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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.

V.

TREATMENT OF JOINT DISEASES—*Continued.*

In the third stage of joint diseases we have still more to deal with both extensive and continued changes in which mostly all the component parts of the articulation are compromised. In whatever tissue the malady might have started, in its progress it has comprised the rest. Thus in synovitis, the articular cartilages have been exposed to constant maceration of pus, and have suffered those elementary metamorphoses to which I invited your attention on a prior occasion. And when at last they drop off in rags and fragments, the osseous surfaces of the epiphyses are in turn subjected to the same obnoxious actions.

With the progress of their disintegration, the periarticular structures become more or less invaded and gradually manifest conditions very similar to those of white swelling. If, on the other hand, the primary affections of the periosteum and epiphysis proceed to the perforation of the articular cavity, it is self-evident that its lining must suffer appropriate alterations. The third stage is consequently a disease of the entire articulation, and its treatment a formidable object of the healing art.

Notwithstanding the undeniable difficulties of these affections, quite a large proportion of the patients recover with or without aid, and sometimes under domestic surroundings of the humblest kind; whereas others run their course to destruction in spite of therapeutic efforts and hygienic advantages. The reason of this difference is not always apparent. Occasionally the abscess determines where the joint gives way to the centri-

fugal action of the pus. If, for instance, the pus escapes through the floor of the acetabulum, it spreads over the internal surface of the pelvic bones, by detaching the periosteum, and may eventually make its appearance below Poupart's ligament, or through the ischiatic notch, or between the gluteal muscles. Irrespective to the lesion of the hip joint itself, this condition alone would constitute a frightful disease, sure to terminate disastrously. Similar complications may occur with other joints and aggravate their respective diseases.

The indications of treatment diversify with the complications presenting. Generally speaking the same therapeutic rules come into play at this juncture which have been already detailed. *Rest* and *position*, exercise, even in these aggravated cases of joint disease, their beneficial influence, but the appliances should be portative so as to allow the patient the conditional enjoyment of open air perambulations. Of these the patient is greatly in need to sustain his constitutional standard. The appliances should, moreover, be such as would not be easily saturated and soiled by the discharges. James Startin's suggestion to impregnate the bandages and splints of felt, with an equal mixture of melted paraffine and stearine, for the double purpose of stiffening and rendering them watertight, is certainly deserving of attention.

I have not as yet employed this material, but it seems to me preferable to varnish coating heretofore used.

It is self-evident that the fixture of the joint is an essential disideratum to prevent the corroded surfaces of the epiphyses from grinding upon one another, and thereby give rise to pain and renewed irritation.

The fistulous openings should be maintained and their drainage kept free. This is, however, no easy task, because their sinuses are very circuitous, and dilatation by laminaria or compressed sponge, impracticable. The laying open of the tracts by the knife is mostly of but temporary assistance, incurring loss of blood which patients can scarcely bear. The employment of potassa c. calce (Kirkpatrick) to open direct communication between the articular cavity and the surface, deserves surgical consideration.

Abscesses frequently form in the circumference of joints. Those which are attended with great swelling, pain and fever, and indicate the efforts of nature to eliminate structural detritus, should be promptly and fully opened; those which appear more or less remote from the articulation and cause no local or general inconvenience (cold and consecutive abscess: abscessus congestionis) may be ignored as long as they do not raise alarm by their size and pressure upon important parts. Their contents readily undergo fatty degeneration, followed by gradual resorption. But if they

require opening it should be done by trochar with the exclusion of air The knife should only then be employed when air has entered the pyogenic cavity, and decomposed its contents. In this way septicæmia with its fatal consequences can be averted.

With a view of bringing about a more decided detachment and diminution of the structural detritus, various means have been recommended. John Gay insists upon free incisions into the affected joint; others allege they have successfully employed the seton, and Kirkpatrick favours an opening with his escharotic into the joint and uses it freely upon the osteoporotic substance; and finally exsection. The two former apply only to superficial and accessible joints, and all four are necessarily followed by copious suppuration. They are therefore but available in well preserved constitutions, and in superficial caries of the articular faces.

It is obvious that no debilitated patient can pass unharmed through so consuming an ordeal. As to exsection I beg to submit:

I. That if a thick slice is removed from the epiphyses, we approximate the cartilaginous disks fastening them to the shaft, which may thus become involved, protract and even prevent the reunion.

II. That if we comprise the cartilaginous disks in the operation, the extremities become so much shortened as to render the result nugatory, and the artificial leg preferable.

III. That the exsection of single tarsal and carpal bones is but very exceptionally attended with good results on account of the existing intercommunication of the tarsal and carpal joints.

The arrest in the growth of extremities operated upon by exsection, as observed by Kœnig of Hanau,* is probably founded on error and should not prevent us from resorting to so legitimate an operation in its proper place. The growth is impeded by the previous disease, a fact most probably ignored by that author.

From these remarks it appears that exsection, as well as amputation, has its defined therapeutic value, and one cannot well be substituted for the other without risk and injury to the patient. I have nothing to do with the technicalities of either operation at this juncture.

Permit me, however, to tender my advice in reference to two points in exsection.

I. Before proceeding with the operation, overcome, if possible, the existing malposition by dividing the contracted muscles. I have mostly taken these preparatory steps and thereby secured perfect control of the subsequent position of the extremity. I owe, perhaps, to the observance

* Archive of Clinical Surgery, Berlin, 1867.

of this preliminary measure, the happy results that have attended my operations, more particularly at the knee joint. Whereas some of my surgical friends who neglected it, had great trouble to maintain position, and lost their patients. The supposition that the shortening of the limb is sufficient to relax the contracted muscles, proved, in their respective cases to be, erroneous.

II. I remove with great care and accuracy as much of the synovial membrane, serous slides and bursæ (Bilroth) as are extant and exposed to air, for they will suppurate and materially retard union.

At this juncture the debilitated state of the constitution deserves the closest attention. No medication will, however, be of service as long as the local troubles are not mitigated by a proper course of local treatment.

The amelioration of the articular disease is the most direct way of relieving constitutional reaction. Nevertheless, quinine, iron, cod liver oil and sedatives may be needed to control fever, pro note hæmatosis, supply an easily digested nutriment, and secure repose and immunity from pain.

In *morbus coxarius* the principles of division of the morbid periods rest on a different foundation, and accordingly the third stage of that disease is determined by the spontaneous disruption of the articulation and a peculiar malposition of the affected member.

It is of course necessary to ascertain the anatomical and clinical character of the existing malady, to determine the plan for therapeutic action.

If the inflammatory character of the disease still prevails, the appropriate means will readily suggest themselves from preceding remarks; and as readily if caries has ensued. The contracted muscles require division to allow the reduction of the existing malposition. Next, the articulation should be kept at rest by means and appliances with which we have already become acquainted; irrespective to the prevailing state of the joint; being equally beneficial in arresting articular inflammation as preventative to the irritative grating of carious surfaces upon one another.

If anchylosis should thus ensue, it will take place in the most desirable and useful position of the extremity.

Locomotion of the patient renders the use of crutches indispensible, the weight of the body will aggravate the local trouble. Only when the caput femoris shows disposition to slide up and backwards, does extension become imperative. My portative apparatus (fig. 6) answers the indications.

When, however, no improvements in the pathological condition of the joint follow this treatment, when caries and suppuration continue, and

threaten the patient with hectic, then the exsection of the head of the femur is justifiable and appropriate.

Fortunately the rational and successful treatment of morbus coxarius, lessens the exigency of that operation, and to this fact we may ascribe the present rarity of its performance.

Notwithstanding the avowed aversion of French surgeons to this operation, it cannot be denied that it has furnished a fair statistic of success, and that it has saved the life of many a patient, which otherwise would have been lost.

Of the seventeen partial exsections of the hip joint which I have performed in the course of my surgical career, nine were attended by recovery and two are still under treatment.

The limbs have been shortened from one to three inches.

With the exception of one case, the sclerotic tissue formed between the acetabulum and the shaft of the femur, permitted a moderate mobility and is strong enough to bear the superincumbent weight of the body.

That case concerns a young lady upon whom I operated in the year 1856 when she was nine years of age. Owing to monstrous obesity, the intermediate substance has never become firm. I have seen this patient but lately, she has grown to be a handsome and healthy woman; and I have again had an opportunity of examining into her condition. When she stands on her right limb, the mere weight of her left suffices to bring it to its full length. But if she rests upon the latter, the intermediate substance bends outwards and allows the shaft of the femur to come in contact with the acetabulum, by which the limb is three inches shortened. In this positon she can bear the entire weight of the body upon the affected side. My apparatus gives her the desired support for locomotion, and with it her gait is easy and graceful.

I apprehend that some of the exsections which I have performed, have been under rather unfavourable circumstances, and yet withal the conjoint result is anything but discouraging; some of my patients died of other diseases (two of laryngeal diphtheria, and one of cerebral meningitis) evidently connected with the impoverished state of their respective nutrition.

Though I am not a great admirer of exsection of the hip joint, nevertheless I honestly believe that its performance when warranted by the anatomical changes of the joint, bids as fair a chance of success as the exsection of any other joint. It is scarcely necessary to remove carious portions of the acetabulum unless very accessible, for the nutrition of that portion of the pelvis is unimpaired, and inasmuch as it remains accessible to local appliances, it becomes soon repaired.

In those patients who died after the operation, I invariably found the acetabulum restored to its integrity.

VI.

Treatment of the Sequelae of Joint Diseases.

The most judicious and diligent treatment succeeds but rarely in restoring the affected articulations to a perfectly normal status. There remains generally some tenderness of the articulation, which shows itself after a liberal use, and on changes of the weather. Besides a certain stiffness and dryness may continue a long time after the disease has become completely extinct.

The treatment of this symptom may be fulfilled with aromatic lubrications, cold and warm douche, flannel bandaging, the longer use of "sole baths," which in Germany have acquired great reputation in these troubles. More than all, *passive* and *active exercises* are best calculated to give permanent relief. Even slight malpositions may be gradually overcome in this way. There are quacks in every country who acquire reputation and lucre from the treatment of these articular impediments, and surgeons may learn from them the undeniable benefit of the use of apparently so insignificant remedies as lubricating frictions and passive exercises. I have myself to acknowledge some practical information from this rather turbid source. Having straightened the contracted knee of a lady patient, and repeatedly moved the same under chloroform without succeeding, I at last gave it up. After some months I again met her, with a perfectly flexible and useful joint, and learned that a female quack had restored her extremity to usefulness by persistent and daily lubrications and passive motions. In the beginning, the treatment had been very painful and almost unendurable; but gradually the pain had subsided. I need not to assure you ,gentlemen, that this lesson was never forgotten by me; and I am anxious to impart its benefit to you. If you have no time yourself, I would advise you to employ menial hands, but do not give quackery a pretence to superior skill and practical efficiency.

The passive motions are best commenced with the assistance of chloroform, which will enable us to overcome impediments, without any hazard whatever to the patient. Tenderness of the joint may follow, but will subside with a day or two of rest. The passive motions should then be renewed with or without chloroform, as the case demands, and should be carried on until the desired results are achieved. The patient may greatly assist our efforts by appropriate movements.

If however, the previous treatment has been inefficient and regardless

of consequences, the patient will present more aggravated conditions. The very best treatment is no sure protection against *an obliteration of the articular cavity; but malposition of the joint, may and should always be prevented.*

Anchylosis, forms then, another object of after treatment. Surgery discriminates two forms; the false or fibrous, and the true or bony, to which might be added a third, by bony bands or osteophytes. The first consists of partial or total connection of the articular faces by sclerotic tissue, the second in the bony interposition, and the third forms a partial osseous involucrum of the joint. The false anchylosis results from synovitis, both primary and consecutive; the true from penetrating wounds and caries of the articular faces; and the last from suppurative periostitis.

There is always more or less mobility in false anchylosis, but there is no vestige when osseous material forms the connecting link. When muscular contractions existed previous to the agglutination of the articular faces, the mutual anatomical relations of the latter are invariably changed.

The treatment of anchylosis has always been a cherished object of surgery from Hippocrates down to the present time. Success is, however, but of recent date.

Gradual extension for the purpose of overcoming fibrous anchylosis is an old surgical proceeding and has from time to time found advocates in the professional ranks. Mechanical ingenuity has found a fruitful field for display in the construction of all sorts of instruments; the latest method introduced is that by pulley and weight.

The usefulness of gradual extension in the treatment of fibrous anchylosis, is for obvious reasons but *limited* and *conditional*, and the attempt to substitute the same for *brisement forcé* is a failure.

