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CANADA

MEDICAL & SURGICAL JOURNAL

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Original Communications.

THE INFLUENCE OF CERTAIN OCULAR DEFECTS IN CAUSING HEADACHE.

BY F. BULLER, M.D.,

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(Read before the Canadian Medical Association, at Hamilton, September, 1887.)

The influence of abnormal conditions in the organs of vision in causing headache has long been recognized, but it cannot even now be said that the nature of that influence in all its bearings is fully understood. The term *eye strain* is, indeed, applicable to a very complex condition, in which anatomical, mechanical, muscular and nervous influences variously combined each play their part. Whenever there is a deviation from the normal state in any one or more of these particulars, visual disturbance of some sort is likely to result, and with it more or less disturbance of function in other parts or organs.

In the eyes themselves, such disturbance of function most frequently presents itself to the ophthalmologist in some form of so-called asthenopia. Many cases of this kind are also accompanied with reflex disturbances in parts more or less remote from the eyes, the most important of which, in point of frequency at least, undoubtedly is headache. Headache from this source may attain any degree of severity, from mere discomfort to the most unbearable agony. It may be constant or intermittent, but in any case it is likely, in the long run, to resist every remedial measure until the visual difficulty, whatever it may be, is discovered and suitably corrected. Some experienced ophthalmolo-

gists go so far as to contend that nearly every case of migraine or sick headache is associated with some defect in the visual apparatus ; for my own part, whilst admitting that such an association is of frequent occurrence, I am inclined to think there is a large proportion of these cases not to be accounted for in this way. Others, again, claim that all sorts of nervous disorders, including chorea, epilepsy and insanity, are often due to the same cause ; on this point I am not prepared to express an opinion.

There is, however, among ophthalmologists, and through their labors also, I think, in the general profession, a settled conviction as to the importance of ocular defects in causing headache. On this subject there is, however, but little information to be gained from the ordinary text-books of medicine, though current literature contains much that is well worth careful study.

Every one has heard of remarkable cures of headache by the correction of certain errors of refraction, and there is, perhaps, a widespread notion that ocular defects causing headache only require the adaptation of suitable glasses to remove the trouble. This is quite true of certain cases, the correction of the refractive error may accomplish all that is to be desired. Sufferers from headache during half a lifetime have time and again been cured in a few days by wearing the glasses that have corrected a simple hyperopia. I once saw a student who had reached the third year of his university course, a martyr to headache all the time, and subject to attacks of vomiting if he studied longer than two hours consecutively, so disheartened that he had decided to abandon his university career when he found himself suddenly cured of all his ailments by wearing convex cylindrical lenses of 36 inches focus. Convex sphericals of the same focal distance had been used for some time previously without benefit. Here there was only a simple error of refraction, slight in degree, but giving rise to symptoms that might readily have been mistaken for some serious organic disease. Such a case can, I take it, only be explained by assuming an instability of nerve force which a trivial disturbing element was capable of putting completely out of balance. On the other hand, it is a matter of daily experience to meet with persons whose visual apparatus presents

infinitely greater deviations from the normal without setting up any noticeable mischief.

As a rule, those who suffer considerably from slight ocular defects are neurotic subjects, in whom minor ailments are apt to make more show than serious ones do with those whom nature has endowed with vigorous nerve power. But there are visual abnormalities which even the most vigorous cannot bear up against without suffering, more particularly when any unusual demands are made on the organs of vision, or when from any cause the general-health becomes deteriorated. In such persons the true nature of the troubles they experience is exceedingly apt to be overlooked unless the eye symptoms happen to predominate, which by no means always occurs.

I have said the elements which may unite to produce eye strain, though simple in themselves, constitute a complex condition when so combined. Let us consider the most important ones separately, always bearing in mind that several may be combined in the same individual.

First of all come the errors of refraction—myopia, hyperopia and astigmatism. Next we have defective muscular action both of the extrinsic and intrinsic muscles of one or both eyes, in which any one or more of these may be implicated. Lastly, there may be faults in the perceptive organs—that is, of the retinae and their nerve centres. This third division we may leave out of the question, as a consideration of this part of the subject would take us beyond the limits of a short discourse.

It is the physiological demand for binocular vision and for distinct vision that under certain circumstances induces eye strain and consequent headache. We must therefore direct our attention chiefly to the muscular apparatus, any portion of which may be defective in power, or, what amounts to the same thing, the demands made upon it may for various reasons be greater than it can bear.

In hyperopia and in astigmatism the chief demand is for distinct vision, hence the ciliary muscle is liable to be overtaxed, and there will be accommodative asthenopia. In myopia, the muscles of convergence are placed at a disadvantage, and we are more likely to meet with so-called muscular asthenopia.

Both in myopia and hyperopia, as shown by Donders, the acts of accommodation and of convergence, which are essential to binocular vision, become disassociated. It is only in the emmetropic eye that they are arranged to act equally at all distances. This want of harmony between the intrinsic and extrinsic muscles is in itself a fruitful cause of eye strain. As a manifestation of this disassociation, we often meet with the obvious muscular defect called strabismus, usually convergent in hyperopia, and divergent in myopia. In emmetropia, the range of distinct vision, consequently both of accommodation and of convergence, is from infinity up to some near point, say a few inches distance, but in the above mentioned errors of refraction, though there is the equivalent range of distinct vision, it is displaced more or less, backwards from the normal near point in myopia, and forwards in hyperopia. Correction of these errors of refraction acts beneficially in each case by restoring the range of vision to something like its normal position, and, consequently, in re-establishing the association between convergence and accommodation. Correcting glasses also act, in hyperopia, as a direct relief to the ciliary muscle by diminishing the necessity for excessive accommodative efforts, whilst in myopia suitable glasses relieve the necessity for extreme convergence. In astigmatism, the constant effort to obtain distinct vision is particularly irksome, probably because it induces an irregular action of the ciliary muscle, a structure which nature has designed to act uniformly in all its extent, and which, on account of its delicate functions, is endowed with numerous and extraordinarily sensitive nerves. In astigmatism, then, we have to deal with accommodative asthenopia. But when the extrinsic muscles are at fault, the difficulties caused by otherwise uncomplicated errors of refraction cannot always be remedied by glasses that correct the refractive error. There can be no doubt that defects in the extrinsic muscles are met with much more frequently in connection with errors of refraction than in the normal eye, and it is sometimes found that a suitable correction of the refractive error will in time restore muscular equilibrium where this has been defective. Correcting glasses can often be supplemented in their action by combination with prisms in such a position as to relieve the strain

of overworked muscles. Combinations of this sort may have the happiest effect in allaying the visual disabilities of those who suffer from both refractive and muscular errors. There are, however, cases in which a defective action on the part of the extrinsic muscles is the sole cause of the visual difficulty, and I am convinced that a large proportion of those cases in which a careful correction of the refractive error affords little or no relief to the symptoms of eye-strain can be explained by the presence of some defect in the action of the extrinsic muscles, either inherent or the result of long habit—a defect which must be corrected before relief can be obtained by wearing glasses. The following case illustrates this point:—

