; by keeping the parts clean, so that no dead matter may remain to be absorbed, by allowing clean air, also, to approach and give its purifying influence,* then the effects will be as salutary and invigorating as is pure air to one who has been confined in a dungeon, and as grateful as the limpid stream to the weary traveller with sore and bleeding feet. The belief that if air entered the cavity of a joint or any closed sac, the most disastrous results would be sure to follow, has now quite exploded. So should we discard the idea that air—pure fresh air—is such an evil agent in connection with wounds. It is not argued that air may not be productive of harm, and that healing of injured tissues will not more quickly take place as in subcutaneous section; but it is contested that carbolic acid is not necessary to enable nature to take any necessary step to restore a part crushed and wounded.

Then with respect to chronic abscess, Prof. Lister has given a very elaborate way whereby carbolic acid may be made to prevent the entrance of air into an opened abscess, or render inert the floating organisms. It is a fact well known that oftentimes after a chronic abscess has been open-

ed and a quantity of pus discharged, which was inodorous, and the opening made to close up, that when again opened foetid pus would escape, while hectic symptoms would present themselves. But is it because of organisms introduced by the air? Rather is it not because the abscess was closed and air pent up which led to a decomposition of degenerating pus which would otherwise have gradually dissolved and been absorbed. It must be remembered that a collection of pus necessarily presses aside the natural tissues; now these structures will tend to return to their natural position when pressure is removed, and my practice has been to make a direct opening large enough to allow a free escape; but not to evacuate the abscess. The patient was placed in a comfortable and natural position beforehand, so that no motion of the body would expel the contents; a poultice applied soothed the part and prevented the closing of the incision; but no tent was introduced. The result invariably has been satisfactory; the structures gradually returning to their natural position, pressed out the pus, yet not so quickly as to make room for air to enter. Should the air find an entrance I would make a passage sufficiently large that a change of air could be had by the contracting pyogenic membrane; then there is no decomposition, no evil results. Of course in these cases *rest* to the parts is an absolute necessity.

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*Remarkable case of Hypertrophy of the neck of the uterus impeding labour.* BY E. D. WORTHINGTON, A.M., M.D.

Julie D—, a French Canadian, of most exemplary character, is now 36 years of age, has been married 13 years, slight, well formed and remarkably healthy. Never had any uterine disease other than that I am about to describe; 12 years ago she gave birth—at the seventh month—to her first child, which weighed only 2½ lbs. The boy is now alive. She was living at Nicolet at the time, and was attended by the late Dr. Brasard. She assures me that that first labour of hers was the most severe and protracted one she ever had, and that she nearly died before the child was born. I have attended her in five confinements since that time, all the children except the last one, being still born.

1857. June 20. She was delivered of a boy. Nothing particular to characterize this labour, except that the foetus was small, had been dead for some days, and that I was reluctantly obliged to deliver with the forceps. If any abnormal condition of the neck of the uterus existed at that time I did not notice it. She had been in labour for some hours when I saw her, and had been flooding more or less for several days before.



1858: Nov 13. Julie sent for me early in the morning. The pains were then very severe, and she had been suffering a good deal all night. On examination found the cervix so swollen and elongated as to fill up a considerable portion of the vagina. The finger could be passed readily round the neck in every direction, but I had some difficulty in finding the os. It was at the apex of the abnormal enlargement—almost at the external labia—and the finger naturally went beyond this point, and was moved about in fruitless efforts to discover an opening. One finger could be introduced one and a half inches into the cervix, its walls for that distance being firm, thick and unyielding, but it was impossible to pass the finger higher up. From the vagina I could through the wall of the uterus very indistinctly feel the rounded form of the head of the foetus. I could ascertain this, and nothing more. The woman was undoubtedly at the full period. Long continued pressure on the undilated cervix between the foetal head and the bones of the pelvis might account for a good deal of the swelling of the os, but not for the elongation of the cervix. The case was rather puzzling. However, as every thing was to be gained by delay I gave her a full dose of Opium, raised the hips, introduced a piece of sponge wet in tepid milk and water into the os, and a larger piece into the vagina, pressing up the mass as well as I could, and directing an attendant to make gentle pressure over the labia and perineum. Saw her frequently during the day, and remained with her all night; continued the sponges—gave Opiate enemata—applied Belladonna to the os, and kept her occasionally under the influence of Chloroform. Towards morning the head could be felt. The os and cervix more yielding. Could pass two fingers up to the head. Sent for Dr. Brooks but he did not arrive until noon. At that time the os was still more dilated, and the head descending, but even then so remarkable was the state of the parts that I was rather amused at Dr. Brook's uninitiated efforts to find the os. Our patient was now getting anxious and exhausted, and cried out piteously for us to use '*les fer*' and relieve her of her sufferings. This we promised to do as soon as the os was sufficiently dilated to admit of their application, which was not until 4 o'clock in the afternoon.

The forceps were applied without any great difficulty, but it was found impossible to move the head. After repeated efforts we were certain that delivery could not be effected, except by craniotomy, and as at this time we could not hear the foetal circulation, we performed that operation unhesitatingly, and delivered our poor patient of a foetus fully up to 12 pounds in weight. Her recovery was rapid.

Convinced at the termination of the labour, that its long duration

and unfavourable result to the child, was due not so much to its size, as to the elongation and unyielding state of the cervix, I told Julie that if ever she should become *enceint* again, she must let me know about the seventh month. In the event of such an extremely probable contingency, if I found the cervix in the same state, I would bring on labour at that period. She promised, but did not keep her promise.

1861. January 30th. Julie sent for me in the evening about 6 o'clock. She and her husband were living on a farm of my father in law, two miles out of town. On my arrival I found exactly the same state of the cervix, except that it was softer and more dilated. The membranes had broken, and the feet were presenting. Julie had been a faithful servant in our family for many years, before and after her marriage; she was so kind and good, such a favourite with us all, so anxious to have another living child, her prayers being continually for a "little girl," but with the shocking bad taste of *wishing it to have red hair*, a sister for "Henri, he is so lonesome," that I determined to use to its utmost limit, all the prescribed caution, so that she might have the cherished object of her wishes. Alas! Julie's baby was born next morning at day-light, dead, as might be expected; but every sorrow has its solace, every cloud its silver lining, it was only a boy, and had black hair.