The anatomical conditions resulting from joint diseases are but exceptionally amenable to that method: it is tedious at best, and frequently so *painful* as not to be borne by many patients. It's claimed superiority is, moreover, anything but conclusive. Nevertheless we meet with cases in which the elastic resistance of intra-articular adhesions and of the capsular ligament can be but overcome by gradual and persistent extension, and in these it seems to be the only remedy. These conditions we recognize only after unsuccessful attempts at *brisement forcé* and the latter has therefore to precede.

Such cases may be rare and constitute but a small fraction in statistics, but they do exist, notwithstanding their denial.

I possess two specimens of this very character, in my collection, both derived by amputation of the thigh. One belongs to a lady who had

contracted fibrous anchylosis of the knee from rheumatic synovitis, aggravated by contraction of the hamstring muscles. Before coming under my charge, she had suffered *brisement forcé* without previous division of the contracted flexor muscles. Violent reactive inflammation of the joint followed the forcible extension, and the latter was too painful to be maintained. The integuments sloughed at the internal circumference of the articulation, and her constitution was so violently shaken that her recovery was placed in jeopardy; and when, after many months of severe suffering, she had regained her strength, she was to all intents and purposes in *a worse condition* than before the operation. Moreover, the leg was in so high graded a state of hyperæsthæsia, that she could not bear the slightest touch, and the thickened epidermis was peeling off in large patches. Although desirous of amputation, I deemed it my duty to try once more *brisement forcé* Assuming that the omission of myotomy was the cause of the disastrous failure in the first instance, I divided the contracted hamstring muscles previous to the operation. I met no difficulty in breaking down the intra-articular impediments, but I exerted my entire physical strength in vain in attempting to fully extend the leg. I succeeded, perhaps, to an angle of 160° but could not keep the leg in the same. It would jerk back in an instant as soon as I relinquished my efforts.

Applying in the usual manner, longitudinal adhesive straps, and fastening to the same a weight of fifteen pounds, I tried gradual extension over a pulley. No re-action ensued. The limb yielded but very sparingly to extension, and the improvement during the following fortnight was just noticeable. A second effort was then made terminating as before. I was certain that the muscles had no part in the resistance, having been thoroughly divided. The patient lost all confidence in her eventual relief, and insisted on amputation, which I dared not refuse; for irrespective to the deformity, the hyperæsthæsia alone rendered her condition insufferable. The examination of the specimen revealed the fact that the resistance was exclusively due to the posterior wall of the capsular ligament, which was greatly thickened and pervaded with copious elastic fibres. Even after I had cleared it of tendons, lateral and crucial ligaments, it was impossible to straighten the joint.

The other specimen refers to a little girl eight years of age, who had two years previously acquired an affection of the knee joint through traumatic injury. When I took charge of the case I found her knee joint in an angular position and its mobility greatly impeded by intra-articular adhesions. There were some fistulous openings at the internal circumference of the articulation, at the bottom of which bare bone could be felt to a limited extent.

In attempting to perform *brisement forcé*, the resistance of the adhesions was very great, and though I proceeded with great care and precaution, I had the misfortune to produce diastasis of the femoral epiphysis. The limb was again placed in its original malposition and kept at rest, and well sustained by plaster of paris bandages. No trouble at all followed the unsuccessful attempt, and the epiphysis was in due time found firmly united with its shaft. Though I did not feel inclined to hazard another trial of the same kind, but was prevailed upon by the uncle of the patient, who is himself an esteemed physician, and by the family at large. You may well suppose that I was very timorous in the second attempt, and that I used no undue force. In fact the extension of the limb was effected by straight traction and without using the respective bones as levers. On this occasion I succeeded in opening the angle considerably, without being able to straighten the limb completely. But, as in the former case, there was an elastic resistance to contend with, which reduced the angle at once as soon as the tractions were slackened. Moreover the extension of the limb was accomplished at the expense of a shifting of the tibia backward on the femur, and a slight bending of the tibia and femur. There was no separation of the articular faces. Although I had again divided the hamstring muscles, and again allowed the limb to resume its old malposition, nevertheless the ensuing re-action was quite formidable. The patient being of a very delicate and nervous constitution, could not have endured without succumbing to the violence of the symptoms, and therefore amputation was resorted to to avert the fatal catastrophe. Happily, recovery ensued without any untoward occurrence.

In this specimen the resistance was due to the strength and elasticity of the intra-articular fibrous adhesions, and I was unable to overcome it by any means short of entire demolition of the specimen. In attempting to straighten the same, the epiphyses of both constituent bones were proportionately compressed and the shafts bent, whilst the anatomical relations of the joint remained unchanged.

It is very evident that from these and similar causes, the extension per force, is not always practicable, and there remains, consequently, a limited orthopaedic field for the employment of gradual extension.

When in London, I saw a young woman at the Royal Orthopædic Hospital, who had been successfully relieved by gradual extension, from a fearful distortion, caused by a very thick, and apparently unyielding cicatrix, the result of an extensive burn. Her chin had been literally drawn down and fixed to the chest. She was then still under treatment, but her head stood already erect, and most of its motions were free; the cica-

trix was soft and pliable. This startling result had been achieved by persistent gradual extension throughout three successive years.

The anatomical composition of scar tissue is the same which characterizes the fibrous impediments of my cases, and if the former can yield to persistent extension ,the latter likewise will.

In preferring this method in any given case, I should advise to remove all and every muscular resistance by previous division There are some authors, among whom Barwell occupies a prominent position, who oppose, for several reasons, this operation as unnecessary and objectionable. According to their reasoning the contracted muscles are in a state of clonic spasm, which will yield to persistent extension.

I have already exposed the fallacy of this opinion in another place, and proven by theory and practice the inefficiency of gradual extension, in as far as muscular contraction is concerned. But if it is impossible to extend them in more recent cases of joint disease, it is surely impracticable in protracted cases, and after the muscular tissue has been displaced by structural elements devoid of expansibility.

From my experience, gradual extension is absolutely dangerous, being apt to produce fearful and insufferable pain, and reproduce the original disease of the joint.

I am indeed astonished at the self-assurance with which Mr. Barwell claims invariable success. The field of his clinical observation must indeed have been very limited when he never met with cases in which gradual extension gave rise to serious troubles. All his arguments against the division of contracted muscles are, moreover, of a very insignificant nature. Mr. Barwell says the divided tendons of muscles do not readily unite. I deny this assertion as entirely unfounded; if the division is carefully preformed and the theca of the tendon respected, it will unite readily and form firm and reliable connection. My experience has been rather the other way, and therefore I have been occasionally compelled to re-divide the same structures.

Next, it is asserted that the divided muscle is so much shortened by the operation as to lose entirely its physiological office. However, how can the muscle lose a function which it does not possess ? The division of muscles which had not entirely lost their physiological expansibility, does not permanently destroy it; I have had plenty of proofs to that effect in my practice.

The fact is that most of these muscles are worthless before and after their division, because most patients content themselves with a straight and useful extremity, though the mobility of the interested joint may have been partially or totally lost.

The inefficiency of gradual extension has led to the adoption of a more efficacious and practicable method for the treatment of fibrous anchylosis, known as forcible extension or *brisement forcé*.

Some twenty years ago, Amussat called the attention of the Royal Academy of Medicine to the method of M. Louvrier, and caused a committee to be appointed to investigate its startling results. The report thus elicited from competent surgical judges, presented, that up to that time Louvrier had treated twenty-three cases of contractions of the knee joint; that he employed a rather clumsy and complicated apparatus by means of which he forcibly broke down all resistance and straightened the respective limbs; that the results were but imperfect; that no good form was obtained; that a few had been straightened perfectly and remained so; that in some, posterior subluxation of the tibia had been produced and that three patients had died from operative shock, purulent infiltration and pyæmia. Louvrier himself admitted, with laudable candour, the short-comings of his method.

In spite of the enthusiasm on the part of the younger members of the profession for the new method, it met with but a cold reception among the contemporaneous surgeons of note. But a low therapeutical estimate was put upon it, and at best it was pronounced a cruel measure worse than the trouble it was designed to relieve. Fergusson and Stromeyer were its most determined opponents and disposed of it in not very flattering terms.

If I do not mistake, Dieffenbach was the only surgeon of distinction who not only vindicated *brisement forcé* but had the courage to adopt it against all clamour. He, however, modified the proceeding by substituting the hand for the surgical rack of Louvrier, and included tenotomy and myotomy as preparatory measures.

In a comparatively short time this distinguished surgeon had operated upon 200 patients, and reports the general result in his work on operative surgery, to the effect that he lost but two patients from suppuration and pyæmia; amputation was required in one; in some the limb was improved to a moderate degree, in others anchylosis became re-established. A large proportion of the patients were materially benefited.

Some advancement has this method of treatment received at the hands of Professor Bernhard Langenbeck, of Berlin, but it should be remembered that he had a most powerful aid in chloroform. In his inaugural dissertation, on entering upon his professorship,* he pronounces gradual extension ineffective; the division of the contracted muscles, as perform-

*Commentatio de contractura et anchylosi genu nova methodus violentiæ ex tensionis ope curandis. Berolini, 1850.

ed by Dieffenbach, as superfluous, and even dangerous, by inviting the entrance of air and thus giving rise to suppuration. Louvrier's method is, according to him, too uncertain, and its results removed from the control of the surgeon. The technicism of Langenbeck conforms, in most points, with those of Dieffenbach. The results which Langenbeck attained up to 1853, are compiled in the inaugural dissertation of Philipp Frank.*

In carefully analyzing the results of Louvrier, Dieffenbach, and Langenbeck, and in comparing them with each other, it cannot be denied that Dieffenbach's were superior to Louvrier, and Langenbeck's better than his predecessors. But all of them are certainly imperfect, and by no means satisfactory. Louvrier caused, in three cases, considerable injuries to the knee-joint, and consequently lost them. Of what nature these injuries were I have not learned, nor the reason why they happened in three cases, and not in the remainder. Very likely that they were cases of true anchylosis, and that he fractured the bones, or caused diastasis of the epiphysis, or tore vessels or nerves. The subluxation of the tibia, in almost all the cases of Louvrier, must have been a great detriment to the final result of his treatment. For, in the first place, the posterior projection of the tibia must have, by necessity, compressed the popliteal nerves and vessels, thus materially interfering with the circulation and innervation of the leg. Again, the gastrocnemius was evidently put on the stretch, and the heel prevented from reaching the ground. Moreover, the contracted flexor muscles were so much irritated as to cause serious subsequent troubles. Dieffenbach's method was, therefore, a material improvement. In using *manual* force alone, he protected himself against the error of meddling with cases of true anchylosis, not amenable to brisement forcé, and by dividing the contracted muscles he relieved the patient from the serious consequences appertaining to undue extension. Lastly, in breaking the anchylosis up, by alternate flexion and extension, he obviated subluxations of the tibia. The real merits of Louvrier or Dieffenbach for the advancement of this province of orthopædic surgery are, in my humble judgment, obviously greater than those of Langenbeck. The method of the latter is essentially that of Diffenbach deprived of the benefit of tenotomy, but favoured by chloroform.

I have the most unreserved appreciation of the great talents and diligence of Langenbeck, but I appreciate truth and clinical facts still higher. About 600 cases of affection, contraction, and anchylosis of the knee-joint have given me ample opportunity for most thorough clinical observations,

* De contractura et anchylosi articulationis genu et coxæ; Berolini, 1852.

and entitles me to a participation in the settlement of the important question which is still being discussed by the highest scientific tribunals of Europe, before which Langenbeck maintains his former position.

On the feasibility of *brisement forcé* we all agree. Its superiority over progressive extension can no more be questioned, and its former opponents have been effectually silenced by the overwhelming results of that practice. It has also been clearly demonstrated that the hand is a better mechanical adjuster than the lever and the screw. But for the introduction of anæsthetics, more especially of chloroform, the operation would have been of little practical value. The pain attending it is severe enough to terrify the boldest patient and surgeon. The subsequent sufferings it entails, and the uncertainty of its success, would have driven it again into oblivion. Chloroform and tenotomy assure the future of *brisement forcé*. The former renders it perfectly painless, the latter protects against consecutive effects, which are worse than anchylosis and the contraction of the knee-joint together. I do not dispute that in some instances, simple extension will suffice to overcome, permanently, a moderate reflex contraction. Further, I have observed that a weight of a few pounds fastened to the extremity for a few days will have the same effect. But a high degree of muscular contraction can be subdued by division alone. The name of Langenbeck was sufficient inducement for to follow his directions..