Mrs. S., aged 37, consulted me in the year 1883 on account of short sight, weak vision, and almost constant headache, troubles which dated back to girlhood, and from which she had never been able to find relief. She was wearing concave spherical glasses for distance only, of 16 inches focus. Under atropine I found M $\cdot 1/14$, with myopic astigmatism about $1/60$, vision $\frac{20}{20}$ each, and apparently some weakness of the internal recti, but, as I thought, not enough to call for special attention (at that time I was not in the habit of testing the muscular functions in doubtful cases as carefully as I do now), I ordered -18 to be worn constantly if possible. Three and a half years later—that is, last April—she came to me again complaining that the eyes and head were, if possible, worse than ever. I then found the refraction, corrected under atropine: R., -4.50 D $\odot -0.50$; D ax. 70° ; vision $\frac{20}{30}$. L., -4.50 D $\odot -0.75$; D ax. 100° ; vision $\frac{20}{20}$. With this correction there was a latent divergence at 6 metres distance, \approx pr. 6° , abduction $\approx 15^\circ$, adduction the same. Abduction increased by exercise to 18° and adduction to 25° . Though varying slightly from day to day, repeated examinations substantially confirmed these conditions. There was thus an evident loss of muscular balance in favor of the external recti. This I corrected by a partial tenotomy of the left external rectus carefully regulated to exactly correct the latent divergence. She was directed to continue using the same glasses as before. A month later she came to report the result. There was then perfect muscular balance at 6 metres, abduction 12, adduction

30. From the day of the operation the headache had entirely disappeared.

Insufficiency of the external recti with latent convergence has lately also become a well recognized condition as a cause of asthenopia and its attendant discomforts. This condition is perhaps of less frequent occurrence than the same defect in the internal straight muscles. When discovered, however, it may, if necessary, be remedied by taking from the internal recti their overplus of power, or the relative strength of the externi may be augmented by a carefully regulated advancement of the tendon.

I now come to what I believe will prove to be one of the most important muscular anomalies, for the detection of which and a precise knowledge of the proper measures for its relief we are mainly, if not entirely, indebted to Dr. Geo. T. Stevens of New York. I allude to defective action of the superior and inferior recti. I have recently found this defect to be of more frequent occurrence than I should have anticipated, and it is of extreme importance, not only on account of the visual and other (reflex) disturbances an error of this kind is capable of inducing, but also in its influence on the action of the other ocular muscles. I now consider no test of the muscular functions to be complete unless the condition of the superior and inferior recti is carefully taken into account, because a latent vertical deviation so disturbs the balance of the other muscles that the most misleading results are likely to be obtained if a vertical deviation has been overlooked. The terms suggested by Dr. Stevens to express the various abnormal conditions of the extrinsic ocular muscles seem to me entirely satisfactory, and I now always employ them in my records. Vertical deviation or *hyperphoria* may be combined with any error of refraction, and with lateral deviation in either direction, such as the following case, which is one of compound hyperopic astigmatism, with hyperphoria and exophoria:—

Mrs. F., aged 36, a thin, worn-looking woman, has had pain in the eyes and headache for many years, always aggravated by near work. In Dec. 1883, I found under atropine—

R., + 32 s. \odot —80 c., ax. 135° , $\frac{20}{20}$.

L., + 40 s. \odot +14 c., ax. 130° , $\frac{20}{40}$.

and ordered these for all near work. They afforded some relief,

but the headaches remained as before. She came again in April, 1887, and I found the refraction unchanged. After repeated examinations I found 1° of right hyperphoria and 2° of exophoria, abduction $=9^\circ$, adduction $=16^\circ$. After partial tenotomy of left lower rectus, the hyperphoria was corrected, but the lateral deviation remained unaltered. This was also corrected by partial tenotomy of right external rectus. On June 14th there was exophoria 1° , abduction 6° , adduction 23° , and freedom from headache. On June 25th there was exophoria $=2^\circ$ and some headache after prolonged use of the eyes. The remaining exophoria will probably require a repetition of the tenotomy. There is evidently still a considerable degree of latent excess of strength in the externi.

In another case, a gentleman 45 years of age, there was: R. H. $=0.75$ D $\frac{20}{20}$. L. H. $=4$ D. $\bigcirc +2$ D. c., ax. 110, $\frac{20}{30}+$. With frequent headache and the head feeling so badly he was in great anxiety, fearing the head symptoms indicated organic disease of the brain. Here the correction of $1\frac{1}{2}^\circ$ right hyperphoria by partial division of the left inferior rectus and the correction of the error of refraction by glasses relieved the head completely.

The same error of muscular balance will undoubtedly cause distressing symptoms where there is no error of refraction or one so slight that it will not account for the symptoms. I have recently seen a marked instance of this kind, and will here give another in which the error of refraction was trivial, but the patient a great sufferer from headache and weak vision; he also had a worn, distressed look which one often meets with in cases of eye strain:

C. A., aged 29, has had weak vision since his school-days, and suffered almost constantly from headache. In 1880 I treated him for an anterior choroditis of the left eye, from which he made a perfect recovery, but I did not succeed in relieving his asthenopia. Last June I again had an opportunity to examine the eyes, and found, under atropine: R. $+0.75$ D s. $\frac{20}{20}$. L. $+0.75$ D s. $\bigcirc 0.75$ D c., $90^\circ \frac{20}{20}$. There was slight insufficiency of the internal recti, with exophoria 1° and left hyperphoria 1° . A correction of the latter gave immediate freedom from headache, and was soon followed by a marked improvement in his general health.

There can be no doubt that visual imperfections which call for a constant and abnormal expenditure of nerve force, such as must necessarily be the case where there is a latent deviation of the optic axis in any direction, is not only a frequent cause of morbid conditions in the eyes themselves, such as conjunctivitis, blepharitis and keratitis, perhaps, too, of deeper seated inflammatory affections of these organs, but also of headache, migrain, neuralgia and other nervous disorders. That they cause deterioration in the general health almost goes without saying.

Every subject of such visual defects as these is handicapped or over-weighted to just such an extent that he is liable to break down before the finish. In the cases I have quoted I have not, for obvious reasons, gone fully into details, but enough has been said to show their bearing on a subject which seems to me to merit more attention than hitherto has been bestowed upon it even by those who have to do exclusively with ophthalmic surgery; and, I am convinced, the facts I have endeavored to bring forward may be used as a key to unlock the hidden secret of many obscure and troublesome cases that would otherwise stand as an opprobrium to medical art, bidding defiance to all its resources.

THE DANGERS AND ACCIDENTS OF LOCAL TREATMENT IN PUERPERAL CASES.

BY JAMES C. CAMERON, M.D.,
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Dr. Matthews Duncan has somewhere remarked that the subject of antiseptics in midwifery is by far the most important obstetrical question of the day, being of even greater moment to the public than the prevention of epidemics, for while epidemics come only at intervals, puerperal septicæmia is a constant menace to the lives of a most valuable portion of the community. Antiseptics may justly be said to have revolutionized the practice of midwifery, so that results impossible anywhere a few years ago are now everywhere obtainable. Antiseptic midwifery in some form or other is practised almost universally; but, unfortunately, general use is apt to run speedily into abuse, and the antiseptic system is no exception to the rule. Uterine and

vaginal douches, when properly administered in suitable cases and at suitable times, are invaluable, but otherwise they may prove dangerous. To point out some of the dangers and show how they may be avoided is the object of this paper.

The opinion seems to be prevalent among the profession that, while the intrauterine douche is *generally* safe, the vaginal douche is *perfectly* so. No particular skill is considered necessary. Impressed with its harmlessness, some recommend the antiseptic vaginal douche as a prophylactic against infection during the puerperal state, and advise its use in all cases. Not unfrequently we find the operation entrusted to the nurse or some incompetent person, without direction or supervision, as if douching was a trivial matter out of the province of the physician or perhaps beneath his dignity. With such doctrines and practice I cannot agree, for in my opinion prophylactic douching during the puerperal state is not only unnecessary, but frequently the cause of serious harm. Though believing in thorough antiseptics during labor and the puerperal period, and admitting the value of vaginal and uterine douching in certain conditions, I am nevertheless convinced that the douche is not perfectly harmless, and that it should be used only when clearly indicated, and then with caution.