1865. My services were again required, for about the middle of July. Julie left word with my wife that she was then seven months advanced in pregnancy and would like to see me when convenient. I saw her in a few days, she was then living in town. She at once called my attention to the extraordinary development of the cervix;—a pinkish white, soft, round, fleshy, healthy looking mass; it hung down between the thighs like a huge penis, with no evidence of diseased action about it, but looking as if it was, "to the manor born." It had a circumference, of *ten and three-quarter inches*, ending rather abruptly in a rounded extremity, in the centre of which was a proportionately large, but otherwise orthodox *os*. It was *seven inches* in length, measuring from the labia. To give a familiar illustration it was as near as possible to the size of an ordinary three half pint black bottle, broken off short at the neck. Two fingers could be readily introduced within the *os*, but the canal gradually narrowed, until at the length of the fore finger it abruptly became very small indeed, and at this point it was hard and unyielding. The outside covering resembled very thin cuticle rather than mucous membrane. The finger could be passed up the vagina by the side of the neck, and its point could just touch the junction of the neck with the uterus itself so that this monstrous cervix must have been at least *ten inches* in length. Julie then informed me that this "had been growing slowly since her first

confinement, that it gave her very little uneasiness, except of late years, and then only from its weight, that it was always larger when she was not pregnant, as pregnancy advanced it gradually receded, and during the latter months disappeared within the vagina. She had never spoken of it before, and begged her husband never to speak of it even to me, she was ashamed to allow any one to know of its existence. I then understood *why* I never could get any satisfactory account of it from her before, and *why* she had always been unwilling to have anything done for it. When lying on her back she could return about half of it, but on taking away her hand it immediately returned. She was more comfortable when it was down, for on pushing it up it made her feel so full. It had increased very much since her confinement in 1858, but had only attained its present great size within the last three years. Before she became pregnant this time she could return it within the vagina, when on her back, but only to a point bringing the os parallel with the external labia.

I cannot tell you how distressed I was on convincing myself that there was a foetus within the uterus, and that the apparently hopeless task of bringing the child through this long neck, or of performing the Cæsarean section were the only means of saving the life of my poor patient. To attempt the former appeared to me then about as feasible as to pass a small foetus through a male urethra, or a 74 gun-ship through the Canal, and to do either would require a considerable amount of dilatation. Once at the request of a Catholic Priest I had performed the Cæsarean section immediately *after death*, and I have no peculiar weakness for repeating the operation at an earlier period. My only hope was in the admirable deficiency in sensitiveness that existed in this "horrid shape," so I immediately commenced a long, tiresome, but most persistent course of dilatation. Using no internal treatment other than was necessary to secure absolute quiet to the uterus, and prevent the beginning of labour until there was sufficient progress made to give hope of a favourable result.

It is unnecessary, and would be very tiresome, to go into a detailed account of a process that extended over a period of close upon two months. The means used were such as would naturally suggest themselves to any one, the operation being of a purely mechanical character. I may add, however, that after attaining a certain amount of dilatation, I found better results from the use of India rubber hollow balls, with long tubes attached of the same material, than from any other dilator. The ball was rolled up, introduced as high as I safely could through a speculum, and then forcibly filled with air, and allowed to remain for hours and then withdrawn.

At the end of the eighth month I could pass the whole hand up through that part of the neck external to the vagina, with comparative ease. I then commenced to dilate within the vagina, and here I met with my greatest difficulty, suffice it to say that within a few days of the time when labour might be expected, I had succeeded beyond my most sanguine expectations in dilating to a point that could not be far removed from the internal mouth of the uterus. The case was of such an extraordinary character, that my friend Dr. Gilbert being in Sherbrooke about the time I was using simple sponge tents, I took him to see it, and my confrere Dr. Austin saw the case frequently with me during the whole process of dilatation. They both agreed that it was so remarkable in its character, as to deserve to be placed on record; and I only regret that a variety of causes have prevented my sending it to your pages before this time.

On the evening of the 16th September, symptoms of labour set in, and about 10 o'clock, as the pains were increasing, I determined to commence dilating the last remaining point of constriction in the neck of the uterus. I therefore rolled up, and passed fairly within the uterus, an india rubber ball of nine inches in circumference, of a conical form, at the junction of the ball with its long tube. In doing this I unavoidably ruptured the membranes, but a little traction on the tube prevented the escape of more than about an ounce of the liquor amnii. I did this believing that the conical neck of the air distended ball, kept constantly engaged in the internal os, would act as a wedge when acted upon from above by the pressure of the child's head; that this wedge-dilator would act more directly and quicker in accomplishing the object I had in view, than could the larger and rounder surface of the head itself; and that when this ball was forced out of the uterus the pressure of the head would then tell with better effect. About daylight I sent for Dr. Austin, and just before he arrived the ball came through the cervix, followed by the discharge of the liquor amnii.

It would be safe to say that labour had now fairly commenced, its progress was slow and steady. I gave my patient chloroform, and a little after 10 o'clock in the forenoon, delivered her of a fine, healthy child.

I am sure that my last dilator was of the greatest possible service, and that it did not cause in itself the least suffering, but, on the contrary, saved many hours of weary agonizing pain—for when it came away the progress made by the head was very remarkable. Indeed, from this point, our greatest difficulty was in getting the head through that part of the neck outside the vagina, and I can assure the reader of this strange case, that the whole head had passed entirely outside of the vagina before even

the slightest portion of the scalp had passed the mouth of this most remarkably hypertrophied mass.

Modesty was put aside, and Dr. Austin and myself with well oiled hands, and the most tender careful manipulation slid the distended neck—stretched to its utmost tension—over the head. If it had been necessary I would have divided it,—slit it up—and perhaps I ought to have done so: but it was rather vascular; it might have given rise to troublesome bleeding, at a time when our patient *might* require every ounce of blood in her body;—and besides all this, such a proceeding did not at any time seem to be absolutely called for—a very good and satisfactory reason to me, at least.

The Placenta soon followed, and Julie had a good recovery. It is true that this neck lay inflamed and painful—as much of it as could not be reduced—but cooling applications within a week brought this to its former condition. A few months ago poor Julie's baby died, and now, though she tells me she has not the slightest wish to have another child—fearing that, even if it should be born alive, she would have the additional misery of losing it—she is anxious at last to have something done to rid herself of this great annoyance. I saw her to-day that I might give some idea of its present size. She wears a bandage that keeps it pretty well up, but she cannot wear it all the time. The mass is certainly somewhat smaller than it was two years ago: otherwise it is unchanged. I would be very glad indeed if some one of more experience than myself would give me a hint as to treatment.

My own opinion is that amputation could be performed with safety by the *ecraseur*, or by ligature. There is very little room for the application of either, even if the patient and the husband would consent to operative interference, which they positively object to at present. The only thing that remains is to adapt a gutta percha or ivory body of a pyramidal shape, to a firm bandage, and to wear this constantly, introducing the smooth rounded point within the os, to keep it in position.

About the time of Julie's confinement I was called to see an old lady of 65, and as I sat chatting with her, her daughter in law said "Mamma, why do you not speak to the Doctor about that other thing? he might do something for you." The old lady replied "Ah no, dear, nothing can be done for that I've had it ever since I left Ireland five and twenty years ago—when my John was a wee baby." She then allowed me to examine what was only a smaller edition of what I have just described; being in size equal to an ounce quinine bottle, and three and a half inches in length—outside of the vagina—thus giving additional testimony to the truth of the old adage that there is nothing new under the sun."

Sherbrooke, Dec. 2nd. 1867.

*The Necessity of Supporting a Medical Journal in the Dominion of Canada.* BY SIR DUNCAN GIBB, Bart, M. D., J. L. D.