I have tried his method in quite a number of cases, and succeeded, in most of them, in extending the extremity, but as soon as the anæsthesia subsided, the muscles commenced contracting again, or, if prevented therefrom by mechanical restraint, an intense suffering ensued. There are but few maladies that cause so intense agony, and prostrate the constitution in so short a time, as the persistent extension of contracted muscles. I remember, among several cases, particularly one of a little boy, who was brought on from Montgomery, Alabama, with a contraction of the knee-joint. The original disease, synovitis, had subsided two years before. The joint was quite well, and there was no pain felt either on motion or pressure. Moreover, the mobility of the joint was not materially disturbed beyond the impediment of the contracted flexors Under chloroform only the biceps muscle felt tense, and I divided it. I then easily succeeded in extending the leg, and in securing its position in a straight splint. The anæsthesia had scarcely passed off, when the patient began crying loudly, and very soon the articulation became tender and distended. Inflammatory fever set in, with a pulse of 150. The strongest opiates, the most active and persistent general and local antiphlogistics made no impression whatsoever. The paroxysmal pains

suggested to my mind their specific character. On relieving the limb from its restraint, it immediately bent. This was another indication in the same direction, and yet the tension of the remaining undivided flexor muscles was so trifling as scarcely to deserve notice. On the sixth day after the operation, the joint was greatly distended and fluctuating, without the slightest sign of amendment. At that juncture I again placed the patient under chloroform, when again all muscular tension vanished, and I had to wait for the subsidence of anæsthesia in order to mark the tendons to be divided. What sedatives and the whole antiphlogistic apparatus failed to effect, *tenotomy* did. Rest immediately ensued therefrom. From that moment improvement commenced, and eventuated in perfect recovery. I could adduce several instances of the same striking and conclusive nature. But one will suffice to illustrate the importance of tenotomy in the treatment of the deformity under consideration. I shall now proceed to delineate the plan which I have adopted, and which I have reason to believe is the mildest, the safest, and certainly the most effective. First, be certain in the diagnosis. Fibrous anchylosis may be easily recognized, for there always remains a moderate degree of mobility at the joint; even osteophytes are not incompatible with mobility, more especially when they arise from one bone, and do not firmly connect with the other. But if both bones are united by osteophytes, there is nothing left of mobility, and in as far as the latter is concerned, there is no symptomatic difference between a true anchylosis and that caused by osteophytes. The previous history of the case alone can give you a clue as to the nature of the anchylosis. From the preceding remarks you may be led to expect osteophytes from previous periostitis, and true bony union from a more structural affection of the joint itself. Supposing, then, that we had either a fibrous or an osteophytic anchylosis, with marked contractions of the flexor muscles, I would suggest, first of all, to divide all the contracted muscles. It will be better to do this six or eight days previous to the performance of the *brisement forcé*. By that time the wounds have firmly closed. No air can enter and give rise to suppuration, and you obviate at least one of the objections raised by the opponents of tenotomy. It is, of course, indifferent whether you use chloroform on that occasion, since but little pain accrues from the operation. Nor do I deem it necessary to give you special advice as to the flexor muscles of the leg, since by extension you can raise them from the adjacent parts, and divide them successively as they present themselves. The division of the tendon of the biceps deserves special mention. The external popliteal or peroneal nerve is in such close approximation to the internal margin of the tendon as to be easily cut through. If this

be the case, paralysis of the abductor muscles of the foot and talipes varus would inevitably follow. In order to avoid this nerve, you have to divide the tendon either from outside by dead pressure with a tenotome not too sharp, or by inserting it close to the inner margin of the tendon, and give the edge an outward direction. With all precaution imaginable, I have nevertheless met with this accident in four cases. Yet I am happy to say that the paralysis arising from the inadvertant division of the nervus peronæus, did not exceed six months, the nerve having probably re-united, and thus re-established its full innervation.

About eighteen months ago, I took charge of a young man, who had sustained a serious accident; his right knee-joint having been opened at its outer aspect by a large lacerated wound. The tendon of the biceps as well as the peronæus nerve were demolished for about an inch. The patient has never recovered the action of that nerve.

But even if there be no trace of mobility in the joint, as in complete osteoyhytes, tenotomy should precede *brisement forcé* for reasons requiring no further explanation.

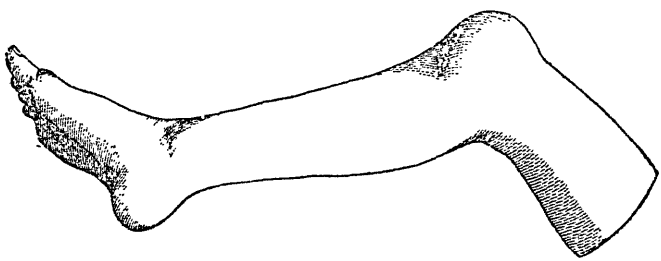
In order to perform *brisement forcé* the patient should be fully under the influence of chloroform. He should be placed on his face, but at the same time due attention paid to respiration, for at that degree of anæsthesia, respiration is very feeble and in the main diaphragmatic. The slightest impediment may entirely arrest it. As soon as the patient is thus prepared, you have the thigh properly fixed by an assistant, and then taking hold of the leg, bend it with a sudden jerk, and then extend it; and so continue to alternate between flexion and extension, until the articulation is quite free.

If there be any rotation of the tibia, it will be advisable to amend that position by re-twisting it in the opposite direction. This done, bandage the extremity carefully with a roller, surround the knee-joint with strips of stout adhesive plaster, and fasten either the extremity in a straight iron splint, such as I have before shown, or adjust the extension with the pulley and weight, as before described. In order to correct the lateral position of the limb, Professor Robert places side cushions inside of the splints before fastening the extremity.

By this plan I have obtained most satisfactory results, and have never had any trouble in producing a speedy and steady recovery of numerous patients. It was never followed by inflammation or neuralgia which other surgeons have complanied of; nor did the contraction return, provided all the contracted muscles had been successfully divided. If any of those symptoms should set in, rest assured that the tenotomy is not complete. The earlier you perfect it the better it is for your patient. It is need-

less to contend against them by antiphlogistics and sedatives; you will effect nothing. Tenotomy is the only remedy.

Brisement forcé is both in appearance and reality a powerful remedy. It overcomes, by main force, all resistance; it ruptures the fibrous adhesions of the joint and unyielding tissues, and can certainly do great mischief if indiscreetly performed. But in using the necessary precautions with physical power, nothing is to be apprehended therefrom. In the large number of my cases I have had but four accidents: one of them was inevitable, and certainly could not be foreseen. The case refers to a youth of about sixteen years. He was tall, slender, and evidently of feeble constitution. Having been employed in a manufactory in which he had to tread a wheel, he had thus acquired an inflammation of his knee-joint, which terminated in a deformity. His leg was bent at an angle of 105°, (Fig. 13), but permitted mobility within an angle of 30°

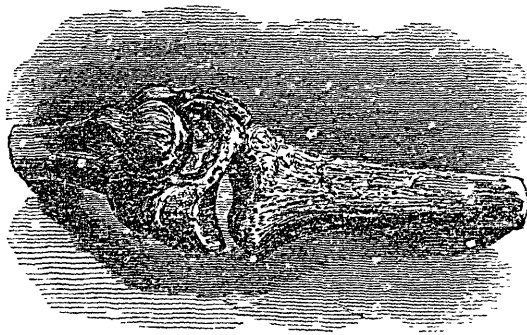


(Fig. 13,)

eyond which there was resistance on the part of the contracted biceps and other articular impediments. The patella was moderately moveable. After having divided the tendon of the biceps, I increased the flexion of the limb by a comparatively gentle effort, when, to my surprise, the resistance suddenly yielded.

A few days afterward a slough appeared in the popliteal space, and the suppuration became so profuse as to render amputation imperative. It was then found that the epiphysis of the femur had yielded, whereas the articular adhesions had remained unbroken. (Fig. 14.) The disproportionate strength of the articular adhesion, over the union between the lower extremity of the femur to its shaft, was the proximate cause of the accident, and certainly could not have been anticipated. A large proportion of my patients have been children in whom the same condition of the femur existed, but with the exception of a few cases, I have met with no accident whatever. In reference to the case just related, I candidly confess that I had not the remotest idea that such an accident would happen at the age of the patient, nor did I or any of my able assistants rea-

lize its occurrence. It was in fact the first mishap of this kind, though it has not been the last. The next case happened with a lad from Indiana, aged 17 years. His appearance was equally delicate, but more from rapid growth than any other cause, for the affection of his knee-joint had



(Fig. 14. See page 256.)

subsided some years previously. I performed the operation at the office of my esteemed friend Dr. Gaston at Indianapolis and in the presence of the prominent practitioners of that city. They all can bear witness that I proceeded with great care and precaution, and employed no undue violence.

Nevertheless a diastasis of the lower epiphysis of the femur took place, but no serious consequences followed, beyond the delay of treatment, which has since been resumed.

The other two accidents of this description happened with children; one of the cases I have already adverted to.

These accidents are indeed of no great consequence, provided they are promptly recognized and attended to. The limb must be brought back into the former position, and this position must be secured by bandages impregnated with plaster of paris; in six or eight weeks the union is perfect, and the treatment may then be renewed without further hazard.

It seems to me that these accidents are likely to happen in cases where the intra-articular adhesions are rather tough, and the connections between the epiphysis and shaft of the femur somewhat infirm. The latter may be expected in debilitated and overgrown individuals, and, in such, more than usual precaution is needed to obviate mishaps of this description.

(To be continued.)

Case of Biliary Calculi escaping through the parieties of the Abdomen. Recovery. By E. D. Worthington, A.M., M.D.

I regret that never having formed the habit of keeping a Medical Note

Book, I am unable to give more than a mere outline of the following rather extraordinary case.

On the 24th of March last, I was called, for the first time, to see a widow lady aged 59. She had enjoyed uninterrupted good health, until about ten years ago. Since that time she had suffered once or twice a year, for a day or two at a time, from what she called "Bilious attacks." In the intermediate time, her general health was good, and for the last two years having no return of her old ailment, she considered herself, as she expressed it, "a well woman." When I saw her, she had a "Bilious attack," great restlessness, acute pain at the epigastrium and right hypochondrium, thirst, and incessant attempts at vomiting, bringing up from the first only what she had swallowed. Pulse unaffected.

I gave her a good dose of calomel dry on the tongue, and ordered turpentine fomentations. When I saw her again she was better, the bowels had been freely moved, but there was still some irritability of the stomach, and tenderness on pressure. For the first I ordered effervescing draughts, and for the second, a large blister.

She continued to improve daily, and at the end of a week was up and going about the house.

She sent for me again on the 15th of April, and told me that though she was up she was not well, that she had a good deal of dull burning pain about her stomach and side. There was no tenderness on pressure over the liver, but I discovered a well defined enlargement extending from below the umbilicus to near the lower border of the ribs, on the right side. It could be grasped in the hand, and felt like a large solid tumour, firm and deep in its attachments, and on pressure, caused a sensation more of faintness than of acute pain. No redness whatever externally.

Strange to say my patient was hardly aware of the existence of this mysterious enlargement. Believing that the unusual hardness was merely superficial, and caused in the first place by the blister, I prescribed internally, iodide of potassium in infusion of Calumbo; a Dovers powder with Hydrarg $\underline{c}$ Creta at bed time; and painted the surface once a day with Tincture of Iodine.

At the end of a week the tumour was somewhat softer, more superficial, less firm in its deep seated attachment, the skin distinctly red, and the whole swelling more painful on pressure.

It then became evident that the case was likely to terminate in abscess opening externally, and of course I did everything I could to bring about a "consummation so devoutly to be wished."

Dr. Gilbert, of Hatley, being in Sherbrooke early in May, I requested him to see the case with me. Even then there was no yellowness of the

skin, no rigors, or other constitutional symptoms to lead any one to the supposition that the abscess was connected with the liver. Some days afterwards the abscess was opened, when it discharged about 20 ounces of greenish coloured, excessively fœtid pus.

On the fourth day, the nurse, on changing the dressings saw that the discharge had suddenly ceased, and that the opening was plugged up by some hard, brown looking substance. With a woman's curiosity she took a pin and picked this out, when it proved to be a large Biliary Calculus. Two more escaped within twenty-four hours. The discharge lessened day by day, and the opening soon closed up. She improved rapidly, and is now quite well. I saw her to-day. She keeps the gall stones, as a great treasure, and is rather proud of shewing them to her friends.