Liability to absorption through tears, fissures, abrasions or other traumatisms constitutes the chief danger of the vaginal douche. The contraction of the constrictor muscles narrows the orifice of the vagina and favors sacculation of its canal; consequently part of the infection is apt to be retained, perhaps for a considerable time. Indeed absorption is more liable to take place through the vagina than through the uterus, because the latter usually contracts firmly and empties its cavity, especially if the injection be hot.

For various reasons the intrauterine douche is more dangerous than the vaginal, especially if the current be too strong or the outflow insufficient. Fluid may be forced through the Fallopian tubes into the abdominal cavity, causing acute peritonitis or even death, as in Vöht's case; or a thrombus may be dislodged from the placental site and hemorrhage take place; or air may find its way directly through the uterine sinuses into the veins; or

some of the injection fluid may enter the veins. In Stadfeldt's case, symptoms of poisoning appeared while a large sublimate douche (1 to 5000) was being administered, proving that the mercuric solution entered the circulation directly. The uterine sinuses, firmly attached to the muscular wall of the uterus, are closed during muscular contraction, but gape open during relaxation; therefore, in relaxed conditions of the uterus, fluid or air may readily penetrate into the veins. I have seen sudden death produced in this way during an intrauterine injection of perchloride of iron for post-partum hemorrhage.

The fluids most commonly used for injection are plain water or solutions of permanganate of potash, carbolic acid or corrosive sublimate. Plain hot water is the safest, and is quite sufficient when debris is to be washed away and a simple mechanical effect is the only one desired. But in septic cases where germicide action is also required, corrosive sublimate is by far the most effective, but at the same time it is the most dangerous. Death has occurred in sixty hours from the effects of an intrauterine sublimate douche (1×2000). Patients suffering from anæmia or kidney troubles are very susceptible to the action of mercury; so, too, are those who have recently been under mercurial treatment, or in whom there is marked atony of the uterus or extensive traumatism of the genital tract. It may be taken as a general rule that sublimate injections are contra-indicated in all such cases, or should at least be given with the greatest caution.

Frequently an intrauterine douche is followed by a chill and rapid rise of temperature (104° or over), accompanied sometimes by colic and abdominal tenderness. As a rule, these symptoms are of nervous origin, though exceptionally they may be due to absorption. In men, the passage of a catheter or sound is occasionally followed by a sharp rigor and high fever; surgeons call this urethral fever, and attribute it to nervous influences. Similar symptoms may be caused by the passage of a uterine sound or by artificial dilatation of the cervix, without any evidence of inflammatory mischief; nervous influences are undoubtedly the cause. So in like manner, the passage of a foreign body (irrigation-nozzle) into the uterus, and the distension of the uterine cavity with fluid, especially if the outflow be

insufficient, may produce similar nervous symptoms sometimes of an alarming nature.

What precautions are to be taken for the avoidance of these dangers and accidents?

1. The patient should always be placed across the bed in the *dorsal* position, with hips well raised and thighs everted. The operator has then better control over the direction and force of the injection as well as over the outflow. In intrauterine douching, the anterior lip can be more easily seized and the uterine cavity straightened, if the patient is lying in the dorsal position.

2. The vaginal or uterine nozzle should be *inflexible* (glass or hard-rubber), without a central orifice in the bulb (to avoid injecting fluid through the Fallopian tubes or dislodging thrombi from the placental site). The openings in the bulb should be directed slightly backwards, so that the injection stream may flow away from the fundus, not towards it.

3. A sufficient outflow should be secured. The vaginal orifice should be kept open. Before an intrauterine douche is given, the anterior lip should be seized with a vulsellum or tenaculum and drawn gently downwards till the uterine cavity is straightened. The nozzle can then be more easily introduced, and a good outflow is secured. After the operation it should always be ascertained that there is no pouching of the vagina or retention of fluid.

4. The quantity of fluid injected should be small; from one to two litres is quite sufficient. Large and long-continued injections are not more effectual, while they greatly increase the risks.

5. Antiseptic injections should be weak, unless powerful germicide action is required in acute septic cases. For an ordinary vaginal douche a sublimate solution of 1×7000 or 1×5000 is quite strong enough. The strong solutions (1×2000 or 1×1000 , or even 1×500) should be used only in urgent septic cases, and then with the greatest caution. After a sublimate injection, a pint or two of plain hot water should be run through to wash away any retained sublimate, thus lessening the risks of absorption.

6. The injection should always be used hot (108° – 112° F.)

Hot water is a powerful stimulant, causing the uterus to contract firmly, thus closing up the sinuses and tubes, and expelling the injection fluid from its cavity.

7. To prevent nervous chill and rise of temperature, a glass of brandy or some diffusible stimulant should be given fifteen minutes before operating. The stimulant acts primarily by bracing up the vascular system, and secondarily by increasing the resisting power of the nervous system. If this precaution be taken, and the injection be given rapidly and without undue exposure or chilling of the surface, rigors and fever will rarely follow. In very nervous, excitable patients, or where there is likely to be pain, ether may be advisable.

8. During the more severe methods of intrauterine treatment, such as curetting or brushing (*écouvillonnage* of Doléris), the placental site is apt to be disturbed; some of the little plugs may be scraped or brushed away from the mouths of vessels, permitting the entrance of air, fluid or septic matter. Curetting or brushing should be followed at once by a small douche of very hot water given very slowly and carefully; a bacillus of iodoform should then be passed into the uterine cavity and the vagina loosely packed with a strip of iodoform gauze.

THE TREATMENT OF ULCERS BY THE TRANSPLANTATION OF LARGE PIECES OF SKIN, AFTER THIERSCH'S METHOD.

BY JAMES BELL, M.D.,

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(Read before the Medico-Chirurgical Society of Montreal.)

While skin-grafting by Reverdin's method, which consists in the placing of small pieces of skin at intervals on a base of healthy granulations, is known to, and practiced by surgeons everywhere, the treatment of ulcers by the removal of the diseased tissues and the transplantation of large pieces of skin—a process which is known in Germany as Thiersch's method of skin transplantation—is, I believe, but little known to English and American surgeons, and but rarely practised by them. The essential principles of this method are:

(1) That the part to be treated be prepared by the removal

of all unhealthy granulations and diseased tissues generally, and be rendered thoroughly aseptic.

(2) That the skin to be transferred to the bed thus prepared be thoroughly cleansed, rendered aseptic, and carefully removed and applied with its under surface closely in contact with the base of the wound in such a manner as to cover it completely.

(3) That the wound be kept aseptic throughout, and disturbed as little as possible.