Although being at a distance, and far away from the scene of one's early recollections, I am always deeply interested in the welfare of the Profession in Canada, and necessarily depend upon the only Medical Journal in that now extensive Dominion for information upon matters medical. The movement which led to the formation of a *Canadian Medical Association* is without exception the most important that has ever been brought before the notice of the profession in Canada, and all honour is due to my respected friend, Dr. Marsden of Quebec, as the originator of it. No more fitting place than Quebec could have been selected, for the inauguration of so important an undertaking, and the Medical Society of that City deserves its full measure of thanks in so ably bringing to perfection the original proposition of Dr. Marsden. The profession of this country have noted the formation of this association, and cordially wish it all the success it deserves, in carrying out the important measures which will be brought before it.

The magnitude and importance of the Canadian Medical Association have been made clear by the full details published in the Quebec papers, kindly forwarded to me by friends. My object in sending this short communication, is to ask the profession in Canada to unite and support a Journal, through the medium of which they may communicate with one another, and by means of which the profession will take that standing which exists in other countries. I have been astonished, as well as many others here, to find that in a large country like Canada, with its many thousands of practitioners, such a comparatively small number subscribe to the only Medical Journal in the country, and so few, indeed, very few, are Contributors. Why is this? It used not to be so, although I am free to admit that it never was what it ought to have been at any time. In England, Scotland, and Ireland, there is scarcely a practitioner of any grade, who does not subscribe to one Medical Journal at least, and in the large towns two or more are taken. In London alone, with its 2650 practitioners, a large proportion take the 3 regular weekly Journals, besides several others of a more or less scientific or general character. A great many take two; nearly all one. The consequence is that every one knows what is going on around him. The weekly journals are essentially Medico-political, and this is a feature of much greater importance to the general Medical reader, than original contributions alone.

Now it occurs to me—an impartial looker-on at a distance—that a quarto-journal, similar to the "Lancet" or "Medical Times," or like the

“British American Medical Journal” published from 1845 to 1850, with a white paper cover, and issued twice a month, of suitable thickness, would be the exact kind of periodical suited to the profession of the United Dominion of Canada. It would require an editor (like the present journal, and who should be the same respected individual), with a staff of assistants, for its various departments. Medical news from all quarters should be welcomed, and short communications upon various subjects. And if the profession are in earnest in their desire to co-operate for the general good, they should unanimously support a journal that would not only compare favourably with those of other countries, but that would command the respect of the profession throughout the world.

From the tendency of Medical legislation in this country, it is easy to see that applications from our Colonial Universities are by no means treated with the respect they are entitled to. And every petty corporate body here, with absolutely no advantages whatever, beyond the recognition of its certificates for registration entitling to practice, is looked upon as of more importance than any colonial institution, no matter how good. A well supported journal, representing the opinions of the Canadian profession, and giving the record of the proceedings of the Canadian Medical Association, moreover, being recognised by the Canadian Government as an organ reflecting the opinion of a great and influential body, would necessarily have such weight that measures intended for the benefit of the profession could be carried without any serious opposition. Without a well supported Medical organ, the Canadian Medical Association cannot exist! What would the British Medical Association—now numbering its 3000 practitioners, scattered over the length and breadth of the land—be, without its Medical Journal? To be sure the Canadian Medical Association is different, as the journal would be published at private risk, nevertheless no difficulty need be apprehended on that score, if a large and voluntary subscription list be obtained.

I have been much impressed with the editorial article upon “The Medical Convention of Canada,” in this Journal for October, and sincerely hope some good may come of it. I would humbly suggest that in every town and village in the Dominion of Canada, some person should be employed to canvass the profession for supporters of the Journal, and the subscriptions should or ought to be paid in advance, as is the general custom here.

The following is a list of the Medical Journals which have been published in Canada, and may be useful at any moment for reference.

The “Quebec Medical Journal.” 2 Vols. 8vo. 1826 and 1827. Edited by Dr. Xavier Tessier.

"Montreal Medical Gazette." Svo. Vol. 1., 1844-45. Of Volume 2, only 2 numbers appeared. Edited by Drs. Badgley and Sutherland. The "British American Journal of Medical and Physical Science." 7 Vols. 1845 to 1852. Published at Montreal. The first 5 Vols. 4to. and the 2 last, Svo. The first two volumes edited by Drs. Hall and Macdonnell, the remainder by Dr. Hall alone.

"La Lancette Canadienne," Journal Medico-chirurgical. Montreal, 1847. Folio. 12 numbers pp. 58, all ever published. Edited by Dr. Leprohon.

The "Canada Medical Journal." Svo. Montreal, edited by R. L. MacDonnell, M. D., and A. H. David, M. D., 1851 and 1852, 1 vol.

The "Upper Canada Journal of Medical, Surgical and Physical Science." (New series) Svo. Toronto, 1851 to 1855. 3 Volumes (?) Edited by Dr. Stratford. [I have not seen the *old* series.]

The "Medical Chronicle, or Montreal Monthly Journal of Medicine and Surgery. 6 vols. Svo. 1854-59. Edited by Drs. Wright and McCallum.

"British American Medical Journal." Royal Svo. Published at Montreal, 1860-62, 3 Vols. Edited by Dr. Archibald Hall.

"Canada Lancet. Royal Svo. 2 Vols. 1863 and 1864, Montreal. Edited by Dr. Bowman.

The "Canada Medical Journal. Svo. Montreal, 1865 onwards, and is now in its fourth vol. Edited by Drs. Fenwick and F. W. Campbell.

"Gazette Medicale," *Revue Meusuelle, Medico-Chirurgicale*, 4 to. Montreal, edited by Drs. Lemire and Dagenais, one volume published, 1866.

Bryanston Street, London, November 27th, 1867.

*A Treatise on Human Physiology*, Designed for the use of Students and Practitioners of Medicine. By JOHN C. DALTON, M.D., Professor of Physiology and Microscopic Anatomy in the College of Physicians and Surgeons, New York, &c., &c., &c. Fourth Edition, revised, and enlarged, with two hundred and seventy-four illustrations, 8 vo. pp. 695. Philadelphia: Henry C. Lea, 1867.

In noticing the third edition of this work we remarked that the style was such as to render it not alone a book of study to the student or of reference to the medical practitioner, but a book which could be taken up and read at any time, with both pleasure and profit, and as affording delightful recreation from the labours of practice. We can heartily



endorse these views as applied to this the fourth edition, which has received from the hands of the author a thorough revision; indeed the progress of Physiology and the kindred sciences during the last few years has entailed this labour on our author. This progress has not necessitated any decided change in the views entertained in any of the departments of this science; still there has been great activity in investigation in different directions, and as a result many new features have arisen in Physiological knowledge. Improvements in Microscopical and other instruments have added much to the general store, and by aid of these means, Helmholtz and others have been able to note the physical changes in the eye during vision at different distances.