In November, 1855, I saw a case that presented appearances similar to those I have already described, except that there was yellowness of the skin, and undoubted symptoms of obstruction of the ducts. I was a young man at the time, and asked Dr. Johnstone to see the case with me. He would not recommend the lancet, and even if he had, the relatives would not allow any surgical interference, as the patient was a very old woman.

After death I could only get permission to examine the abscess. There was a very thin covering of tissue confining its contents. Beside pus it contained, if I remember, 93 gall stones, at any rate enough to fill a common saucer.

I have frequently met with cases were gall stones have been passed by the bowels, and in such cases have seen greater benefits result from the free, long continued use of nitric acid, than from the use of alkalies as a solvent.

Sherbrooke, Nov. 1867.

Case of Stricture of the Urethra treated by External Division. Under care of G. E. Fenwick, M.D., Professor of Clinical Surgery, McGill University, Reported byGeorge Ross, A.M., M.D., House Apothecary, Montreal General Hospital.

Andrew Melville, aged 46, was admitted into the Montreal General Hospital on the 21st October, 1867, suffering from a stricture of old standing.

He states that he has never had but one attack of gonorrhœa, and that occurred 27 years ago—it was pretty severe and he was under treatment for over a month—some scalding in voiding urine remained for a long time after apparent cure. About seven years ago he first noticed a diminution in the size of the stream of urine, together with the other symp-

toms of commencing stricture. Three years since had almost complete retention, which was relieved by the passage of a small catheter. Had no further trouble with it until just twelve months ago when he was treated in this hospital for extensive urinary infiltration which had followed almost complete occlusion of the urethra; a small perineal fistula has always remained since this time. A few days before admission noticed some swelling in the perineum, accompanied by severe scalding.

When admitted, the perineum was found swollen and hard, as was also the scrotum, and he complained of almost total inability to pass water, together with much pain on making the attempt. An attempt was now made by the House Surgeon to pass a catheter, but without success, owing to the œdematous condition of the parts around the urethra and the existence of a long false passage leading up between the bladder and rectum. He was put to bed and hot stupes applied with relief.

Considering therefore the impermeable nature of the stricture and the constant danger of repeated attacks of urinary infiltration, it was determined to perform perineal section.

Accordingly on the 15th Nov., the patient having been put under the influence of chloroform, a No. 10 catheter was introduced into the urethra as far as the seat of the stricture, and upon this an incision about 1½ inch in length was made. When the extremity of the catheter was thus exposed, search had to be made for the entrance of the urethra, and in this part of the operation considerable difficulty was experienced, but at length a small probe having been got through the stricture, this was freely divided upon it for the distance of about ¾ of an inch. The large catheter was then easily passed into the bladder and retained by tapes.

The operation was followed by two or three pretty severe rigors, and on the fifth day by the formation of an abscess in the cellular tissue of the scrotum communicating with the urethra, but which when opened soon healed up.

On the third day the catheter was removed and re-introduced the next day and again retained for 48 hours, at the end of which time it was withdrawn and afterwards only passed in at first every day and subsequently every second day.

The wound presented a uniformly healthy appearance and at the time of discharge is so completely healed that the entire stream of water passes freely by the natural passage.

Discharged cured, Nov. 30th, with an injunction to keep passing a No. 10 catheter himself twice a week for at least 12 months.

LONDON CORRESPONDENCE.

The meeting of the British Association for the Advancement of Science, which was held this year in September, at Dundee, was one of the most successful that has occurred for many years past. Indeed the people of Dundee made up their minds beforehand that nothing should be wanting on their part to render the meeting a pleasant one to all who should attend it. Genuine warm hearted hospitality abounded, and the town was so crowded by the influx of visitors, that very many were accommodated in private houses. What struck us very forcibly at this meeting, was the amount of work done in all branches of Science by the members of our profession, of the 3 professions of Law, Divinity and Physic, the latter only numbers amongst its followers the "Bees of Science" if the expression may be allowed, for industry, labour, research, a spirit of earnest inquiry, and indomitable perseverance—necessarily engendered by the habits of training for study—are the peculiar characteristics of the medical philosopher. The subjects interesting to your medical readers were so numerous, that we shall only glance at some of the more important and strikingly new.

A variety of papers were read, more or less dwelling upon the Antiquity of Man. This subject has occupied the attention of scientific men for some time, and year by year, evidence is accumulating, to show that man existed upon our planet at a time very far beyond that given in the Mosaic Record. And if the interpretation of the age of the deposits in which the remains of man or the work of his hands are found co-existing with the remains of numerous extinct animals, be correct, then we must consider man to have been created after the image of his Maker from 20,000 to 50,000 or even many more years ago. This need not surprise us in the least, for periods of time, geologically speaking, carry the mind back, for millions of years, and 50,000 or 100,000 years is a comparatively short period in the history of our planet. In a Report upon the exploration of Kent's Cavern, Torquay, by Mr Pengelly, read before the geological section, he stated that amongst other things were found a tooth, a portion of an upper jaw, with teeth, of a man in the cavern, associated with the bones of many extinct animals. Sir Charles Lyell believed it would be of the greatest importance to continue the researches into this cavern, and that it would take a great many years before they were properly exhausted. In the gravel beds of the Cavern there had now been found the remains of the mammoth, by which they proved the co-existince of man with that animal; and they had obtained proof of the co-existence of man, with that of not less than three different species of

elephants in Europe. They had most unquestionable proof, Sir Charles remarked, that three different species of elephants existed when it was inhabited by that race of men who made the flint hatchets and the bone instruments which had been found in such large numbers in the cavern.

The interest of the subject appears to be increasing year by year, and a mass of valuable evidence is gradually accumulating which philosophers will turn to account by and bye.

Other papers were read upon the various races of man, and on colour of the skin as a test of race. People are beginning to believe that the black and white races of mankind sprang from different creations, and the old theory of the alteration of colour by climate is becoming exploded. An excellent paper was read by Sir John Lubbock on the origin of Civilization and the Early Condition of Man.

Dr. Hughes Bennett, of Edinburgh, read a paper upon the Influence of Mercurials on the Bile secreted by the Liver, in which he gave the results of a number of experiments upon dogs. They consisted of four series of experiments relating to the amount of bile secreted with and without mercury. In each case a biliary fistula was formed, the weight of the animal was ascertained, the amount of food given, and the secretion of bile for 24 hours measured, and its solids and salts ascertained. The greatest variations were found to exist in the amount of bile secreted daily, independently of the amount of food or other obvious cause. The same fact was observed when mercury was given. No conclusions were drawn at present from these experiments, which are to be continued by a regular committee organised for the purpose.

In a paper by Dr. Richardson, on the coagulation of the blood, he abandoned his ammonia theory, and his present views are, that the process of coagulation in albuminous and fibrinous fluids is due to a communication of caloric force to them, and to a physical or molecular change, determined by the condition of their constituent water. Whether this theory will be more durable than his former one, physiologists will determine.

The antiseptic properties of the sulphites was the subject of a paper by Dr. Polli of Milan. The author found the sulphites of lime, hyposulphite of magnesia, sulphite of magnesia, sulphite of soda, and granulated sulphites, to possess all the properties of sulphurous acid, with the advantage that their action was more uniform, certain, and constant. Both on animals, and himself, he found that large doses could be given without the least danger or inconvenience. Decomposition in animals is arrested by their use, and cases of blood poisoning are rapidly cured by them; both are attributed to the antiseptic properties these salts possess.

Of other papers of interest were the following, which are now being published in the various medical and scientific journals:—

Preparation of the Finest Bile Ducts. Exhibited and explained by Professor Turner and Dr. M. Foster.

The influence of Air on Vital action as tested by the Air Pump. By Dr. John Davy.

Certain effects of the concentrated Solar Rays upon the tissues of Living Animals immersed in water. By Dr. G. Robinson.

Food of the Aborigines of Australia. By Mr. John Crawford.

Experiments on the Luminosity of Phosphorus. By Dr. J. Moffat.

On the Decay of Stone, By Mr. J. Spiller.

The Comparison of Limbs deduced by the Torsion of the Humerus. By Professor Martins of Montpellier.

The adaptation of the Structure of the Shell of the Bird's Egg to the function of Respiration. By Dr. Ogilvie.

A contribution to the Anatomy of the Pilot whale. By Professor Turner.

Vocal and other Influences upon Mankind of Pendency of the Epiglottis. By Sir Duncan Gibb.

Experiments with Poisons, &c, on young Salmon. By Dr. McIntosh.

On Protogon in relation to the Molecular Theory of organisation. By Professor Bennett.

Effects produced by applying extreme cold to certain parts of the nervous system. By Dr. Richardson.

On the prevalence of Spedalske or Leprosy in the Kingdom of Norway. By Mr. Henry Ker Porter.

An abnormal leaf of Prunus lauro-cerasus. By Professor Dickson.

Observations with the spectroscope on Animal colouring Matters. By Mr. Ray Lankester.

Microscopical Preparations of the Cochlea, of the Retina, and of Teeth of Fossil Fishes. By Professor Allen Thompson.

The Epithelium of the cornea of the ox in relation to the growth of stratified epithelium. On some Points connected with the Joints and Ligaments of the Hand. By Professor Cleland.

Report on Methyl compounds. By Dr. Richardson.

On Birds, their Nests and Plumage, or the relation between sexual differences of colour and the mode of nidification in birds. By Mr. A. R. Wallace.

Observations on the habits of flying fish. On Trichodesmium or Sea Dust. By Dr. Collingwood.

On the presence of Quinine and other Alkaloids in the animal Economy. By Dr. Wentworth Scott.

On the conservation of Forests in our Colonies. By Dr. Lauder Lindsay.

On Polliniferous ovules in a Rose. By Dr. Maxwell T. Masters.

Report of the Lunar Committee. By Mr. Birt.

Such are a few of the chief papers, which will give your readers an idea of the variety of subjects brought before the association. Anything positively Medical or Pathological is rigidly excluded. Mathematics and Physics, Chemistry, Geology, Biology (taking in Zoology, Botany, Anatomy and Physiology), Geography and Ethnology, Economic Science and Statistics, and Mechanical Science, are all legitimate subjects for consideration, and contributions from all quarters of the world are welcome. If any Canadian philosopher is desirous of contributing anything to the British Association next year at Norwich, we will gladly be the means of carrying out his wishes. Short communications, with original facts, are welcomed.

Yesterday (Nov. 20th.)we were present at University College Hospital, and witnessed the *Removal of a large Osteo Sarcoma of the Lower Jaw* by Mr. Christopher Heath. The theatre was crowded to suffocation. The patient was a man aged 32, in whom an enlargement of the lower jaw commenced eight years ago, after the extraction of a tooth. It remained more or less stationary up to two years ago, when he fell from a horse and injured himself; from that time it grew pretty rapidly, and now was as big as an adult's head. The man, who was from Leicester, had been seen by several surgeons, all of whom refused to operate. Mr. Heath, who has already made himself famous for operations on the jaws, considered it a suitable case for surgical interference, and the man was admitted under his care. It so encroached on the mouth, that the tongue could not be seen, and there was much difficulty in feeding himself. The patient presented a most extraordinary appearance from the immense size of the tumour, which had in front of it a fungoid looking mass, which was not malignant disease, but the result of some quack treatment he had undergone. Chloroform was given at the nose, the patient sitting in a chair with his legs tied to it. When under the influence of the anesthetic, Mr. Heath made an incision on either side of the central fungoid mass, cutting through the lip and dissected off the skin. He sawed through the angle of the jaw on the left side where it was comparatively free from disease, and then carefully detached all the surrounding structures, until he reached the articulation on the right side, when with a little care he succeeded in getting away the cordyle. The tongue early in the operation was transfixed with thick cord, and was held out by Sir Henry Thompson. Comparatively little bleeding ensued, but several small vessels were tied. The lip and chin were brought together by pins, and the flaps by silver wire sutures; and it was astonishing to witness the improvement in the man's features. The great tumour was the size of an adult's head, and weighed 4½ lbs.; it was not malignant, and for the

most part was bony. Although the patient was weak, chiefly from the want of food, he seemed to be in good condition after the operation, and there is no reason why a favourable issue should not ensue, of course excepting the usual surgical accidents. Such operations as this were rife in Liston's time, but we believe that Liston never removed one so large, though Syme did at Edinburgh.