In preparing the ulcer it will often be necessary to dissect away the skin on which it is situated throughout its whole thickness. Sometimes, even, especially on the shin—one of the commonest sites for old ulcers—it will be necessary to remove the periosteum and perhaps chisel away the outer surface of the bone over a considerable area. This, of course, involves a good deal of bleeding, whether an Esmarch's bandage has been used or not; and it may be necessary to apply a compress firmly over the wound for an hour or two before transplanting the skin. In many cases, however, it will be sufficient to scrape away the granulation bed with a Volkmann's spoon, in which case there is usually no delay from hemorrhage. The skin to be transplanted may be taken from any convenient part of the patient's body, or from another person altogether. It is removed in strips with a sharp knife, or, preferably, a broad-bladed razor. The skin is to be taken to a depth sufficient to secure as nearly as possible the whole thickness of the epidermic layer, the rete Malpighii being the most desirable part. It does not matter if the papillary layer of the true skin is partially removed, but the corium should not be included. I do not intend to discuss this subject from a physiological or histological standpoint, but I may be permitted to say *en passant* that Prof. Thiersch of Leipzig, after whom this operation is named, demonstrated, in 1875, on a leg which was about to be amputated, that union occurred between the skin and subjointed tissues without any intervening connecting layer, and that blood-vessels, or at least blood-spaces, which soon developed into blood-vessels, extended from the wound into the skin in as short a space of time as eighteen hours. These facts were demonstrated by injecting the leg after amputation. It was in the same year also that he (Prof. Thiersch) recom-

mended the cutting away of the granulations before transplanting the skin. Surgical methods have, however, undergone so many changes since 1875 that I shall describe the details of the operation as I saw it generally performed in Germany during the past summer, notably in Schede's clinic in Hamburg, and as I have performed it myself in the cases which I am about to bring before you.

CASE I.—Wm. J., a healthy-looking man, but somewhat pale, an old soldier and ex-lighthouse keeper by occupation, had been exactly two months in hospital under regular treatment for an ulcer extending across the lower third of the right leg. This ulcer had originated thirteen years prior to his admission to hospital, from the stab of a game-cock's spur. It had gradually extended, and never healed in the least degree in any part, and at the time of operation covered an area of about four by five inches, its prominent features being hard, raised edges and indolent, painless granulations. During the thirteen years of its existence he had been treated at different times by a great many surgeons, but without any appreciable benefit. The operation was performed on the 7th of August last, in the following manner: The patient was anæsthetized, the leg thoroughly washed with soap and water, and irrigated with a solution of corrosive sublimate of the strength of one part in two thousand. Thinking that probably from its long standing the periosteum underneath the ulcer would be diseased, I dissected out the whole space covered by the sore, cutting through the healthy skin just beyond the margin of the granulation surface. Finding the tissues quite healthy, however, beneath this flap of skin, I merely twisted a few small vessels and applied a temporary gauze-dressing very firmly and proceeded to shave, wash and irrigate the anterior surface of the thigh. Then removing the temporary dressing, I shaved off strips of skin with a razor and carefully covered the wound with them. (A strip of skin can easily be removed with a good razor from three-quarters of an inch to an inch and a half in width and as long as you want it.) These strips of skin were placed transversely across the wound, and across them again were placed strips of silk-isinglass

plaster about half an inch wide and at intervals of about half an inch apart, the plaster being wetted in the sublimate solution. The whole was then dressed with a sublimated gauze dressing. The dressing was changed on the fifth and again on the thirteenth day, and finally removed on the thirtieth day after operation, when the wound was perfectly healed. A gauze pad was then applied over the lower third of the leg to protect the newly-formed skin, and the patient was kept in hospital for about two weeks longer as a precautionary measure and then discharged. I may say here that it is not necessary to wait until the wound is absolutely dry and bleeding completely arrested before transplanting the skin, but as soon as it has been arrested to such a degree that the strips of skin can be applied without danger of their being washed away by the blood the process may be completed.

CASE II.—R. McC., aged 50, an old soldier and an inveterate drunkard, had a chronic indolent ulcer of four and a half years standing on the middle third and anterior surface of his leg, covering an area of two and a half by three inches. He had been under treatment in hospital for seven weeks, but his ulcer had made no progress towards healing. On the 22nd of August I dissected out this ulcer and transplanted skin from the thigh, as in the last case. The dressing in this case was never changed, and was finally removed on the 15th of September, twenty-four days after operation, when the wound was found to be perfectly healed. A light gauze pad was applied over the new skin for protection and the patient discharged.

CASE III.—Jas. E., aged 14, was admitted to hospital on the 5th of July, 1887, with a crushed foot. It was found necessary to amputate his first and second toes, and extensive sloughing of the skin followed. He came under my care about the 1st of August, with a granulating sore extending from the instep, in front, to a corresponding point on the sole, continuous over the points of the metatarsal bones, from which the toes had been disarticulated, and over the inner margin of the foot, covering an area of about three by five inches. I kept this sore under observation for three weeks, and on the 23rd of August, as it

had made practically no progress, I operated. In this case I removed the granulation layer with a Volkmann's spoon, and transplanted from the thigh, as in the previous cases. The dressing was left undisturbed until the 14th of September, twenty-two days after operation, when the wound was perfectly healed and the boy discharged.

CASE IV.—Sarah C., aged 44, a pale, unhealthy-looking subject, was operated upon on the 26th of September. In this case the ulcer, which was about an inch and a half in width by four in length, was treated by scraping away the granulations with a Volkmann's spoon and transplanting from the thigh. The dressing was removed on the 18th of October, the twenty-second day after operation, and the wound found to be perfectly healed. A gauze pad was applied, and finally removed on the 4th of November and a flannel bandage substituted. This patient had been four weeks in hospital under ordinary treatment, and the ulcer, which was of four and a half years standing, was making gradual, but very slow progress at the time of operation.

CASE V.—H. O., aged 43 years, was admitted to hospital for erysipelas on the 1st of August. On the 1st of September I saw him for the first time. He was then suffering from a suppurating bursitis and subcutaneous suppuration all about the right knee, with a large irregular patch of ulceration about one and a half by four and a half inches in area, on the outer side of the joint, caused by sloughing of the skin. At this time I drained and cleansed the suppurating cavities, and on the 17th of October, everything being healed but the ulceration already mentioned, I transplanted skin from the thigh. In this case, as the granulation layer was very healthy and presented an even surface, and the parts were quite aseptic, I did not remove any of the granulation tissue. The dressing was removed on the 9th of November, twenty-three days after operation, when the wound was entirely healed. This patient is still in hospital for treatment for the stiffness of his knee and a small sinus leading to the almost completely obliterated bursal cavity.

CASE VI.—A. B., a factory girl, aged 17, on the 18th of October last, got the third finger of her left hand caught in

machinery, the result being that the whole of the soft tissues in front of the distal phalanx, and the skin and subjoined cellular tissue on the anterior surface of the second phalanx, were completely torn away. I saw the patient almost immediately after the accident, and as the bones, articulations and tendons were intact, I determined to try and save the finger. I could not at the time and under the circumstances transplant skin to it, but cleansed it and dressed it with sublimated gauze. On the 24th of October I transplanted a strip of skin from her arm. On the 9th of November, fifteen days after operation, I removed the dressing and found the wound entirely covered with a delicate bluish, semi-translucent film of skin.

I have since operated upon two other cases, but as the dressings have not yet been removed I cannot say anything as to the results. I may add, however, that I have given you full reports of all my cases up to date, and that I have not had even a partial failure.