In the revision and additions to the present volume the author has incorporated the changes in physiological knowledge with the mass of the text, so as not to essentially alter the general plan of the work. Due attention is given to the investigations of J. Lockhart Clarke on the grey substance of the spinal marrow, and also to remarks of Dr. John Dean on the *Medalla oblongata*, these investigations have placed our knowledge of the structure of the spinal cord and base of the brain in a new light, which is of the greatest possible importance to the physiology of these parts. The discoveries of Virchow, Leuckart, and others on the structure and history of parasitic animals affecting the domestic quadrupeds and man, are duly noticed. Several new illustrations have been added to this edition, and of these we may remark they are clear and distinct, finished in the highest style of art.

The well earned reputation of Dr. Dalton as a Physiologist is sufficiently extensive, and his book has for years deservedly occupied the place in our colleges as the text book on this branch of Medical Literature; the paper is of the best quality and the type clear and well impressed, it is to be procured of Dawson Brothers Great St. James Street.

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*Injuries of the Eye, Orbit, and Eyelids; their immediate and remote effects.* By GEORGE LAWSON, F.R.C.S., Eng., Assistant Surgeon to the Royal London Ophthalmic Hospital, Moorfields, and to the Middlesex Hospital; Late Assistant Surgeon, Rifle Brigade. With numerous illustrations, pp. 408. Philadelphia: Henry C. Lea.

In this work will be found the most important facts relating to injuries of the eye, orbit and eyelids. The author has made the most of his opportunities and has collected a number of cases of accident and injury to the eye, which he has observed at the Middlesex and Royal London

Ophthalmic Hospitals. These cases he gives in his work, as illustrating some particular class of injury. The work consists of eleven chapters, in which the following subjects are discussed. 1st. Superficial injuries of the eye. 2nd. Injuries to the eye from burns, scalds, and chemical agents. 3rd. Penetrating wounds of the eye, and other injuries of the Cornea and Iris. 4th. Traumatic cataract. 5th. Capsular opacities and dislocations of the lens. 6th. Foreign bodies within the eye. 7th. Traumatic intraocular hæmorrhage and rupture of the globe. 8th. Gun-shot injuries of the eye. 9th. Sympathetic Ophthalmia. 10th. Injuries of the orbit. 11th. Injuries of the eyelids.

There is also an abstract of the Surgical Report of the Royal London Ophthalmic Hospital, Moorfields, for the year 1866. This latter gives the reader a fair chance of judging of the opportunities afforded the author, when he finds that of 851 patients admitted into the house 749 required operation, and also that the total attendance of out patients was 18,953 individuals during the year. There will be found added to the work specimens of test types corresponding to the "Schrift-scalen" of Edward Jaeger of Berlin. This is eminently a practical work and will repay careful perusal. It should be in the hands of every surgeon who desires to follow this branch of the healing art. The work is amply illustrated, many of the drawings are from Dalrymple's plates on the eye, but the majority are from cases which have come under the author's own observation. The work is issued in Mr. Henry C. Lea's best style, and can be procured of Dawson Brothers, Great St. James Street.

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## PERISCOPIC DEPARTMENT.

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### Surgery.

#### REMARKS ON THE FOLLICULAR CHANCROID,

By F. N. OTIS, M. D., Lecturer on Diseases of the Genito-Urinary Organs, at the College of Physicians and Surgeons, New York.

INOCULATION of the chancroidal virus, through sexual contact, occurs in *three* different ways. First, and most commonly, where the virus is applied to the surface of an excoriation or a fissure: here the ulcerative action commences at once, and the form of the chancroid corresponds to the shape of the excoriated or fissured surface. Second, in order of frequency, the virus may be absorbed (or forced by the intimacy of the sexual contact) into the mucous or sebaceous follicles of the glans penis and the fossæ glandis. From the more generous distribution of such follicles in these

localities they are the most usual seat of such an accident. The irritative property of the virus, which is forced or absorbed a greater or less distance into the follicle, soon causes its mucous lining to swell and close the follicular orifice, thus imprisoning the virus within the follicle, and here it is retained until it works its way (as in such case it certainly will) to the surface, by the ulcerative process, when it presents as a minute pustule. As a rule, several follicles are inoculated at the same time. The first intimation of the occurrence of this mishap is revealed by an itching of the parts, which, when examined early, presents a variable number of small pustules, ranging in size from a pin's point to a grape-seed. Third, and least frequently, the chancroidal virus is deposited upon the sound integument or mucous surface of the penis, when it is erect, and by the subsequent natural wrinkling of the parts it is retained in moist and intimate contact with them until, by its peculiar caustic property, it effects an entrance through the protecting mucous or cutaneous surface. When this form of chancroid becomes established, its shape is usually circular, and corresponds with the surface to which the virus has been thus intimately applied. From the different conditions under which the chancroidal virus is inoculated during the sexual act, as above shown, it is readily understood that no definite date between the suspicious connection and the appearance of the chancroid can be fixed, but must necessarily vary in each individual case. The usual time, as cited by most authorities and based chiefly on the results of artificial inoculation, ranges between four and eight days. The follicular form of chancroid is described, and its advanced state illustrated very truthfully by Cullerier. Bumstead also mentions it. Acton, in the latest edition of his work "On the Urinary and Generative Organs," cites a case where he *believes* that the poison of the chancroid was absorbed into a *hair* follicle, but, as far as I am aware, no writer has yet described a case of follicular chancroid from its inception; where this form of disease has been treated of, the lesion presented has been the developed pustule. The follicular starting point of the disease assumed by Cullerier, Bumstead, and Acton, has been substantiated by a case which came recently under my observation. Mr. W—— came to me complaining of having bruised his glans penis during a connection four days previous. On the morning following the indulgence the part felt very sore, and was swollen and inflamed. These conditions had been gradually increasing in intensity until he presented his case to me. I found the inferior portions of the glans much tumefied from the meatus back to the fossæ glandis, and for half an inch on either side of the median line (the frenum had been smoothly carried away by a chancroid ulceration, for which I had treated him a year previous). The injured

part was swollen, and presented a smooth, shining surface of a deep red colour. By the most careful examination, with the aid of a magnifying glass, I could not discover any point of abrasion or solution of continuity whatever. I advised a simple water dressing, slinging up the penis, so that egorgement from the dependent position of the organ might be relieved, and as perfect rest as possible obtained. He called on the following day somewhat relieved, but in appearance the parts had not improved; the colour was even deeper than on previous examination. A wash of lead and opium was substituted for the water dressing, and the patient advised to keep the recumbent position. On the next day, the third from his first visit to me, and the seventh from the impure connection, he again presented himself. The tumefaction was much the same; the colour had deepened and was now of a violet tinge, and I discovered, as though under a glass, numerous whitish points varying in size from a pin's point to a pin's head, occupying a space a quarter of an inch broad, and one-third in length on either side of the median line on the inferior aspect of the glans. Previous treatment was continued, and I saw my patient daily for three days following, making in all *ten* days from the connection. On the morning of the tenth day I discovered some half a dozen whitish points just underneath the mucous membrane; these were then opened with a fine pointed bistoury, and discharged minute quantities of pus. Under the magnifying glass the little cavities, left after the discharge of the pus, were characteristic of chancreoid ulceration. In brief, all the points, some twenty or thirty in number, finally worked their way to the surface, occupying some three days longer, and they soon coalesced from the extension of the ulcerative process, resulting in a true chancreoid three-fourths of an inch in length by one-third of an inch in breadth, occupying the site of the original white points. The first pustules were visible through the mucous membrane, but evidently deeper than its thickness, on the seventh day after the absorption. The first of these came to the *surface* on the tenth day, but it was not until the thirteenth that all had reached the mucous membrane on their outward march. Applications of the strong nitric acid resulted in a complete recovery in a few days.—*N. Y. Med. Gazette.*

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### Medicine.