In a review of the "original relation of the voyage of Jacques Cartier to Canada in 1534," in the Athenæum, mention is made that it contains an account by Mr. Rameé of Cartier's house near St. Malo, which the reviewer regrets to find is about to be pulled down, and so will every true hearted Canadian. It appears that the house was, a few years ago, in a most ruinous condition, and no steps were taken to arrest the process of decay, and consequently it has become too dilapidated to be restored.

The writer in the Athenæum (Oct. 26th.) says: "This is to be lamented, for besides being a very picturesque building and an excellent type of the old French *manoir*, the house and home of so famous a man as Jacques Cartier should not have been allowed to perish."

No doubt it would not have been, if made known in Canada, where his memory is as much respected as is Shakespeare's in this country; unfortunately St. Malo is far away from Canada, but yet much might be done even at this eleventh hour to save it to posterity.

London, Nov. 21st 1867.

REPLY TO "LOOSE STATEMENTS."

To the Editors of the Canada Medical Journal.

GENTLEMEN.—Were it not that I have a tendency to act on the Horatian maxim *nil mirari*, I could scarcely have failed to be astonished at an article which appeared in pages 236-7 of your Journal for the current month. If I regret, as I do, the appearance of that article in a Canadian Journal, devoted exclusively to the advancement of Medical Science and to the promotion of harmony among its members, it is certainly not on my own account; but simply because of the effect which may be produced on unprejudiced professional readers, when, in the exercise of that justice which is due to myself, I lay its antecedents before them.

Having been present at the *Congrès Medical* which was held in Paris in August last, I had a slight share in, for me, an interesting discussion which took place on "alimentation as affecting different races." I stated in the course of my remarks that the French *habitants* of Lower Canada were, as regards strength and muscular energy, superior to the cor-

responding class of the population in France, so that, assuming the absence of deterioration on the part of the latter within the last century and a half, the Franco-Canadians had during that period made a long stride in advance in physical progress; and whilst, in accounting for the fact—a fact which I had abundant proof to substantiate—I was inclined to attribute it largely to the great salubrity of our Canadian climate, I suggested that alimentation might have much to do with it—contrasting the more abundant supply of animal food enjoyed by the Canadians with, what appeared to me, on my two visits to France, the lenten commons of their ancestors. I stated that in most French Canadian families, where it could be afforded, meat was used at every meal. I specially noticed the case of the Canadian lumbermen on the Ottawa and St. Lawrence and their tributaries, and of the voyageur on the Hudson's Bay coast, who, when out in the forest, or on fatiguing journeys and exposed to cold, would consume from two to three pounds of pork in a day. I further stated that in comparing the descendants of Canadian settlers from the British islands with the corresponding classes of the population at home, I had observed no such difference in favour of the Canadian. The British Canadian, however, I remarked, was, in the majority of cases, not more than the *immediate* descendant—the son, or at most the grandson of his immigrating ancestor, so that whatever might be the ultimate results of his transplantation to our soil, the law of acclimatization had not had time, hitherto, to exhibit its effects upon *him*, comparatively with his fellow-subject of French descent, on whom it had been operating for a series of generations.

These remarks of mine, made in French, in the presence of an immense assemblage of scientific men from all parts of the world, most of whom, I well knew, were quite equal to a correction of statements of a "loose" character, (indeed I am so bold as to think that some of them might have possessed "experience" equal, almost, to that claimed by the writer of "loose statements") were somewhat inaccurately reported in a Parisian Medical Journal, and from its columns they were transferred, sometimes with augmented inaccuracy as they were retranslated into English, to various professional periodicals both in Great Britain, and in the United States. Having seen them commented on in a daily newspaper of this city, the *Montreal Telegraph*, I pointed out some of the inaccuracies in a letter to the Editor, which was courteously acknowledged and inserted in his issue of the 19th ult., just one week before the appearance of the Medical Journal. Moreover I pointed them out specially to the Senior Editor of the Canada Medical Journal, stating and reiterating to him in the course of three several conver-

sations, two of these in the presence of scientific friends, the true tenor of my observations, as they are given above. This I did in order that the "Canada Medical Journal" at least might have no excuse for, and I certainly acquitted it of any desire of, misrepresenting my opinions; and if its readers will *now* take the trouble of recurring to its article on page 236, they will have an edifying opportunity of judging how much fairness it can occasionally display. They will find that its senior editor, perfectly cognizant of the real facts, has had the courage to publish and to comment upon, an erroneous report of my language, just as if he had no reason for supposing that it was not genuine, and to make me draw comparisons, when I had drawn, and he knew I had drawn, no comparison whatever. Leaving, for a short season, the masticating quality of our *voyageurs* and shanty-men to take care of itself, I shall simply ask, whether, or not, common candour towards even a professional friend and neighbour may not be one of the duties of an editor; and whether or not, in comments of just forty lines in the aggregate, intended, no doubt, to be very scientific, courtesy should not have prompted the choice of language more polite and civil than "statement of so extraordinary a nature," "exaggeration of a very serious nature," "loose statements," "singularly untruthful," &c. These words, which one may explain, but no one justify, are the editor's, not mine.

Your obedt. servant,

WM. H. HINGSTON.

Beaver Hall Hill, Montreal, December, 1867.

P. S. As I was the accredited representative of the College of Physicians and Surgeons of Lower Canada, when in France, on the occasion referred to, it will be my duty, as it will also be my pleasure, to furnish to it a *rapport* of the *Congrès*, and of my share therein.

REMARKS.—We cheerfully give insertion to the foregoing reply of Dr. Hingston to an article which appeared in the last number of the Journal, and we are rejoiced to have an opportunity in this Canadian Journal of announcing to the assembled *savants* who met at Paris in August last, that what Dr. Hingston intended to say at their meeting carries quite a different meaning to the hashed up and garbled statements which *must* have appeared in the "Gazette des Hopitaux," or some other Parisian journal, if we may judge from the reports of those statements which have found their way into papers, both Medical and secular, of Great Britain, the United States, and Canada. We spoke to Dr. Hingston about his remarks

chiefly on the pork-eating propensities of the French Canadian, and he insisted that his statements were well founded and correct, and even went so far as to declare that he could himself consume 3lbs of pork in a day. If a scientific man (as we believe Dr. Hingston to be) ventures statements in the Munchausen style, or allows them, with his authority, to go uncontradicted, he can hardly wonder that a journal, which he himself regards as exclusively devoted to science, should notice spreadeagleism of the most absurd description. It is more than likely, that the scientific men who heard Dr. Hingston, and regarded him as a fair specimen of the British Canadian, supposed that men of the French race who inhabit these northern wilds, and whom they understood the Doctor to describe as larger and better men physically than those of British origin, were a species of ogre beside whom a Patagonian would be a baby; hence it is not at all to be wondered at their swallowing, without comment, the three-pound of pork theory.

The letter referred to by Dr. Hingston, which appeared in the "Evening Telegraph" of the 19th ult., was published after our article had gone to press, and had reference to an extract copied from the "British Medical Journal," wherein, as we stated, Dr. Hingston *is made* to draw a singularly untruthful comparison between the French Canadians and those of British origin, as regards their vigour and general physique. In writing that article, and specially the part of it copied above, we did not imply that Dr. Hingston made the untruthful statement. We are fully alive to the fact, that John Bull is so fond of his roast-beef and plum-pudding in London, that he cares very little about his lenten, or pork eating neighbours, or the effect of such alimentation on their general development; but we desire, if possible, to put him right on the subject as regards us Canadians.

We trust Dr. Hingston is not drawing on his imagination in the statement which he furnishes above, of what he did say before the Paris Conference; certainly the two statements are singularly at variance.

In noticing the subject, we held in mind the singular and ridiculous assertion, that the French Canadians habitually consumed two or three pounds of pork per day. It is remarkable, in Dr. Hingston's reply, this point is most studiously avoided, except where reference is made to "most French Canadian families, where it could be afforded, meat was used at every meal;" also, the Canadian lumbermen, and the *voyageur* on the Hudson's Bay coast. With regard to our drawing unnecessary, and, to say the least, ungracious comparisons we cannot plead guilty. Is it or is it not a matter of fact? or is the Doctor fearful of perilling his popularity, or hazarding ours, by holding us up as making an ungracious attack on the size and general physique of the French Canadian.—*Eds.*

REVIEWS AND NOTICES OF BOOKS.

The Practice of Medicine and Surgery applied to the Diseases and Accidents, incident to Women. By WILLIAM H. BYFORD, A.M., M.D., Professor of Obstetrics in the Chicago Medical College. Second Edition, enlarged. Philadelphia: Lindsay & Blakiston, 1867. Montreal: Dawson Brothers.

Dr. Byford is most certainly a practical observer of no ordinary talent, and has produced a volume which does him infinite credit. Female diseases are constantly being brought under the notice of the Physician, many of them at times troublesome and annoying, and after reading carefully many chapters in Dr. Byford's work it affords us much pleasure in testifying to the thoroughly practical character which pervades every page. Its appreciation by the profession is best illustrated when we mention the fact that it was in September, 1865, when the first edition was published, and the preface of the second edition is dated October, 1867. Such a rapid exhaustion of the first edition speaks volumes for the estimation in which it is held. Under the head "*causes of Mammary Inflammation*" Dr. Byford speaks pretty plainly as regards some of the causes which give rise to this exceedingly troublesome and annoying inflammation. He says, "external causes may give origin to similar sorts of inflammation, as bruises from blows, tight lacing, stays of whalebone, &c. These last are productive of a good many cases. Not unfrequently one patient gets up well from the effects of labour, and the first time she dresses to go out pinches her excitable gland with lace strings, or punches it with the end of a piece of whalebone during the whole of her round of fashionable calls, and comes home with the breast excited to inflammation." This short paragraph contains much truth, and, beyond a doubt, explains the cause for the appearance of many a mammary inflammation for which the unfortunate doctor in numerous instances is blamed. Under the heading *treatment of Mammillitis*, our author says, "An excellent dressing for the nipple for the last two months is a rough coarse sponge, so cut as to cover the areola, and surround and cover loosely but touch every part of the nipple. On this there should be but one texture of raiment, so as to allow of the evaporation of fluid as fast as secreted, and the free admission of atmospheric air. In cold weather when going out, the breast would of course be covered by all the clothing that is used for the protection of the other portions of the body. It is a great mistake to cover these important organs—important on account of their usefulness instead of their beauty, so thickly as they usually are: they bear exposure

with great impunity When we wish to harden the nipples, we should bear in mind the circumstances which harden our hands, and make use of them; we should equally avoid the circumstances that soften our hands. When a lady wishes to soften and whiten her hands, she wears kid gloves, and does not allow them to touch hard substances. In a like manner she may soften her nipples if she wishes to do so. To occasionally moisten them with water, and to allow it to evaporate slowly on exposure to air, is a good expedient to harden them. Friction with a dry towel or the fingers will assist in the process. It is a matter of great question whether various washes used to harden the nipples are not injurious instead of beneficial. They generally exert a chemical as well as a physiological effect, while this last is the only one desired. During lactation the same exposure to air and lightness of covering should be observed, and after nursing the nipple should be wiped clean and dry before being retained under the clothing. This is a rule that should never be neglected."

Much of the advice given in the above paragraph is totally contrary to our ideas of the rules that should be followed under the circumstances detailed,—but we are free to confess that even under the most orthodox treatment many cases prove troublesome. In such the reputation of Dr. Byford would certainly induce us to try the plans he recommends. The work is printed on beautiful paper, and bound in a substantial manner.

The Canadian Horse and his Diseases. By D. McEachran, M.R.C. V.S., Graduate of the Edinburgh Veterinary College, late Lecturer on Materia Medica in Upper Canada Veterinary School, Lecturer and Consulting Surgeon to the Board of Agriculture, Montreal, C. E.; and Andrew Smith, V. S., Edinburgh, Graduate of Edinburgh Veterinary College, Principal of the Upper Canada Veterinary School, consulting Veterinary Surgeon to the Board of Agriculture, Toronto, C. W. Toronto: James Crmpbell & Son. 1867.

We have received a copy of this little work, and cheerfully give it a passing comment. The authors are anxious to draw the attention of farmers and stock breeders to the great necessity of becoming familiar with some at least of the diseases which are peculiar to the horse. The diseases of Canada are specially considered, and the authors are desirous of exposing the impositions and denouncing the cruelties of quackery. In these pages the most simple language is used, so that it comes within the scope of all. The work consists of eighteen chapters, written in a clear style and easily to be understood. In the last chapter, will be found receipts and prescriptions, formulæ for various diseases. We regard it as a

most useful book for the farmer, and can cheerfully reccommend it. In fact no farmer should be without a book of this kind, as by a few timely remedies he will save many a valuable animal from either death, or permanent injury.