These cases have no special interest in themselves, but they demonstrate the ease, certainty and rapidity with which skin may be reproduced by this method on ulcers which cannot otherwise be induced to heal. As to its applicability, there is no class or variety of non-specific ulcer which cannot be immediately prepared for the reception of flaps of skin, nor does the size of the ulcer increase the difficulty or delay the healing. In very large ulcers, skin may be taken from a limb about to be amputated or from one or more volunteers independent of the patient. The wounds made by the removal of the skin flaps being very superficial heal rapidly, and are not followed by contraction or other ill effects of cicatrization. Every surgeon will recall cases of extensive ulceration following mechanical or chemical injury to the skin, burns, frostbites or cellulitis, or cases in which it has been necessary to remove large areas of skin for malignant growths upon or closely beneath it (as in carcinoma of the mamma for example), and in which, after months or years, a poor contracted cicatrix was the best obtainable result, while oftener, perhaps, the ulceration remained, or developing into an epithelial cancer, proved rapidly fatal. Again, how many men and women

past middle life go for years and years with chronic, irritable or indolent ulcers, especially on the lower extremities, occasionally for a period inactive, or even tending to heal a little, but, on the whole, gradually increasing in superficial area and depth until amputation is called for in many cases? In all these cases we have, I believe, in this method of skin transplantation a line of treatment absolutely safe and as certain and satisfactory as we have for any other class of surgical diseases. Its advantages over the older method of skin-grafting are obvious. It is applicable to all kinds of ulcers without preparatory treatment. It covers the whole area with skin instead of isolated points, which merely act as starting points for epithelial growth. The end is attained in an infinitely shorter space of time and with much less trouble; and finally the result is a sound skin, not a tense tissue-paper covering which will give way again on the slightest provocation.

ON HEPATIC CIRRHOSIS OF THE LIVER. §

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Having met with two cases of that rare affection in children, cirrhosis of the liver, I venture to make them the subject of a few observations; not that I hope to remove the obscurity which surrounds the subject, but rather to add to the few examples already recorded two more, in which neither the use of alcohol nor the virus of syphilis can be assigned as the cause of the hepatic cirrhosis. I confess also to the desire to induce the members of this Association who may have had similar cases, to place them on record, and also to evoke the views of my colleagues respecting the pathology of the disease.

The infrequency of cirrhosis of the liver in children may be substantiated by a few quotations. Thierfelder* speaks of the "absolute rarity of the affection as regards children." Henoch† admits that he never found the disease "fully developed in children." Dr. Charles West‡ states that "an experience of

§ Read at the second annual meeting of the Association of American Physicians, Washington, June 2, 1887.

* Ziemssen's Cyclopaedia, ix. p. 175.

† Lectures on Diseases of Children, 1882, p. 232.

‡ Dis. Infancy and Childhood, 7th ed., p. 654.

70,000 cases of children's disease had yielded him but four examples of hepatic cirrhosis." The late lamented Flint, in a private letter to me respecting one of the cases about to be reported, dated December, 1884, remarks that "in so young a subject the disease is exceedingly rare." And Neureuter[§] estimates its ratio to other diseases admitted into the Franz Joseph Hospital for children at one-tenth of one per cent.

Permit me first to relate the two cases that have been under my own care.

CASE I.—Miss —, aged 9 years, was brought to me in November, 1878, on account of a few nævoid-looking groups of vessels on the right eyelid, which had formed, her mother thought, since a severe attack of pertussis experienced in the preceding July. On January 27, 1879, my services were again sought, because the child had been "poorly for some weeks." It was subsequently admitted that she had not been well for several months. She had been weak, fretful, nervous, and unable to perform her school-work, and her appetite had failed. Her leading symptoms at this first visit were a subicteroid tint of skin and conjunctiva, and enlarged liver, its lower margin extending an inch and a half below the ribs; the spleen also in the same condition, and its lower end perceptible two inches below the ribs. The upper abdominal zone was very perceptibly enlarged; indeed, her mother had for some time thought the child's waist increased in circumference. Pulse 114; temperature 103.8°F.; tongue clean; urine of deep orange color; a loose cough, not explained by examination of chest, the organs in which were normal, so far as physical signs could be relied on. Expectoration scanty, semi-transparent, viscid, and pink from the presence of a minute quantity of blood.

Personal history.—Is one of four children; all of whom are living and healthy, except a brother, who died of membranous laryngitis at five. All the four children have had symmetrical handsome faces and figures, devoid of evidence of rickets, hereditary syphilis, or scrofula. The patient has always been healthy, and made good recoveries from measles, croup, chickenpox and whooping-cough. She had escaped scarlatina.

Family history.—Mother is remarkably healthy and well-nourished. Mother's father died of valvular disease, mother's mother of disease of the kidney; a maternal uncle of phthisis, and a maternal aunt of laryngeal diphtheria; another maternal

aunt died of cerebral embolism from rheumatic valvular disease, a third from puerperal convulsions, and a fourth, three weeks after parturition, from some puerperal inflammation. Three maternal uncles and two aunts are alive, and enjoy good health.

The child's father, a vigorous, healthy man, has not had syphilis, and uses alcohol in moderation. The paternal grandfather had always been healthy, and died in advanced life; the paternal grandmother died when comparatively young, the cause of her death is not known; all the other members of the father's immediate family, viz., a brother and two sisters, are living and healthy.

It would occupy too much time to report the daily notes, so the leading facts must suffice.

A febrile temperature prevailed throughout the four months that the child lived after coming under observation. During the first four days of February it was 104° , and for the rest of the month it ranged between 101° and 100° . The average daily temperature for the first fourteen days of March was 100.7° , and for the remainder of the month about 99.4° . For the first week of April the temperature ranged between 101° and 100.5 , for the second week between 100° and 99° , and for the rest of the month between 100° and 98.8° ; although it was but three times below 99. For the first half of May it ranged between 100° and 101° ; during the last ten days of the patient's life the temperature was not recorded.

Epistaxis was frequently present throughout the illness, in moderate amount, yet sufficient to soil three handkerchiefs a day. It had occurred, however, very often since the attack of whooping-cough in July.

Hemorrhage from the kidneys was also a persistent symptom after its first appearance on February 25th. The urine was rarely free from blood after that date, but the removal of the pressure of the ascitic fluid, by tapping, was followed by a temporary sensible reduction in the proportion of blood contained in the urine.

In the early part of February, pain of the character of "belly-ache" was experienced in the umbilical region for one day, but it was unaccompanied by tenderness on pressure. Pain in the splenic region was complained of for three days before the first tapping, which was performed on April 7th. It did not recur in that region for three weeks, during which time the belly was rapidly refilling. The night succeeding the first tapping, pain occurred in the right side of abdomen, and persisted for the four succeeding days, unaccompanied by tenderness, or a higher temperature than had immediately preceded the paracentesis;

and the ascitic fluid was found to be transparent even after the third tapping, which became necessary a fortnight after the second.

From these facts it may be concluded that the turbid serum and recent lymph found in the peritoneal cavity after death were the products of a latent peritonitis which succeeded the last paracentesis.

Perceptible enlargement of a few veins in the epigastric zone was noted on February 10th; by May 3rd many large mammary veins were found inosculating with these; and by May 17th the thoracic and abdominal parietes were covered by numerous large veins, suggestive of the serious obstruction that existed in the portal system.

Ascites was first noted on March 4th. It resisted digitalis, squill, cream of tartar, potassium iodide, and an occasional cathartic or an active diaphoretic; and tapping became necessary on April 7th, when nine pints of transparent citron-colored serum were removed. The operation was repeated on April 21st, and for the third time on May 4th, on which occasion eleven pints were evacuated.

A reduction in the size of the spleen was noticed after iced compresses had been applied over the organ three times a day for thirty or forty minutes at a time, but a month afterward the organ had regained its former size.