ON THE TREATMENT OF THE ADVANCED STAGE OF CROUP.

By Dr. EBEN, WATSON, M. A., Surgeon to the Glasgow Royal Infirmary.

[The true indication is to relieve the spasm of the glottis or to reduce the œdema of the mucous folds above it, without wounding the trachea,

and then to use measures for the expulsion of the false membrane in due time through the natural openings.]

The topical application of solutions of the nitrate of silver of gradually increasing strength is a powerful reducer of the irritability of the glottis, but it requires far too much time for its action, even if it were otherwise suitable to cases of exudative inflammation, which I believe it is not. Emetics do certainly act on the glottis, and are such great helps in relaxing it that they can never be dispensed with, but their operation is only short-lived, and the patient would soon be exhausted by their very frequent employment. The inhalation of chloroform is perhaps the most speedy and powerful relaxer of the glottis at present known, and it may with caution be used in the cases to which I am now referring. It has this advantage, likewise, that its action may be maintained for a much longer time than that of those previously mentioned.

A few weeks ago a child of two years old was brought into one of my wards in the Infirmary, in the advanced stage of exudation croup. I thought he was suffering especially from spasm of the glottis, and had him put under the influence of chloroform, in which state his breathing became much fuller and more satisfactory, while both colour and heat greatly improved. But the mother, terrified at some mention that had been made of an operation, would not consent to his remaining in the house, and in spite of all our remonstrances, took the child home that same day, I suppose to die. Another good relaxer of the glottis is hot water, with which the *vinum belladonnæ* may, I think, be usefully mixed, and the best way for applying it is by Siegle's atomizer. In this way the patient is made to inhale the mixture as a spray, and even if he be an infant, the air in his neighbourhood may be so impregnated with the vapour that he cannot escape its action. I have seen much advantage from this appliance both in croup and in other laryngeal states allied to it.

These agents for relaxing the glottis have a double advantage; for they both gain time, which is so precious in these cases, and they may be alternated with other means, such as emetics, for the expulsion of the false membrane. They are the only relaxers of the glottis of which I can at present speak from experience; but do I not doubt that when attention is fairly drawn to the subject, other agents will be discovered still more appropriate to the fulfilment of this important end. At all events, that is the direction in which our endeavours ought to point, if we are ever to be able to overcome this formidable feature of advanced croup.

In those cases of the disease in which suffocation becomes imminent from the supervention of œdema of the aryteno-epiglottidean folds, tracheotomy is often performed, and were it not for the unsound state of

the trachea this would be a successful operation. Indeed, it will be found on a careful examination, that the most of those cases which are reported as successful performances of tracheotomy in croup are cases of œdema glottidis, often without a symptom of exudation at all, or in which the false membrane has been previously expelled, for œdema is apt to occur in the disease after the patient has struggled through its exudation stage. In such circumstances, the obstruction to respiration being at the glottis, tracheotomy relieves with certainty; but I repeat, that if the operation be performed during the exudative inflammation of the trachea, the natural and ordinary result is aggravation of the morbid action, too often to a fatal extent. I also assert, with some confidence, that, in the vast majority of cases, œdema glottidis may be reduced without tracheotomy by the timely employment of what I think more rational and certainly much safer measures.

Thus, for instance, I have in a good many cases of this kind successfully applied a strong solution of nitrate of silver to the œdematous swellings by means of laryngeal sponge-probing, and, whenever this is rightly done, it will be found that there is an almost immediate transudation of serum from the tumor, whereby its bulk is diminished and the air permitted to pass more easily through the glottis.

If, however, the swelling does not yield to this application, or not with sufficient rapidity for the urgency of the case, there is another procedure of more speedy efficacy which should then be practised. I refer to pricking or incising the œdematous parts with the laryngeal lancet;—a measure which I can thoroughly recommend in suitable cases. In the performance of this little and almost bloodless operation the laryngoscope is not always available, either owing to the age or irritability of the patient; and, perhaps, in all cases, the best and safest way of performing it is to steady the tumor with the forefinger of the left hand, and then putting in the lancet, with its blade concealed till it touches the tip of the finger, to protrude the blade by means of the spring in the handle and so to prick or incise the part as desired. This is not a difficult operation, and I am certain from my experience of it, that it gives relief to the breathing, both speedily and effectually, without incurring any of the dangers of tracheotomy.

When this operation is required during the exudative stage of croup, I find it useful to follow it with an emetic, by which means all the loosened exudation is expelled and the full amount of benefit ensured. Much has been said and written of the advantages of particular emetic medicines in croup. But I suppose that the essential quality, desirable in such cases, is speedy action with as little as possible of depressing effect; and

this is abundantly fulfilled by a combination of ipecacuan powder with sulphate of zinc. In my practice I never prescribe the tartrate of antimony alone as a vomit, especially to a child, but I find that drug useful in cases of croup in almost every stage, when given in small doses, of the wine for instance: I think its effect when thus administered, is chiefly that of soothing and calling forth a natural moisture upon the lining of the wind-pipe. Since, moreover, the antimony is not used in these advanced cases for its depressing effect, it is not inconsistent to employ it as I have described, while at the same time it may be necessary to support the patient's strength with soups or even with wine. The inhalation of a spray of warm water from Siegle's atomizer is often of essential service after lancing the œdematous aryteno-epiglottidean folds. The vapour just acts as a fomentation does to external parts, by soothing its irritability and reducing congestion.

In conclusion, I think I may re-state in brief terms the practical results which, in my opinion, flow from the preceding consideration of this subject.

1. Tracheotomy should on no account be performed during the exudative stage of croup; for it is either useless in the worst cases or positively hurtful in those where there is any hope of recovery.

2. In those cases of advanced croup in which the spasmodically constricted glottis is the cause of immediate danger, our efforts should be directed towards its relaxation, for which purpose no very satisfactory means are as yet known to us, but perhaps the best are the inhalation of chloroform and the use of Siegle's atomizer, interrupted occasionally by the employment of an emetic.

3. In those cases in which œdema of the aryteno-epiglottidean folds is the proximate cause of impending apnoea, the swellings should be reduced by the topical application of strong solutions of nitrate of silver, or by the laryngeal lancet.