Synopsis of course of Lectures on Materia Medica and Pharmacy, delivered at the University of Pensylvannia, with five lectures on the Modus Operandi of Medicines. By JOSEPH CARSON, M.D. Philadelphia: Henry C. Lea. 1867.

To students attending the lectures of the University of Pennsylvania, this work must be of incalculable advantage, giving as it does, a complete outline of the Lectures on Materia Medica delivered at that institution. Even to the Country practitioner, whose time is generally taken up with his practice, it will prove of great value as it contains much useful information, in a very small compass.

PERISCOPIC DEPARTMENT.

Medicine.

ON SCROFULOUS DISEASES OF THE EXTERNAL LYMPHATIC GLANDS AND THEIR TREATMENT BY IODINE AND OTHER LOCAL STIMULANTS.

BY DR. THOMAS BALMAN.

[The local treatment of scrofulous diseases of the external glands has not been much dwelt upon by authors of works even specially devoted to the subject of scrofulous diseases. The importance of the subject in practice cannot be over-estimated.]

From neglect, feeble health, or other causes, such swellings may assume a subacute condition; and, in place of subsiding, may go on slowly, and perhaps imperceptibly, increasing both in size and consistence, or they may manifest this peculiarity from the first. They then constitute the great majority of those cases of strumous glands which are so frequently presented to our notice in the out patients' wards of our numerous charitable institutions. In a case of this kind I usually proceed thus:—If the swelling is recent I begin with iodine lotion, or this may be replaced by the diluted tincture of the Pharmacopœia—one part to three of water. Pledgets of lint, soaked in either of these lotions, are to be continuously applied to the tumour; and, in order to retain the moisture, they should be covered with a piece of gutta percha sheeting or oiled silk. If the tumour be of longer duration, firm to the touch, or has implicated

the surrounding textures, I pencil the surface lightly two or three times with the solid nitrate of silver, or with a solution of iodine. The former is the least irritating to the skin, and is, therefore, in many cases, the best to start with. This application is repeated at intervals of five or six days. All bandages, woollen wrappers, and other such articles of dress with which the patient is usually smothered, are removed, and the parts freely exposed; and, if within a convenient distance of the sea-coast, the tumour may be also advantageously bathed with sea water every morning.

This procedure will produce in all probability one of two results, either a gradual diminution in the size of the swelling, or suppuration. In the event of the latter happening, the abscess should be opened at once—of course in the most dependent and favourable position. The parts surrounding the incision are then to be immediately painted circumferentially with the iodine solution. The application should extend as far as the limits of the tumour. The effect of this treatment is to cause the rapid collapse and effectual emptying of the sac of the abscess, and within a very short period probably, adhesion and closure of its cavity. The punctured wound, which may be covered with a piece of tow or charpie, very often heals without the slightest disfigurement, and we are enabled, if necessary, to continue our application. Abscesses which, if allowed to ulcerate, would continue many weeks, and perhaps months, may by this treatment be sometimes obliterated in a few days.

Injections of iodine, zinc, and other astringent lotions, as proposed and extolled by Lugol, Tylor Smith, and others, have never succeeded, in my hands, in procuring any corresponding results. And the almost universal practice of poulticing in order to accelerate the formation and discharge of matter has long appeared to me still more objectionable; and I confess that I was some time ago surprised to find such an accomplished pathologist and excellent surgeon as Mr. Paget recommending this antiquated and, I truly believe, mischievous practice in the treatment of these complaints. However useful poultices and moist applications generally may be in acute phlegmonous inflammation of the lymphatic glands, in deep-seated or painful abscesses, or in a variety of other cases which it is scarcely necessary to name, I am satisfied that when continued for any length of time in strumous, suppurating, and other sores, whether involving the absorbent glands or other textures of the body, poultices tend to relax tissue, impair the tonicity of the capillary blood-vessels, sustain the discharge, and facilitate the spread of the suppurative process, and not unfrequently lay the foundations of sinuses and of those horrible bridge-like marks which so often disfigure the victims of this disease.

—The benefit of local stimulation by iodine is not simply limited to scrofulous abscesses. During the last two years I have been in the habit, both at the Dispensary for Diseases of the Skin and in my own private practice, of using it freely in a variety of other cases: in chronic affections of the joints, inflamed breasts, boils, carbuncles, old cicatrices, œdema, and in the slighter forms of erysipelatous inflammation of the skin. In carbuncle the effect is sometimes most striking: the pain and irritation are almost immediately relieved, and the slough is rapidly thrown off. Ganglions, when situated about the wrist, may be got rid of by the same means. They should be first punctured with a fine needle, and a slight amount of pressure continued for a few weeks afterwards.

I at first thought that the local use of iodine in the way described was novel; but I have recently discovered that Mr. Davies, in a work written five-and-twenty years ago, has recommended the external application of the simple tincture in some of the cases I have mentioned. His book, which I regard as a very valuable contribution to medical literature, should be read by all who are desirous of knowing the full therapeutic influence of this important remedy. A series of cases was afterwards published in the *Lancet*, by Dr. Langon, in support of Mr. Davies's views, and are well worth perusal.

A question of some importance will here naturally present itself. How, it will be asked, does local stimulation, either by iodine or nitrate of silver, subdue inflammatory action, lessen the swelling, pain, and irritation, and accelerate the cure, in such cases? The pathology of inflammation, as revealed by the microscope, explains in some measure, I think, how it does so. The phenomena of inflammation we know to consist primarily and essentially of enlargement or dilation of the blood-vessels and capillaries of the part affected; accumulation, crowding together, and final arrest of the blood-corpuscles, and their subsequent adhesion, both to themselves and to the coats of the vessels, effusion of the liquor sanguinis into the cellular and adjacent structures, causing the swelling, œdema, heat, pain, and redness which are known to characterize inflamed textures. We have to deal, then, with impeded action, diminished contractile power in the coats of the capillary blood-vessels, and consequent inability of the arteries to grasp and push forward that vital stream upon the healthy and continuous movement of which the whole fabric is sustained. Iodine and nitrate of silver, so much extolled by Mr. Higginbottom, and perhaps any other local stimulant, seems to restore this impaired vital contractility of the blood-vessels, hurries on these struggling and pent-up globules to complete their labyrinthine journey in the general torrent of the circulation. The local stimulating action of these substances

must further tend to quicken the action of the absorbents, and thus materially assist in the removal of the effused products.—*Lancet.*

ON EPISTAXIS.

By Sir Henry Marsh, M. D., Bart., Physician in Ordinary to the Queen in Ireland.

Close observation of the natural process by which this exudation is effected, affords much useful instruction, and teaches us what the true nature is, of many of those internal and unseen hemorrhages, which formerly, and still are popularly, referred to the rupture of the trunk of a blood-vessel. This, doubtless, is the occasional, but comparatively rare, cause of a fatal hemorrhage. The most frequent cause of hemorrhages, often fatally profuse, is,—as may be observed in epistaxis, capillary exudation,—blood extravasated, not from an arterial or venous trunk, but from myriads of turgid capillary and exhaling vessels.

A remarkable case, elucidating this truth, occurred at Steevens's Hospital. A young man, labouring under hemoptysis, was admitted a few hours before my morning visit. Having spoken to, examined, and prescribed for him I passed on. Whilst talking to the patient who lay in the next bed, I heard a gurgling sound and turned round: the man to whom I had but a moment before been speaking was dead,—was suffocated. A minute and careful examination disclosed neither tubercle, nor cavity, nor consolidation, nor lobular nor diffuse apoplexy, nor ruptured trunk, in any part of the parenchyma of the lungs; all the larger bronchi were nearly filled with blood, which was coagulated in them, particularly at and about the bifurcation, so as to obstruct the ingress of air. It was a case of bronchial hemorrhage,—of copious sweating of blood from innumerable capillary tubes distended with blood. I say sweating, because I doubt there being any rupture or breach of surface.

In some forms of fever, sweating so profuse has occurred as to soak through the bed, and to accumulate in large quantities in a vessel placed underneath.

A capillary extravasation of red blood may be as profuse as a capillary exudation of white blood. A mucous membrane may copiously sweat blood; I have seen the same thing happen from the pores of the external skin of the face. One case, a very remarkable one, I shall briefly refer to. The patient was a young woman four or five-and-twenty years of age: herself intensely strumous, as were also her parents and brothers; she was subject early in life, both before and after puberty, to spontaneous epistaxis. She was attacked with fever. The symptoms presented the usual aspect of

scarlatina; a dusky red rash was universally diffused, with sore and swollen throat, but no ulceration. There was a well-marked febrile movement in the system. On the third day the whole characters of the case were altered; fever subsided, the throat was no longer complained of. Quite suddenly petechiæ, some very small, some as large as a split pea, appeared under the cuticle, and were rapidly scattered over the whole surface; their colour was livid, and they soon became black as ink. After the lapse of a few days dark grumous blood began to ooze from the gums, from all the points of junction of the internal and external skins, and from the nares, and appeared mixed with the urine and fæces; patches of ecchymosis stained the skin over large spaces. The debility, vascular and muscular, was extreme, and the fetor emanating from the breath and whole person in the highest degree offensive. All signs of scarlatina vanished.

In this miserable state, with a gradual augmentation of every worst symptom of purpura hemorrhagica in its most malignant form, she lingered on for nearly three weeks.

For many days before death the following remarkable phenomena manifested itself. Blood oozed and descended in streams from the pores of the skin of the face only. With intense interest I watched the process. The surface having been wiped clean, minute globules of dark blood were seen to exude from every pore; these rapidly increased in size, coalesced, and formed streams which flowed on every side; a profusion of blood was thus extravasated, in like manner as drops of rain increase in size in descending, unite, and form tortuous little rivers, on the glass of a window of a carriage.

Whether attributable to the great tenuity of the Schneiderian membrane, connected with delicacy of the sense of smell, or to the highly vascular network of this membrane, or to the copiousness of the supply of blood to the brain, or to all unitedly, certain it is, that of all the hemorrhages that are most frequent of occurrence is epistaxis.

To this variety of hemorrhage some are much more prone than others, and this may depend not only on constitutional causes, such, for example, as mal-organized blood, but also upon superior delicacy of the mucous membrane and it vessels; a condition of mucous membrane, as well as of external skin, frequently characteristic of struma. Whatever be the cause the fact is certain, that blood streams from the nares with more facility than from any other mucous surface.

This is the case, in varied degrees, at every period of life, but much more remarkably so at the extremes of life; the most frequent time of occurrence of epistaxis is, however, during the period of growth. I have

many interesting cases recorded which prove that this hemorrhage, having appeared in early youth, disappears during middle life, and returns as years accumulate, and old age approaches. The period of senility varies much in differently constituted individuals, and is hastened or retarded by the events and habits of the past life.

It is a curious fact that the epistaxis of the growing period of life should, in so many instances, resume its sway towards its close. It may be termed the *Epistaxis redux* of advanced age. Within the last few days I attended a lady, now in her seventy-fourth year, affected with severe hemoptysis. Thrice before, several weeks having intervened, she was similarly affected, and twice, previously to the attacks of hemoptysis, she bled profusely from the nose. Inquiry elicited the following facts: In early life, antecedent to the full establishment of the catamenia, she had been a martyr to idiopathic epistaxis; at the menstruating periods she suffered habitually much pain, and the discharges were very profuse, and at the period of the cessation of the menses, when they recurred at long and irregular intervals, the hemorrhage was excessive, and the blood came down in large clots. She had been married at a young age, but had never been pregnant. This old lady does not appear to labour under any organic disease; the heart's action and the breath-sounds are perfectly normal. I I have on record several equivalent cases.