On the 26th of February, the day after the first occurrence of hæmaturia, the *urine* had a sp. gr. of 1.022, and a smoky appearance, but no marked sediment. It contained about one-third by volume of albumen, many leucocytes and blood corpuscles, very few highly granular hyaline casts, and, in the same field, a single waxy and a single epithelial cast. The urine of the 5th of May had a sp. gr. of 1.014; it contained only one-twentieth of its volume of albumen; numerous blood globules, several large epithelial cells containing numerous fat globules, and a single hyaline cast, were seen in one field.

On the 10th of April my friend, Dr. Osler, counted the blood-corpuscles, and reported 2,400,000 red per cubic millimetre, and 1 white to 144 red. Six days later, with the same proportion of red corpuscles, the ratio of the white to the red was 1 to 91. From the report of the latter date the following memorandum is taken: "Nothing of special note about the corpuscles—red natural, of uniform size; no microcytes. White of natural appearance; very little variation in size. No nucleated red corpuscles."

On the 12th of March a troublesome dry cough set in, accompanied by fine bubbling in the bases of the lungs without the

whistling rhonchi of bronchitis. About the same time a moderate general puffiness of hands, feet and legs appeared; symptoms which, when taken in connection with the character of the urine a fortnight before, probably indicated a renal source. The state of the kidneys after death favors this view. During the last eight or nine days of life, grave disturbance of the nervous centres occurred: delirium, ravenous appetite, tearing of bed-clothes, a soporose passing into an unconscious state. Next day recovery of consciousness, involuntary evacuations, reticence or actual inability to speak (not established which), extremely dilated pupils, twitchings. Then a half-conscious condition, attended with monotonous expression, general restlessness, and moaning. Death took place on the 23rd of May, four months from the time she came under treatment.

Autopsy made next day by Dr. Osler.—Eleven pints of turbid serum with flocculi of recent lymph in peritoneal cavity; adhesion of great omentum to intestines; parietal peritoneum thick and granular-looking, chiefly in the upper abdominal zone and on the diaphragm. Spleen about three times normal size; capsule thickened; texture tough, resisted the knife. Liver, right lobe adherent by thick layer of imperfectly organized lymph to under surface of diaphragm. The organ was large and thick; very granular; tough, resisting the knife; of a dirty white color; very anæmic—fine specimen of hypertrophic cirrhosis. The new fibrous tissue extended throughout the entire organ and appeared to be “mono-lobular.” Gall-bladder contained a little clear citron-colored fluid. No gall-stones or obstruction of the biliary ducts. A laminated colorless coagulum within vena porta and loosely attached to its lining membrane. Stomach, suprarenal capsules, intestines and bladder were normal. Kidneys large and deeply-congested; cut surface coarse; capsule easily torn off; a moderate serous effusion into right pleura; a fine granular exudation over pleura, covering lower lobe of right lung; some clusters of gray tubercle in the upper lobe of both lungs; a caseous nodule the size of a dried pea in left upper lobe, and a caseating bronchial gland at root of right lung. Heart, brain and cord not examined.

CASE II.—Occurred six years after the first, in the brother of the little girl whose history has just been read. He appears to have had in previous years the same diseases as his sister, and, like her, to have escaped scarlatina. Some two years before the detection of the illness about to be described, this boy, then eight years old, was brought to me by his mother, as he looked pale, appeared not to be thriving, and she feared that he might

be the subject of the same affection as his deceased sister. Nothing definitely wrong was discovered by me at that time, nor a few months later by another physician; but the child improved while taking lactopeptine. In May, 1884, he was seen by me on account of a slight herpes circinatus, and his health appeared to be good at the time. The summer months were spent at the seaside, where he underwent a good deal of fatigue without apparent ill effect. For a fortnight after returning home he appeared to be in good health, but at the end of that period he became languid and unfit for work or play. I was then (12th of September, 1884) requested to see the child, and noted the following: subicteroid hue of skin and of the conjunctivæ; urine deeply bile-tinged; stools contained bile; waist appeared enlarged, and epigastric zone prominent. Hepatic dulness extended from fifth space to over a couple of inches below the margin of ribs in the nipple line and well down into the epigastrium in the median line. The splenic dulness was also much increased. Two small patches of enlarged venules under left eye and one upon the side of the neck were present, of a bright red color, and exactly like those observed on his sister. No enlarged lymphatic glands, although twelve or eighteen months before a single gland in one groin was somewhat hypertrophied.

As in the first case, a febrile temperature was present. During the first month it ranged between 99.4° and 100.4° F., and during the second between 100° and 101° in the forenoon. It did not exceed the latter point at any time beyond half a degree. The pulse-rate was lower than in the first case. It did not pass 90 till the middle of October. It gradually rose to 104 in the succeeding month, and reached 108 to 110 during the last week of life.

The liver and spleen enlarged rapidly, and in a month from the first examination their lower borders reached the horizontal level of the umbilicus. As in the previous case, the dimensions of the spleen subsequently became reduced, so that after the first tapping its lower border was only about on a line with the margin of the left hypochondrium. It was found, however, an inch lower nine days later, after the second tapping. The liver also suffered a reduction in volume; for by the 5th of December its lower edge was only two inches below the margin of the hypochondrium, instead of reaching to the level of the umbilicus. Epistaxis set in early in September and recurred several times, but only in small quantities. Hæmaturia was not observed, and only once, on the 19th of December, did blood appear in the vomited matters, and then the amount was trifling. Jaundice was present when the child first came under my care, and deep-

ened with the advance of the case. The urine was always deeply bile-stained, but the stools were never devoid of bile.

The blood was examined but once (the 11th of October). It contained no excess of white corpuscles and was of a deep red color. The existence of ascites was established on the 26th of November, and it increased so rapidly that the fluid required to be drawn off on the 6th of December, when five pints of transparent citron-colored serum were evacuated by means of an aspirator. A second tapping became necessary nine days after the first. The fluid had its former character.

Œdema appeared in the feet and legs on the 12th of December, and reached the scrotum and lower part of the trunk on the 14th. The distention of the scrotum became so considerable that, on the 19th, three or four needle punctures were made and the œdema permanently relieved thereby.

Numerous large veins, branches of the epigastric and mammary, were present in November, but did not attain in either number or size the proportions observed in the previous case.

Pain, chiefly in the epigastrium and over the splenic region, was first complained of on November 22nd; it was unaccompanied by tenderness on pressure. It persisted about eight days, and was very severe on the 30th of that month. After that the child frequently complained of pain in the belly, which, at the time, I attributed to the distension of the abdomen.

On the 21st of December a peculiar delirium, attended by screaming and violent shaking of the hands, set in, and lasted about three hours. The same thing occurred on the 23rd and early on the 24th, and lasted about the same time. Coma supervened at 10 A.M. of the 24th. The respiration was slightly stertorous, with flapping of the cheeks; the pupils were widely dilated, but contracted on first exposure to light, and then became as large as before. There were frequent tetanic spasms of the extensors fixing the forearm in rigid extension; rigidity of the lower limbs, the feet being rigidly extended upon the legs; and occasionally twitching of the eyelids. Death took place at 2 P.M., four hours after the advent of coma.