4. And lastly, the expulsion of the false membrane from the wind-pipe, the performance of tracheotomy will very seldom be necessary; but if it is required from obstinate disease of the larynx, it will generally prove successful, in striking contrast to the sad results of the operation when performed while the trachea is lined with exudation.—*Glasgow Medical Journal*, Feb., 1867. p. 374.

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#### THE INOCULATION OF TUBERCLE,

The *London Lancet* gives the following summary of the important labours of the Commission appointed by the Academy of Medicine to investigate the alleged discoveries of Villemin in this sphere:

This Commission was composed of M. M. Louis, Grisolles, Bouley, and Colin. M. Colin read the Report in the name of the Commission and included in it an account of several experiments by the Commission, which yielded results essentially similar to those obtained by M. Villemin. At the very outset of the Report there occur words which indicate the opinion of the members of this Commission on the main conclusions of M. Villemin. They give him credit for throwing light by physiological experiment on medicine, and say that the two memoirs presented by him to the Academy, on the 5th of December, 1865, and on the 30th of November last, reveal to us a fact of the highest interest—the transmission of phthisis by the inoculation of tuberculous matter. Their endorsement of M. Villemin's main conclusions is all the more effective from the fact that they do not hesitate to say that in one or two minor points he has come to hasty or incorrect conclusions. Two of these are in particular pointed out. First, they aver that M. Villemin was inexact in believing that sheep were insusceptible of tuberculosis, and that he too quickly concluded that the tubercles in the cow and those in man were of the same nature. M. Colin, as we have said, gives in the Report an account of the various experiments with the inoculation of tubercle by the Commission. Some of these failed; but the most of them succeeded perfectly. The failures were suggestive to M. Colin. He procured from M. Villemin a specimen of the tuberculous matter used by him. This included fragments of various kinds of tuberculous matter, old and recent, transparent and grey, firm and softened. He reduced all into a homogeneous pulp, and inserted portions of this into four rabbits at the base of the ear. Only one of these animals became affected with tuberculosis. M. Colin accounts for the failures principally by the fact that in examining two of the animals he found that the tuberculous matter inserted had become encysted at the seat of the wound, and so had become protected from absorption. In his subsequent experiments he was careful to go deeper and to spread the matter over a larger surface, and so he obtained success. These later experiments are valuable, not only as additional to M. Villemin's, but as made with every distinct form of tubercle used separately. Fine miliary tubercle, softened caseous matter, hard tubercle taken from an ox affected with the calcareous form of phthisis, yellowish tubercle in course of the so called regressive metamorphosis; and lastly, slices of a tumor full of strongles taken from a sheep affected with verminous phthisis, were all used, and all with similar results. We shall give as a specimen M. Colin's account of his first experiment. It illustrates not only the phthisical result obtained, but the effects produced in nearly all M. Colin's experiments on the lym-



phatic vessels and glands, and upon which he finds important conclusions :

“ A rabbit was inoculated with fine miliary granulations taken from a cow. He died, with all the appearance of phthisis, after two months and some days. The lungs were strewed with tubercles ; the liver, the spleen and one of the kidneys presented tubercles ; the glands of the neck and of the ear were swollen. Finally, from the point where inoculation had been effected, there proceeded white tracks, like farcinous cords [*des trainnes blanches, semblable ci des cordes farcineuses*].”

The glandular results are thus described in the second experiment. The rabbit had become tuberculised after the inoculation with softened caseous tubercular matter :

“ The inguinal glands, the axillary, the prepectoral on the side of inoculation, were hypertrophied and penetrated with matter of caseous aspect.”

The principal conclusion to which the various experiments led, is thus stated in the report : “ Thus, in all the degrees of its evolution, and in all its forms, tubercle comports itself in an identical manner.”

An interesting question is, the extent to which the contagious or inoculable character of tubercle is possessed by it exclusively. The experiments of the Commission show that a great variety of substances, under the generic name of “ tubercle,” have the quality of reproducing themselves in the central organs ; and they go to show that all inflammatory products have a similar tendency, including pus. The exact relation of tubercle to inflammatory deposits is yet a moot point amongst pathologists. All that can be said here is, that experiment shows that there is a considerable similarity between the department of tubercle and other inflammatory products when inoculated. According to M. Colin, the other inflammatory products act in the same direction, but not to the same extent, as the grey granulation. “ *Les produits morbides presentes comme des resultats d'inflammation ou de regression n'agissent pourtant pas au tant que la granulation grise.*”—*Med. & Surg. Reporter, Philada.*

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#### PERMANGANATE OF POTASH IN ACUTE RHEUMATISM.

By C. M. FENN, M. D., of San Francisco.

An extract from a clinical lecture delivered by Dr. James F Duncan at the Adelaide Hospital, some time since directed my attention to the use, among other remedies, of permanganate of potash in the treatment of rheumatism. I promised myself to make trial of the remedy at the first opportunity. Regarding the so-called chemical theory of the

etiology and pathology of rheumatism as, at least, the most plausible; and believing the efficacy of the other salts of potash in that disease to be largely due to the measure of oxygen which they contain, it seemed to me that in this salt we possessed a remedy admirably adapted to meet all the indications; and that from the fact of its containing so large a proportion of oxygen ( $\text{KO}, \text{Mn}_2 \text{O}_7$ ), and holding the same in such loose affinity, we should be enabled most speedily to promote the transformation of lactic into carbonic acid. In apparent corroboration of this view, I append the record of three cases.

*Case 1.* Mr. S——, salesman, æt. 33, after some unusual exposure, was prostrated by a severe attack of rheumatism. Upon an examination of his case the new remedy recurred to my mind. But the urgency of his symptoms was such, that it seemed preferable to make use of the medicines we had some confidence in, rather than to fly to others we knew not of. He was, therefore, ordered a preparation of potass. iodid; vin. colch. sem., etc., and submitted to a hypodermic injection of morph. acetat. one-fourth of a grain. To modify the exhausting and troublesome perspiration, he used on the third day, a vinegar vapour bath, with no appreciable relief. On the fourth day, discovering no change in his condition, other than might be ascribed to the daily hypodermic injections, I requested him to suspend the mixture and gave half a grain of the permanganate, three times a day. At my next visit on the following evening, I was surprised at the marked abatement of all the symptoms. The tongue was quite clean, the perspiration no longer excessive or disagreeable, and the pains were so far relieved as almost to preclude the continuance of an anodyne. His convalescence was now constant and rapid, and on the tenth day from the commencement of the attack he was again at his post.

*Case 2.* Mrs. G.——, æt. 35, of full habit and previously healthy, was attacked during the passage from New York. There had been a considerable amelioration of the more violent symptoms at time of her arrival here; but some of the larger joints were still tumid and painful. The permanganate of potash was resorted to, and in a few days she was able to attend to her household duties.