Considering, then, the facility with which blood is exuded from the nares it is not contrary to anticipation that mental emotions should affect the vessels of the brain, as frequently to give rise to epistaxis. Congestions, inflammations, and diseases of the brain are frequently preceded and accompanied by epistaxis; this I shall have occasion hereafter more particularly to notice. Those mental emotions which produce cerebral congestion (for some, not all, produce this effect), are often signalized, and relieved too, by a flow of blood from the nares. Epistaxis is thus often a naturally provided safety-valve. The following event, of which I happened to be an eye-witness, illustrates this principle. A child some two and a half or three years of age, in attempting to descend a flight of stairs, fell, and rolled down to the first landing place. He was much hurt, and cried bitterly. The nurse, a strong plethoric woman, greatly attached to the child, ran to take him in her arms; the child's father, at the head of the stairs, sternly forbade her to touch him; she was compelled (standing at the foot of the stairs) to look on. Another attempt (after many efforts and touching appeals for help) was made by the child to descend. Again, he fell. The nurse could endure it no longer; her feelings overpowered her. She rushed up stairs, and took him in her arms, and exclaimed, in a highly excited tone, "If it cost her her life, she would save

the child." She became deeply flushed and a copious stream of blood rushed from both nostrils. This woman, whom I had frequent opportunity of afterwards seeing, had never been subject, previously or since, to any form or variety of abnormal hemorrhage. This was a well-marked instance of a strong mental emotion causing epistaxis, of temporary origin, and altogether exempted from any pre-existing or hereditary hemorrhagic diathesis. I shall, on a future occasion, notice how frequently this diathesis, connected with struma, is hereditary.

A lady, in her fortieth year, of florid complexion, and uncontrollable temper, in a fit of furious and unrestrained anger, was seized with epistaxis, Blood from both nostrils flowed in profusion and persisted so long that the family became seriously alarmed. When I saw her she was nearly pulseless; there was a death-like pallor present, and a cold, clammy perspiration; her voice was feeble, and she could articulate only in a whisper, yet she did not appear to be alarmed. There was no time to be lost; much blood still flowed; much descended from the posterior nares, and was swallowed; some hours previously she had vomited blood. Antecedent to my visit, all the usual means to check the blood-flow had been in vain employed. Upon close examination it was ascertained that the flow of blood was much more profuse from the left than from the right nostril, and by means of a flexible catheter passed along the floor of the nose, a plug with a strong silk thread firmly attached, was, through the mouth, introduced into the left posterior nostril. This completely controlled the blood-flow at that side; as it was not desirable too suddenly wholly to arrest the bleeding, the other nostril was not plugged. The loss on the right side became now comparatively small.

So much distress, so many unpleasant consequences have occasionally arisen from the plugging of both nostrils, that, whenever practicable, one of the air passages should be left free. The double plug is often needlessly applied. Sometimes, however, it is unavoidable. It may be well to remark, that if sponge be used for a plug, it is better to enclose it in lint, otherwise, when distended by moisture, it may so insinuate itself into the narrow spaces between the delicate bones of the nose, as to cause difficulty and even injury in its removal.

Months elapsed ere this lady recovered in health, strength, and complexion, from this profuse and prolonged nasal hemorrhage. In early life she had been subject to idiopathic epistaxis; her menses were always superabundant, sometimes extremely profuse. At each of her confinements her losses of blood were enormous. About a week before the attack of epistaxis she had menstruated copiously. Her habits of life had always been temperate. Thus in this case, a fit of anger, or rather of fury, was the exciting

cause of the epistaxis. But its dangerous profusion is to be attributed to the pre-existence of a well-marked hemorrhagic diathesis.

The leading facts of another somewhat similar case shall be briefly detailed.

Mrs. S., aged 49, has ceased for a year and a half to menstruate. She is now labouring under organic disease of the heart. The symptoms indicate the existence of contracted orifice of the mitral valve. She has had two severe attacks of rheumatic fever, one before puberty, one at the age of 26. Eight years have elapsed since she first complained of dyspnœa and palpitation. Thirteen years ago she sustained a severe mental shock, by the sudden and unexpected death of her mother, to whom she was fondly and devotedly attached; the more, perhaps, because, though long married, she was childless. The mental emotion produced by the suddenly imparted news of her mother's death was very great, she was seized with violent headache, which was followed by most profuse epistaxis; for three days the hemorrhage never ceased. She lived in a remote part of the west of Ireland, and it was not until the fourth morning after the commencement of the attack that the physician reached her house; he found her pulseless, and apparently dying. He plugged both nostrils; she was unable to articulate, and with difficulty could swallow; she lay for upwards of three weeks in a state of insensibility; this period of time was a blank in her existence. She slowly recovered, but her natural complexion, vigor, and strength, she has never since then repossessed. In her case it is specially remarkable that, from the earliest age up to the full period of puberty, she had been subject to idiopathic epistaxis, so much so as to interfere with all her girlish amusements and occupations. The flow of blood was never during her early life profuse, but occurred so frequently-sometimes spontaneously, sometimes from the slightest causes, that she lived in a state of perpetual apprehension. When the menses were fully, established the epistaxis ceased, and did not again recur till, as related, a powerful mental emotion recalled the latent predisposition, and accounted for its all but fatal persistence and profusion.

In the pages of history we meet with several instances of hemorrhage produced by the most overhelming of mental influences: wounded pride-thwarted and disappointed ambition. A Doge of Venice burst, as is narrated, a blood-vessel, and died suddenly, when he heard the bell of St. Mark's announce by its toll the appointment of his successor. At Salisbury, the perverse, mentally blind, and unfortunate monarch of England, James II., was, on the eve of an expected battle, which he never fought, seized with epistaxis. It continued, and confined him to bed, for three days.

The influence of augmented heat or caloric upon the cerebral circulation, becomes a frequent cause of temporarily excited epistaxis. Hence it is that at the hottest season of the year, hemorrhages in our climate are most frequent. Hence also it is that an overheated bath, heated rooms, indulgence in ardent spirits, the sun-stroke, violent exercises, so affect the circulation that hemorrhages oftentimes immediately ensue. Intense thought long persisted in, renders the vessels of the brain turgid, and gives rise to a blood-flow.

Hence, too, the great imprudence and injury of ordering those patients threatened with phthisis, who evince the hemorrhagic diathesis, to overheated and dry climates; those who labour under what I have elsewhere termed hemorrhagic phthisis should never be sent to a climate which tends directly to augment the existing and often fatal evil.

Those causes which suddenly excite and stimulate the heart's action, so as to propel blood more rapidly to the brain, do, in many persons, give rise to epistaxis. In fevers, at the commencement of the stage of reaction, this is especially and strongly exemplified. A flow of blood from the nares is the starting-point of many fevers, of none more frequently than the Rubeolæ.

Some months since I happened to attend two boys, each about ten years old, in the same room. They were playfellows and companions, but not relatives. I was much struck by the contrast between these two cases. One possessed a sound constitution, free from any hereditary taint, and had never been affected with idiopathic epistaxis. The other had not long recovered from a tedious and prolonged succession of strumous abscesses of the cervical glands, which left characteristic and deforming scars and cicatrices. From infancy he had been prone to distressing and perpetually recurring attacks of epistaxis. Twice the blood-flow was seriously profuse. Both these boys were attacked, within a few days of each other, with measles. At the time when the rash was beginning to appear they both complained of headache, and they both bled from the nose; the boy with untainted constitution had no recurrence of the bleeding, was greatly relieved by it, and passed through the disease without one untoward symptom; the boy who was marked with the signs of struma (both his parents were intensely strumous) during three days bled so frequently, so copiously, that his life was endangered. The former was in a few days perfectly restored; but months elapsed ere he who was marked with struma resumed his former ruddy and deceptive appearance of health.

Thus were evinced, in strongly contrasted relief, the temporary and salutary epistaxis of a perfect constitution, and the protracted and exhausting epistaxis of the distinctly impressed strumo-hemorrhagic diathesis.

Here it may be noticed how very distinct the hemorrhage of incoming fever is from that which takes place towards its close. Epistaxis is the most frequent variety of bleeding during the hot stage; intestinal, sometimes uterine, when the fever is advanced; and when, at this stage, it or any other variety of hemorrhage, sets in profusely, it is a most formidable symptom, and indicates the great change which has been wrought by continued febrile action in the component ingredients and constituency of the blood. At the ingress of the reaction of fever no material change has as yet been produced; towards the close the blood has been thinned and altered.

Of all the signs of the febrile movement the most invariable is wasting. No matter what the type, this is the most uniform result. Scanty are the supplies; the primary assimilative function, is, in a great measure, suspended; so must be that of sanguification. The body feeds upon itself; as fever progresses, the blood becomes more and more attenuated; and in those fevers which are caused by malaria and by animal and other poisons, the blood becomes so deteriorated, so reduced in tenacity and density, that it oozes and is exhaled from mucous surfaces. Thus a passive hemorrhage is produced, altogether distinct from the active hemorrhage which so frequently, at the incoming of fever, relieves the tension and increased action of the vessels of the brain.—*Medical Press and Circular.*

A NEW TREATMENT OF LEAD POISONING.

[Translated from the Gazette des Hopitaux.]

In a recent clinical lecture, Prof. Monneret, of the Paris Medical School, gave the following exposition of his peculiar treatment (cold intus and extra) of lead poisoning:

Of all poisonings, that by lead and its salts is the most frequent. It is not my intention to-day to describe the different phenomena of this intoxication; I shall only say that they are very varied, and come on sometimes slowly, sometimes rapidly. In the first place, the workmen experience vague abdominal pains. Then there are troubles of the sensibility and motility, commencing in feebleness and ending in paralysis. After a certain time the abdominal colics become very violent, and are accompanied by obstinate constipation. This increase in the intensity of the colics is often due to excesses in drinking, which are usually denied by the patients.

Like other physicians, I had always treated these accidents by the free use of evacuants, when, some eight or nine months ago, the idea of a rational treatment suggested itself to me, based upon the supposition

that the principal symptoms are due to an affection of the sensitive and motor nerves. This treatment was by the application of cold, *intus et extra*. Cold, as is well known, either directly or though the capillaries, has a great influence upon the nervous system, and thus upon the secretions. For this reason I was led to inquire whether the sensibility and secretions of the intestines could not be modified by the action of cold as well as by that of the evacuants which I, in common with others, had always employed. The experiment being a harmless one, I was perfectly justified in making it, and, in addition to this, I was confirmed in my ideas by the success of an analogous preventive treatment by hydrotherapy as followed, under my directions, in one of the Clichy workshops. I myself, in my own service, have used this treatment in more than forty cases of workmen showing the early symptoms of lead poisoning, and have found it sovereign.

As soon as I see the patient I order him some iced drink, lemonade for example, occasionally adding a little wine. At the same time I order three cold water injections daily, the water to be retained in the rectum as long as possible. In addition to the cold drinks and injections, the patient is subjected to hydrotherapy morning and evening, and, in some cases, a shower-bath is given at noon. This may be from a hose-pipe, or the ordinary shower-bath, and should never last more than a minute. The action of this douche is not simply refrigerant, but is much more profound and general, stimulating the capillary vessels, which contract, at first, driving back the blood, and then expand, allowing a free return. Sometimes the action of the glands is increased, and a light perspiration covers the body. These effects of hydrotherapy, upon which I hope to dwell longer at another time, are very manifest and very active, and one can understand that the activity of the tissues is renewed. To these different means I add a cold poultice, in order to maintain a constant refrigeration. And, in this connection, let me teach you what I was ignorant of for a long time—that is, the way to make a cold poultice.

Take a large linen or cotton cloth, and on it spread a layer of linseed meal half an inch thick. Upon this place pieces of ice about the size of a hen's egg; then add another similar layer of meal, and then fold the cloth over so as to inclose the whole. Apply this to the abdomen, and the gradual melting of the ice keeps up the influence of the refrigeration for some three hours. This powerful agent I employ, not only in lead colics, but in all cases in which such action is indicated (such as typhoid fever and peritonitis, for example) and greatly prefer it to the application of ice in bladders, which is sometimes intolerably painful to the patient. By the treatment just described the most speedy results are obtained, and I

have seen the disease entirely cured in from two to seven days. In the forty cases observed by me, with two exceptions, all the symptoms of nervous trouble have disappeared as if by enchantment. The progress toward cure is this: during the first three days the constipation persists, and the injections are returned as they were given; the pain, however, disappears. On the fifth or sixth day the fæcal matter, more or less softened, is rendered naturally, and the cure is complete.

For a long time this treatment appeared so simple that I regarded it as purely palliative; to day, however, I consider it a powerful curative agent, acting upon the capillary and vasomotor systems, and putting in play the natural secretions and excretions, thus aiding the organism to free itself from the poison which has manifested itself by a profound disturbance of the nervous system. It is by restoring to this its activity and molecular action that cold is curative to such an extent.—*Boston Medical and Surgical Journal.*

GONORRHŒAL RHEUMATISM.