Autopsy twenty-five hours after death; cold weather.—No cadaveric rigidity. Icteric hue of general integument. Five pints of orange-colored transparent serum, devoid of lymph flakes, in peritoneal cavity. No signs of acute or chronic peritonitis. Liver, two and a half pounds, enlarged; left lobe very broad vertically; right lobe also large and its posterior border very thick; the edges of anterior border thin; no adhesions of liver to adjacent parts. Its surface everywhere presented the typical "hob-nail" appearance. A shallow depression, about equal in

area to that of a man's palm, was seen about the centre of its convex surface, and the granulations over this depression were very closely set. The substance was dense, resisted cutting very markedly, and was of a deep yellow color. Gall-bladder full of bile, but not over-distended. No gall-stones present. Common duct pervious. Spleen enlarged three or four times its proper size, not adherent to adjacent structures, and like the liver, free from opaque or thickened patches on its exterior. Substance firm, cut surface coarse-looking and exhibiting some dark purple areas. The peritoneum and exterior of intestines normal. Right lung not consolidated. Left lung, kidneys, heart and brain not examined. My notes of the autopsy contain no mention of tubercle in the right lung; had any been present, I doubtless would have recorded their presence.

Dr. Wyatt Johnston, Demonstrator of Pathology in McGill University, has kindly given the following summary of the microscopical appearances of this liver: "The fibrous tissue is seen to be developed in connection with the portal system and surrounds the acini, which vary greatly in size and are nowhere very large. Where the fibrous tissue penetrates the acini, it does so as a considerable bundle, and not in fine intercellular filaments. The centres of lobules are free from fibrous tissue; central veins not dilated; bile-ducts look natural. In the liver cells the nuclei do not stain deeply. This is owing, no doubt, to the long maceration in weak spirit; and to the same fact is probably due the apparent absence of small, embryonic, fibrous tissue cells at the border of the fibrous tissue."

Before making a few observations on the subject of cirrhosis of the liver, it may be well to say that in this paper, by that term is meant a diffuse development of the connective tissue of the liver without reference to the question of the inflammatory or the simple hypertrophic nature of that development. The word interstitial hepatitis is employed as synonymous with hepatic cirrhosis. The known conditions in the human subject under which interstitial hepatitis occurs are somewhat numerous and may be thus classified or grouped:

1. Toxic or irritating substances entering the blood: (*a*) especially alcohol, (*b*) syphilitic virus, (*c*) malaria, (*d*) probably, but rarely, lithic acid when productive of the lithic acid or gouty dyscrasia,* and (*e*) blood pigment in diabetes. †

* Thierfelder doubts this, but Murchison maintains it from his own observation: *Diseases of Liver*, 3rd ed., p. 636, 1885.

† Hanot: *Arch. de Phys. Normal et Path.*, Paris, 3 s. vii. 50-57, and Latulle: No. 20, *Bull. et. Mem. de la Soc. Méd. des Hôpitaux*.

2. Chronic congestion of the hepatic vein, as in valvular and pulmonary diseases, and in those rare affections, of which I have seen examples, obstruction or obliteration of the hepatic veins, or of the inferior vena cava above entrance of the hepatic vein.

3. Adhesive inflammation of the portal vein (pylephlebitis), especially the syphilitic variety.

4. Extension of inflammation to the interstitial tissue of the liver in chronic peritonitis, and in perihepatitis.

5. Obstruction of bile-ducts, whether from congenital defects (absence of common duct) or from post-congenital disease (tumors, gall-stones) or from experiment (ligatures).

6. In association with tubercular disease, more especially of the lungs.

7. As part of a general tendency to new formation or hypertrophy of connective tissue in the system, the so-called fibroid diathesis.

I have not had time or opportunity to institute a very extensive search into the literature of the subject, but have collected sixty-one cases of cirrhosis of the liver in children up to the age of puberty, which, with two personal cases, give an aggregate of sixty-three.

It seemed to me best thus to limit the age rather than include cases even of young adults, for, in the latter, the influence of alcohol would probably be found to be a dominant one, as it is in persons of middle age. I have also excluded cases of hepatic cirrhosis due to congenital defects of the biliary ducts. Confining our attention, for the present, to the *causative* relations of these sixty-three cases, some interesting facts are brought out.

In the first place, the above-mentioned conditions, under which cirrhosis of the liver is known to occur, were alleged to be present in but thirty out of the sixty-three cases, leaving over one-half of these to be accounted for.

1. The ordinary cause of the disease in adults, the excessive use of alcohol, existed in only 10 (Cases 2, 4, 5, 6, 26, 27, 35, 50, 51, 53) of these cases of cirrhosis in children. Its absence was noted 47 times, and no mention was made of it in 6 cases.

2. A heredito-syphilitic origin obtained in 7 cases, the cirrhosis existing at birth in all but one, a boy sixteen years of age. One

of these children was born in the thirtieth week of gestation, and another in the thirty-fourth week. The absence of syphilitic causation was affirmed in 29 cases, and no mention was made of it in 30 cases.

3. In 3 of the syphilitic cases the virus set up an adhesive peripylephlebitis which terminated in a diffuse interstitial hepatitis, and these are the only instances in the whole number of cases of hepatic cirrhosis in children in which adhesive inflammation of the portal vein was the starting-point of the process.

4. Venous congestion of the liver, a not infrequent factor in the production of cirrhosis in the adult, existed in but a solitary case (14). The condition present, obliteration of the hepatic vein close to the vena cava, is exceedingly rare at all periods of life. I have seen one example of it.

5. The lithic acid diathesis is not once mentioned as having been present in these cases; and

6. The same is true of malaria and ague. The absence of malarial influence, however, is only affirmed seven times; it may often have been overlooked.

7. In a single case (48) the existence of widespread false membrane in all parts of the abdomen and a complete envelope of it enclosing the liver, suggest that peritonitis may have extended to the capsule of the liver and excited the interstitial hepatitis. In another case (24) there were numerous adhesions between the liver and surrounding parts, but no general peritonitis.

8. The association of hepatic cirrhosis with tuberculous disease obtained in 7 of these collected cases (7, 15, 28, 29, 30, 46, 54), perhaps in 8 (9); about the same proportion as that in which cirrhosis and syphilis were coexistent.

9. There are recorded examples, in the adult, of the existence of cirrhosis of the liver along with a tendency to a condition of general fibrosis in the system.

In Cases 25 and 47, two organs, the liver and kidneys, were cirrlosed. Cases 5 and 19 are examples of three organs having undergone chronic interstitial fibroid alterations. Thus, in Case 5, the child had taken a great deal of wine between meals and the liver was typically cirrlosed, the spleen large and firm,

and the mucous membrane of the stomach thickened. Again, a girl of thirteen (Case 19), without a history of intemperance, had, together with extreme hepatic cirrhosis, evidences of old double pleurisy and old peritonitis. Case 31 is that of an infant which died at birth, free from a syphilitic history, in which Virchow found cirrhotic changes in the liver, spleen and kidneys coexisting with peritonitis. But the most striking instance of a general tendency to overgrowth of connective tissue is afforded by Case 4, that of a girl aged six, who occasionally "took beer at dinner, but did not like it," and in whom, in addition to cirrhosis of the liver, there was hypertrophy of the connective tissue and an infiltration of small round cells in the spleen, kidneys, stomach, heart and brain. The walls of the blood-vessels in all the organs were also thicker than natural.

In only six, then, of the fifty-seven examples of non-syphilitic cirrhosis of the liver in children, omitting those in which the liver and spleen, but no third organ, had undergone cirrhotic changes, can it be said that the hepatic cirrhosis was the outcome of a general tendency of the system to fibrosis; and in only one of them (Case 4) was found such a thickening of the walls of the blood-vessels as would justify the application of Gull and Sutton's theory of an arterio-capillary fibrosis as the source of hepatic cirrhosis, at least in children. It is, however, to be borne in mind that the condition of the vascular system has, very probably, not often been investigated in this affection in childhood.