The third case I regard as, in some sense, a crucial test of the remedy. The patient, a man in middle life, had long been a victim to chronic rheumatism: some of the joints had become permanently distorted with tophaceous deposits, and the malady was so far incurable. This was varied, however, at intervals of two or three months, with acute attacks which apparently resisted all the usual remedies, and expended their force in from two to three weeks. I had previously attended him in several of

these attacks, and found the common remedies, colchium, acetate of potash in large doses, etc., of but little avail. I now put him on the permanganate, and had the pleasure of seeing him on the street in seven days.

I find the raspberry syrup to be the best menstruum, as it disguises the somewhat nauseous taste of the medicine completely.—*Pacific Medical and Surgical Journal*.

## TWO CASES OF CHOREA TREATED EFFICIENTLY WITH SULPHATE OF MANGANESE.

By WILLIAM A. HAMMOND, M. D., Professor of Diseases of the Mind and Nervous System, in the Bellevue Hospital Medical College, &c.

Having previously used the preparations of Manganese in the treatment of chlorosis, and latterly the compounds of this substance and iron, recommended by MM. Petrequin and Buisson, and imported by E. Fougere, in the same affection with most excellent results, I was induced to try the manganese in two cases of chorea which have recently been under my charge.

J. F., a young girl, æt. 14, was brought to me July 6, from Illinois, suffering under a very aggravated form of chorea. So violent and extensive were the convulsions that the child was unable to walk, the legs being thrown about in the most disorderly manner, or to do the most simple act with her hands. The muscles of the head, neck, and face were likewise in tumultuous action, and occasionally words were ejaculated against her will. The appetite was good.

The disease had ensued after a severe attack of acute rheumatism, and had lasted over four months, when the case came under my care. Menstruation had begun at 13½ years, and was regular, although the general condition of the child was somewhat chlorotic.

In the treatment iron had been first employed, but had induced headache and gastric disturbance; arsenic and strychnia and galvanism had also been used without any successful effect upon the disease.

I prescribed the following mixture: Manganesii sulphatis, 2 drachms, aquæ syrupus zingiberis, of each 1½ ozs. M. Dose, a teaspoonful three times a day. Five grains of the sulphate of manganese were thus taken at each dose.

Under its use the child rapidly improved, and on the 22d ceased taking the medicine, being entirely well. The complexion had lost its paleness and all convulsive movements had ceased.

August 2. F. C. S., a boy, æt. 15, from the interior of Pennsylvania, was brought to me by his mother to be treated for chorea. In this case

the convulsions were limited to the right side of the body, and consisted in certain regular movements of the arms and legs, which came on every two or three minutes, and lasted half a minute or more. There were no convulsive actions of the muscles of the head, neck, or face. The arms were thrown out violently from the side, and as violently brought back; at the same time the thigh and leg were alternately flexed and extended rapidly.

Upon careful examination I ascertained that there was considerable loss of power and sensibility on the affected side.

The boy's general health was bad. He was anemic, indisposed to either mental or physical exertion, and had a rapid and feeble pulse.

The affection had ensued from fright caused by his seeing a schoolmate fall from a height and injure himself severely.

All the ordinary remedies for chorea had been used without material benefit, and when the case came under my observation the disease had lasted somewhat over a year. I directed the use of the mixture previously mentioned, and likewise Fougere's iodinised cod-liver oil. No other medicines were employed under this treatment, the boy began at once to improve, his face became ruddy, his appetite greatly improved, and his pulse rose in force whilst it declined in frequency. The convulsive movements ceased in his leg at the end of a month, at the same time greatly diminishing in the arm. On the 15th of October the power of the will was entirely restored over all the previously convulsed muscles, the strength was regained on that side, and the general health was as good as could be desired. The administration of the medicines was now stopped and the boy returned home.

I have now a case of chorea in an adult under treatment, in which I am using the carbonate of iron and manganese pills of M. Burin de Buisson, with excellent prospect of effecting a complete cure, although the affection has lasted for many years.

[From the investigations of M. E. Millon, quoted by M. Robin, in his recent work *Sur les Humeurs*, it appears that the average quantity of manganese existing in the blood of an adult amounts to about 10.5 grains, the quantity of iron to about 16 grains. From this the inference will be at once drawn that manganese has the same therapeutical rates as iron.

The association of chorea and rheumatism, noticed in the first of the above, is discussed in Trousseau's Clinical Medicine. Dr. Bazin gives the credit of its first observation to Dr. Richard Bright.] *New York Medical Gazette.*

ON THE DIAGNOSIS OF OBSTRUCTIVE MITRAL BY A PRESYS-  
TOLIC BRUIT.

By Dr. PEACOCK.

[The following is an extract of a paper read by Dr. Peacock before the Hunterian Society.]

Dr. Peacock stated his former disbelief in the existence of any such murmur, except, it might be, in rare cases, but subsequent inquiry had led him to modify his views to a considerable extent. He narrated a case in which he had been able to make out a distinct presystolic bruit during life, and on examination after death he found well-marked mitral constriction, together with vegetations on the auricular surface of the valves. In the lungs a number of apoplectic kernels of various ages were discovered. Dr. Peacock had found these bruits to exist either with or without systolic murmur, but, in some cases, and especially when associated with the last, their detection was very difficult, and the diagnosis of mitral obstruction by physical signs alone uncertain. It might, however, be made out by the fact that the burden of the work was thrown upon the right side of the heart, which beat louder than usual, by the tremor which sometimes accompanied the contact of the apex of the heart, with the side, and by the pulse, which, as the left ventricle was unaffected but the supply of blood limited, was small and quick, but regular. The condition of the lungs is also different; the onset of the disease being more gradual than in regurgitation, the pulmonary capillaries have time to distend; hence the dyspnoea is less. There is less general venous engorgement, so that there is less dropsy, and that mostly in the lower extremities; the face is also usually paler. The prognosis is better than in mitral regurgitation, although in neither did he consider it so bad as was sometimes stated, and in both it was better than in aortic regurgitation. The treatment of the two mitral affections was rather different. In the case of obstruction, the patient was usually anæmic, and the circulation was with difficulty maintained; therefore tonics, especially chalybeates, were specially indicated. In regurgitation, again, the symptoms were generally more urgent, and the accumulated fluid had to be removed by diuretics or cathartics. Some patients lived a very long time with contracted mitral, especially young people who might have been born so, or acquired the condition soon after birth. As for himself, he was inclined to believe that rheumatism as a cause of heart complaint had been over-estimated.—*Medical Times and Gazette*, Feb. 3., 1867, p. 131.

# Canada Medical Journal.

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MONTREAL, JANUARY, 1868.