Dr. Parvin, the editor of the *Western Journal of Medicine*, translates the following description of Gonorrhœal Rheumatism from the *Archives Générales de Médicine*. The disease is not sufficiently borne in mind by many practitioners, and we are glad of this opportunity to call their attention to it:

Fournier believed in the specific nature of blenorrhagic rheumatism. 1st. The blenorrhagia, or more properly the urethral affection, is not only the occasional cause of rheumatism; it is the efficient, direct, necessary cause. 2d. The articular or other complications of blenorrhagia are very different from simple rheumatism, very different as to symptoms, as to localizations, as to evolution, as to possible complications, as to future consequences, and hereditary transmission, etc., whence can be inferred an essential difference between these two maladies.

The following characters distinguish them from each other: 1. The recognized and established cause of an attack of simple rheumatism is the influence of cold, or of a rheumatic diathesis. From personal researches, M. Fournier affirms that cold or moisture are absolutely foreign to the manifestations of blenorrhagic rheumatism: nor has any hereditary or acquired arthritic diathesis any more influence. The cause of these manifestations is the blenorrhagia, and we see patients who, independently of any preceeding cause, have rheumatism with each new blenorrhagia.

2nd. The symptoms offer differences not less marked. Blenorrhagia

rheumatism is oftenest apyretic, or if there should be fever, it is less intense, less persistent than in simple rheumatism; it is neither accompanied with the profound depression, nor with the sympathetic phenomena which are observed in acute rheumatism. Blenorrhagic rheumatism is quite often mono-articular, or at least is never generalized over the system to the same extent as simple rheumatism; often it is almost indolent, or quite in character with a true arthritis it is exceedingly painful; it is much more fixed; it does not offer those sudden or rapid *delitescences*, frequent in common rheumatism; resolution takes place with greater difficulty, and often leaves behind a hydrarthrosis, which is rare in the last; finally the blood does not present the buffy coat so constant in acute simple rheumatism.

3d. The complications in the great serous membranes, which simple rheumatism develops, are as rare, as exceptional as possible in blenorrhagic rheumatism.

In return, this has a very curious localization, which falls in simple rheumatism: it is opthalmia, not that which results from the contamination of blenorrhagic pus, but that form known as metastatic, or from internal cause, essentially benign in comparison with the preceding, almost always affecting both eyes, and passing from one to the other with remarkable mobility. In forty-five cases, M. Fournier has observed seventeen in which there was association with articular symptoms.

The evolution, the duration, the terminations of the two maladies equally differ.

As to treatment, while general remedies succeed best in simple acute rheumatism, on the contrary, in blenorrhagic rheumatism local means, (local blood-letting, blisters, painting with tincture of iodine, absolute immobilization, etc.), are efficacious.

Finally, recurrences are very frequent in each disease, but under different conditions. Simple rheumatism recurs under causes the same as those which have produced a first attack; cold moisture, etc., or from constitutional disposition. Blenorrhagic rheumatism, on the contrary, repeats itself only as the result of a new blenorrhagia.

From the establishment of these differences, both numerous and radical, continues M. Fournier, I believe myself authorized to conclude: 1, that blenorrhagic rheumatism is not a simple rheumatism supervening as an incident in the course of a blenorrhagia; 2, that it has its own individuality, and ought to be distinguished nosologically from simple rheumatism.

If in certain complex and difficult cases there appear to be strong analogies between the two diseases; in its pure and simple forms, blenor-

rhagic rheumatism has a physiognomy so peculiar that it is recognized at once by the practitioner of a little experience.

After having thus presented the different arguments which demonstrated, in his opinion, the specific character of blenorrhagic rheumatism, he next inquired if the name given it represented the true idea we should have of the disease.

The name *rheumatism*, because consecrated in medical language, should be preserved, and in addition, blenorrhagic rheumatism is a special mode of this complex morbid state called rheumatism. As to the term *blenorrhagic*, when we consider that this term is badly defined, and has been applied to affections very different from each other; and that, on the other hand, rheumatism far from manifesting itself indifferently in all diseases called blenerrhagic, is never observed but with a urethral blenorrhagia, it would seem essential that the urethra must be involved in order that the rheumatismal manifestations should be produced.

Comparing, then, these accidents with those which simple excitation of the urethra can cause, such as intermittent febrile paroxysms, suppuration in different parts of the body, arthritis even. M. FOURNIER thought that the rheumatism called *blenorrhagic* could be a manifestation of the same sort, and like them, be a reflex phenomenon of urethral irritation. It was less a *blenorrhagic*, than a *urethral* rheumatism; the author proposed the adoption of this name.

LARYNGOSCOPY.

The following useful suggestion is made by a correspondent of the *Chicago Medical Examiner:*

"I have frequently been able to overcome the irritability of the throat, sometimes so troublesome in laryngoscopic examinations, by throwing upon the velum and posterior portions of the pharynx a spray of sulphuric ether, by means of RICHARDSON'S apparatus. The patient should take a full inspiration before commencing the operation, and the spray should be rapidly carried from point to point, so as not to produce congelation. This method is quicker, more convenient, and more efficacious than ice."

Sir William Ferguson has been appointed Seargent Surgeon to the Queen. The old title of Seargent Surgeon extraordinary has been revived, and Mr. Paget appointed to the office. These appointments according to the *Medical Times and Gazette* give great satisfaction to the profession in Great Britain.

Canada Medical Journal.

MONTREAL, DECEMBER, 1867.

AN INSANE HOSPITAL.

We have frequently referred to the subject of Lunatic Asylums and have more than once drawn the attention of our Legislature to the great need of an institution specially designed for the treatment of the insane in this portion of the Province of Quebec.

We are at present in a political transition state, but it is to be desired that in the matter of our public charities, the local legislature in whose hands these affairs are left will act with promptitude and decision. We have before alluded to the barbarous state of the law as at present administered in regard to the insane. We mentioned last year the case of a poor servant girl who was attacked with acute mania following erysipelas of the head. She had been a patient in the Montreal General Hospital, and lacking the means in that institution of treating her secondary malady, the House Surgeon, Dr. Drake, made application to one of the Judges for a special order for her removal to an asylum. This could not be granted and the unfortunate girl had to be sent to the common gaol. No vacancy occurred in the asylums either at St. Johns or Beauport, and in the course of a week or two death relieved her of her sufferings. Is this the only case of hardship that could be mentioned? We fear not. Indeed, in one of Dr. Howard's reports, there will be found the case of a woman who was sent from the Quebec gaol to the make-shift Asylum at St. Johns, and who died a very few minutes after her admission into that institution. These facts should be sufficient to urge on our Local Legislature the imperative necessity of moving in this matter, and without delay. Cases of acute mania are occurring almost daily, and the community in and about Montreal are constantly obliged to send their sick to the United States, because there is not in the length and breadth of this land a suitable institution for their care and treatment.

These reflections are suggested in consequence of having been requested by Mr. G. F. Cole, architect, to examine plans about to be submitted to the Government by the Medical superintendent of a building to take the place of the Asylum at St. Johns. It is, we believe, the intention of Dr. Howard, the able and efficient superintendent of that institution, to offer to build an Asylum provided the government prefers the contract system, and will grant him similar terms as those held by the proprietors of the Beauport Asylum.

We cannot but condemn the system of private Asylums, but in the absence of either means, or a desire to spend it, on the part of our government, we can only accede to the next best scheme as it is manifestly a reproach on our humanity to remain much longer without an Insane Hospital. We trust, however, that whatever scheme is chosen, due regard will be made to ample cubic space. In the Imperial paper on Colonial Hospitals and Lunatic Asylums, at part III there will be found "General Suggestions," and amongst these the following: "that in associated wards the total superficial space allowed to each patient, including the area of the bed, should not be less than 7 feet by 11, in General Hospitals, and 5½ by 9, in Asylums; the height of the ward should not fall short of 13 feet, nor the width of 22 feet." This would give in Asylums for insane a breathing area to each patient of nearly 800 cubic feet. In the plans which we have seen it is proposed to give 800 cubic feet in all associated dormitories and a greater area in single rooms. Ground room there is no lack of in our country, and in erecting a building for the above purpose all the scientific knowledge of the day should be brought to bear. We do not profess to understand architectural requirements, but must state that the plans submitted to our inspection appear to be excellent and a very decided improvement on the buildings already in existence in other parts of the Province.

Again we urge on the government prompt and decided measures on this important subject, and we trust, in selecting a site that the neighbourhood of Montreal and not St. Johns will be chosen.

CHANGES IN THE MEDICAL FACULTY OF McGILL UNIVERSITY.

Owing to the continued ill health of Dr. Sutherland, who has filled the chair of Chemistry since the year 1849, he was this fall compelled to resign his Professorship. At the meeting of the Governors of the University in October last, at which his resignation was received, he was unanimously elected Emeritus Professor. At the same time Dr. Robert Craik, formerly Professor of Clinical Surgery, was una-

nimously elected to the Professorship of Chemistry; Dr. George E. Fenwick was also elected unanimously Professor of Clinical Surgery. During the seasons 1866–7, Dr. Craik lectured for Dr. Sutherland, and Dr. Fenwick lectured for Dr. Craik. Dr. Drake, House Surgeon of the Montreal General Hospital, has been appointed by the Faculty, Demonstrator of Anatomy, and Dr. George Ross has been named Curator of the Museum. While congratulating these gentlemen upon their several appointments, we cannot but deeply regret the cause which has occasioned it. As a lecturer on Chemistry, Dr. Sutherland had few equals—being thorough master of his subject, and gifted with a ready flow of language, which enabled him to throw around even the most tedious portions of chemistry an interest sufficient to attract the attention of the student. We are sure that all who have had the pleasure of following his course will unite with us in the hope that ere long his health may be completely restored.

A CORRECTION.

In the London *Lancet*, of the 2d of November, there appears an article from the pen of Sir J. Y. Simpson, Bart., M.D., of Edinburgh, on "Carbolic Acid and its uses in Surgery." In the course of the article he alludes to some remarks made by Dr. Hingston, of Montreal, at the meeting of the British Medical Association, in the following words:—"In the discussion which followed, Dr. Hingston, the able and accomplished Professor of Surgery in the McGill College of Montreal, stated to the surgical section," &c., &c. We need hardly remind our readers that Dr. Hingston is Surgeon to the Hôtel Dieu and not Professor of Surgery in McGill College, that chair being now filled, as it has been for the past thirty years, by G. W. Campbell, A.M., M.D., the worthy and respected Dean of the Faculty. We believe Dr. Hingston has made the correction in the proper quarter.

We notice by the *Lancet* of November 2, that W. H. Corbett, M.D., Staff Assistant Surgeon, has been promoted to Staff Surgeon. We congratulate the Doctor on his promotion. Dr. Corbett is a son of Sheriff Corbett, of Kingston, and is a graduate of McGill College, May, 1854.

The *Philadelphia Medical Reporter*, of November 2, informs us that Asiatic Cholera, of a very malignant type, broke out suddenly the previous week in the Navy Yard, near that city.

We notice amongst other announcements of New Books that our friends Messrs. Lindsay & Blakiston, Medical Publishers of Philadelphia, are preparing to issue early in January next "Reports of Cases and Clinical Lectures by the Medical and Surgical Staff of the Pennsylvania Hospital, with illustrations, &c., &c. This is the first issue of this kind in the United States, and coming from the oldest Hospital and from the very centre of Medical Science there, it will no doubt form a very creditable and attractive volume.

From the same publishers, and to be issued about the same time, we are promised "An Annual of Therapeutics, Pharmacology, &c., translated from the French of A. Bourchadat, Professor of Hygienne, &c., to the Faculty of Medicine Paris, and edited by M. J. DeRossat, M.D., adjunct to the Professor of chemistry in the University of Maryland, &c., to form a neat 16mo volume. The eminently practical character of this publication which appears annually in Paris, and its extended circulation throughout Europe, have induced its reproduction in this country.

Professor Dickson, of Jefferson Medical College, in a learned paper in the *Richmond Journal*, sustains the doctrine of cycles in disease, and declares his belief that venesection is again becoming a necessity of practice. "We have ceased to be burthened," he says, "with the prevailing timidity as to the lancet. Even if we are mistaken in our belief that we have passed through the adynamic cycle, and in the advent of a new phase less asthenic, surely the experience of our late war has proved, that under the most depressing contingencies of imperfect nutrition, shelter, ventilation, clothing, the loss of blood is far less impressive for evil than has been supposed. And we will hereafter bleed a patient in a doubtful case with vastly less misgiving, and offer him much more readily the chance of a reasonable experiment, the *anceps remedium*, which may require courage, but which, as I have maintained, we are bound to prefer to abstinence or inaction."—*Pacific Medical and Surgical Journal.*