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We have more than once in the columns of the *Canada Medical Journal*, complained of the almost utter uselessness of the mortuary statistics of the city of Montreal, and called upon the city authorities to enforce section 4 of the By-Law concerning Burials. This section provides that no keeper of a cemetery shall permit any interment to take place without previously receiving a certificate signed by the attending physician, stating the name, apparent age, birth place, date and place of death, and the disease of which he or she may have died. The medical gentlemen who hold the office of Public Vaccinators, for three consecutive years, in their annual report, called the attention of the Council to the existence of this By-Law, and urged its enforcement, as a means of giving increased value to the mortality statistics of the city. Their appeals and our remarks seemed, so far as we could judge, to be useless—for no action was taken in the matter. It was, therefore, with something like astonishment that in the *Montreal Gazette* of the 11th of December last, we read an advertisement dated at the City Hall the previous day, and signed by the City Clerk, giving public notice that on and after the 1st of January, 1868, Section 4 of the By-Law concerning burials would be rigidly enforced. We know not to whom we are indebted for the sudden awaking which has caused the enforcement of this By-Law, but most assuredly he deserves the thanks of the entire community. If the By-Law be rigidly enforced, as we sincerely trust it will, a value will in a very short time attach to our mortality returns, which they have not previously possessed. But to enable us to reap all the benefits which we can, from this By-Law, we think the Council should take one other step. The closing paragraph of the By-Law states “that the certificate *may* be in the form specified in the said By-Law.” We fear that the word *may* will defeat, in a great measure, the proper working of the Law. Unless the City Council has

the form B. printed, and keep the profession supplied therewith, we are convinced that certificates will be handed in and accepted by the keepers of cemeteries, which are deficient in more than one particular. If this should occur, it will be seen at once that so far as giving reliable information, we would be little better off than before the enforcement of the By-Law. It may be argued that the profession will soon get used to writing out the certificates; such may be the case in some instances—but we feel convinced that printed blanks (which the corporation are bound to supply to every physician,) should be the only form of certificate which ought to be received and accepted. We earnestly hope that the active member to whom we owe the enforcement of this By-Law, will see the force of our remarks, and at once have the matter attended to.

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#### GYMNASTIC AND ELOCUTIONARY EXERCISES.

We have recently witnessed the exercises of the boys of our High School at a public exhibition, given by our young friends with the worthy object of contributing to the funds of the House of Refuge; and we were impressed with the health bestowing exercises of the gymnastic portion of the entertainment. Subsequently, Mr. Barnjum, the manager, gave a select exhibition of a young ladies' class, at which we were present. The movements were graceful and health invigorating, each muscle of the body was brought into play, and duly exercised. The class was composed of little girls ranging from 7 or 8 to 15 years of age. The various exercises consisted of walking, running, dancing, the dumb-bell exercise and the exercise of the rings, all being accompanied by appropriate music. These various exercises are based on those first introduced by Ling of Stockholm, and are calculated to be of the greatest benefit to muscular development. It is a fact worthy of note that many of the ailments of the body proceed from a system of mental cramming of the young at the expense of muscular energy. Youth is the season of growth both of body and mind, and so sure as mental training is forced, and bodily exercise neglected, there will result disease of the neglected body in some form. In the education of youth it is desirable that harmony should be consulted, by this we mean that harmonious development of the body with the intellectual faculties, each depending on one another, and each equally essential to perfect and uninterrupted health. Many of the ailments of the young, especially spinal curvatures, are due to a want of tonicity in those muscles which are intended to support the weight of the head and upper extremities. If these muscles are neglected as they too often are, by permitting young children and more

especially young girls to be content with the amount of exercise they receive by a walk or drive to and from their school, it is almost certain to result in disaster, or at best, in feeble development which may and often does end in serious and permanent injury. What would be thought of the stock breeder who fearful of his young animals breaking their legs or getting into some mischief in the field, was content in driving them to water and back again to be shut up in a close stall for the rest of the day? Man is, after all, but an animal, subject to the same laws and having the same beneficent hand to guide him, and it is absurd for him to carve out a way of his own, as regards the nurture of his offspring, at once in direct violation of the most apparent truths. We regard exercises similar to those which we witnessed the other evening, of greater importance in a moral sense, as it will be found that those who freely indulge in athletic sports, are less liable to give way to temptation and seek amusement in the various debasing passions of which man became heir at the fall. It is aptly said by Rousseau that "the weaker the body the more it encumbers and weakens the soul." Gymnastic exercises ought to be an essential and indispensable part of education for both sexes; in speaking of gymnastics it is not to be understood we refer to the converting oneself into a whirligig or catherine-wheel, these are feats which answer for the sterner sex, but free and beneficial exercises can be indulged in without any apparatus whatever.

The benefits to be derived by a steady course of exercise are incalculable, but to be indulged in at all it is necessary that a competent instructor should be in attendance.

These benefits may be thus hastily summed up.

Frequent exercises render the muscles firm and increase their developments; they render more active the general circulation, so that each portion of the body receives its due amount of nourishment.

They render the muscles more subservient to the will, so that the movements of the body are more graceful, the various extremities acquiring a pleasing firmness, steadiness and dexterity in motion.

Gymnastic exercises develop the capacity of the chest, giving increased capacity for the free play of the lungs, they tend to the symmetric development of the body as a whole, so that no one portion increases in size at the expense of other parts.

They prevent occurrence of obesity, which is an evidence of a feeble state of repair of certain portions, most frequently the result of excesses in alimentation.

The healthful tone of the skin is promoted by free gymnastics, thus rendering it less liable to the injurious influences and alternations in temperature—a common source of ill health.



And above all they give to the individual that self reliance which should be possessed by each one, so that under trying circumstances, or in the hour of danger, resources are at hand by the exercise of which life or limb have been frequently saved. These, then, are a few of the benefits to be derived by a steady perseverance in muscular exercises, and we can heartily recommend to the heads of families the advisability of permitting their children of both sexes to seek the health invigorating exercises which are to be derived by attendance at the gymnastic institute of Mr. Barnjum.

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THE TORONTO HOSPITAL.

1868

7 We regret exceedingly to notice the closing of the above valuable institution, which for some time has been struggling hard to keep its doors open. We are not thoroughly acquainted with the various causes which have led to this event, but we must say, we have been struck with the somewhat large amount which it seems to cost to maintain each patient. Toronto cannot afford to be long destitute of an Hospital, and when its doors are again re-opened, we trust it will be under auspices which will ensure its successful conduction.

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TO OUR SUBSCRIBERS.

x It is the intention of the Publishers to send in this number of the Journal, accounts to all of our subscribers who are in arrears for their subscriptions, and we earnestly hope that there will be a very generous response. There is a very considerable amount owing, and its payment would enable us to at once liquidate all claims against us. This is the season of festivity, when the heart is said to open more readily than at any other time, and we trust all who owe us will remember that we have to pay the printer.

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MONTREAL DISPENSARY.

Dr. Boyer and Dr. G. E. Fenwick have been elected consulting physicians to the above Institutions. Dr. Angus McDonnell and Dr. Sewell have been elected by the Corporation of the Montreal Dispensary, members of the attending Medical Staff.

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TO CONTRIBUTORS.

We are desirous in future to bring out the Canada Medical Journal on the first of the month. Contributors are requested to send contributions intended for the ensuing number not later than the 15th day of the month.