The instances in which a firm or tough condition of the spleen occurred in association with cirrhosis of the liver, other organs escaping such alterations, have not been included in the above illustrations of a more or less general tendency to fibrosis, because the splenic alterations are reasonably explicable upon other grounds, such as habitual over-stimulation of the spleen by passive congestion of its structure with portal blood: the blood, moreover, probably containing products irritating to that viscus. But it is only right to say that in thirteen instances (Cases 3, 5, 8, 10, 15, 16, 17, 18, 21, 23, 42, 54 and 55), along with the hepatic cirrhosis, the spleen was found large and firm; and in two instances tough (Cases 14 and 31). In eight instances

(Cases 6, 11, 16, 24, 27, 43, 45 and 46) it is simply called "large," and in one (Case 56) "large and soft." It may be said that in twenty-four of the fifty-seven cases of the non-syphilitic group the spleen was abnormal.

Assuming that we have so far determined the causative relation of about one-half of these sixty odd cases of hepatic cirrhosis in children, what about the other half? Before attempting an answer to this question it will be well to recall the fact that, in addition to the above-mentioned well-established conditions under which interstitial hepatitis occurs, there are others which have been suggested, but which need much investigation and corroboration before they can be accepted as proven, however probable they may appear both from analogy and fact. George Budd,* over forty years ago, suggested that "there may be other substances among the immense variety of matters taken into the stomach, or among the products of faulty digestion, which, on being absorbed into the portal blood, cause, like alcohol, adhesive inflammation of the liver." Much more recently, in 1872, Botkin† advanced the hypothesis that the acute infectious diseases may originate chronic inflammatory processes in the parenchymatous organs, because he had found in a number of cases commencing interstitial inflammation of the liver in persons dying of cholera or of typhoid fever. And Klein,‡ in 1877, described an acute interstitial hepatitis as present in eight cases of scarlatina which he had examined.

Now, although, so far as I am aware, no instance has been recorded in which cirrhosis of the liver was shown to be a *direct* sequence of scarlatina, cholera or typhoid fever, yet, as it is established that in the kidney the poison of scarlet fever does frequently set up acute inflammation of the parenchyma and interstitial tissue, which often becomes chronic, why may not the liver occasionally suffer a similar chronic inflammatory process; and what support is afforded to that view by this collection of cases? An analysis of the thirty-eight instances of cirrhosis of the liver contained in this summary, which cannot be referred

* Diseases of Liver, 1845.

† Quoted by Thierfelder in Ziemssen's Cyclop., ix.

‡ Path. Soc. Trans., xxviii. 439.

to any of the established causes of that affection, shows that in nine instances the following acute infectious diseases preceded by a longer or shorter interval the cirrhosis: viz., scarlatina twice (Cases 3 and 25), measles and scarlatina once (Case 42), measles alone four times (Cases 22, 36, 45 and 56), measles and pertussis thrice (Cases 8, 54 and 55). In twenty-five instances no mention is made of acute infectious diseases as antecedent to the cirrhosis, and they were absent in three. The relative frequency of measles and of scarlatina in the above-mentioned nine cases was as 8 to 3; rickets once (Case 13) preceded the cirrhosis.

When the frequency with which the acute infectious diseases occur in childhood is borne in mind, it is plain that the above statements cannot be said to establish Botkin's hypothesis. Certainly, the infrequency with which hepatic cirrhosis obtains in children who have gone through the common infectious fevers is quite in contrast to the comparative frequency with which chronic nephritis follows scarlatina, and we need much stronger evidence than has been adduced to prove that the acute infectious fevers are causes of hepatic cirrhosis in children. However, an exception is admitted, as already mentioned, in favor of intermittent fever or of malaria.

Even if it be granted that in the nine cases in which acute infectious fevers did precede the hepatic cirrhosis, they really originated the interstitial lesion, there remain three in which those fevers had not occurred, and twenty-five in which no mention is made of them as having existed. For such examples of hepatic cirrhosis, Budd's explanation is available and appears highly probable. Indeed, it is more especially in childhood when alcohol, as a cause of hepatic cirrhosis, can be safely ignored in a large proportion of cases, that we feel disposed to accept the view that the products of faulty digestion and certain stimulating kinds of food conveyed to the liver set up interstitial hepatitis. It is well known that many of the lower animals (cow, pig, horse, deer, etc.) are subjects of hepatic cirrhosis. The fawns at Guy's Hospital, to which the students from time to time gave linseed meal as a *bonne bouche*, died of cirrhosis of the liver.

It is impossible to bring much evidence in favor of this mode

of causation from the cases that we are analyzing, owing to the absence of information as to the habits, diet, etc., of the patients. In the two cases observed by myself the children habitually partook of the same kind of food as their parents, and that was at least of a stimulating character for children, the family being noted for the excellence of their cuisine.

Besides food containing articles more or less irritating to the liver, besides new products from faulty digestion, there is a class of bodies which were hardly known when Budd wrote his article that may play a part in the production of interstitial hepatitis—such are the alkaloidal products of albuminous decomposition which of late years have been receiving attention—the ptomaines. Some of these may be the initiating cause of interstitial hepatitis. This subject has not as yet received much attention.

The ages at which cirrhosis of the liver occurred in these children were—

At birth	1	} under 3½ years, 10.
" 3 months	1	
" 17 "	2	
" 20 "	1	
" 2 years	1	
" 3 "	2	
" 3½ "	2	} 5 to 8 inclusive, 13.
" 5 "	4	
" 5½ "	1	
" 6 "	2	
" 7 "	3	
" 8 "	2	
" 8½ "	1	} 9 to 13 inclusive, 28.
" 9 "	5	
" 10 "	7	
" 11 "	7	
" 12 "	5	
" 13 "	4	
" 14 "	1	} 14 to 18 inclusive, 3.
" 15 "	1	
" 18 "	1	
Not stated	2	

According to this analysis, the greatest liability in childhood to hepatic cirrhosis is from the 9th to the 12th year, inclusive.

As regards sex, there were 35 males and 17 females, and in four other cases the sex was not stated. (The syphilitic cases are not included.)

Referring to the character of the cirrhosis in these 56 non-

syphilitic cases, the atrophic form obtained in 19, the hypertrophic in 13; in six the organ was of normal size, and in two instances the patient was yet living when reported upon.

The symptoms of hepatic cirrhosis in children are identically those of the disease in the adult. I shall speak very briefly upon a few of them. In the two examples seen by the writer, there were present, on the face, stigmata composed of collections of dilated minute venules. Although they have been spoken of by some few authors, they are rarely alluded to in systematic descriptions of cirrhosis, and are mentioned but once in the records of the other cases, 61 in number, reported in the summary accompanying this paper. Their presence should suggest an examination of the liver with special reference to the probable existence of cirrhosis.

The opinion commonly held by the profession is that cirrhosis of the liver is a non-febrile disease, yet in 10 (Cases 1, 5, 6, 12, 27, 34, 42, 45, 55 and 56) out of 52 cases, uncomplicated by other affections that might produce pyrexia, cirrhosis was associated with fever—that is, in 19.2 per centum. The same association obtained in five other instances (Cases 7, 9, 13, 46, 54) in which either simple or tuberculous inflammation complicated the cirrhosis and may have produced the pyrexia. Dr. R. E. Carrington,* who has recently drawn attention to this circumstance, found an irregular febrile temperature present in 18 out of 44 cases of cirrhosis, or in 43 per cent. (This list includes seven children's cases.) It would not, however, be safe to conclude from these figures that cirrhosis is less frequently associated with a febrile temperament in children than in adults; for the records of many of these are altogether devoid of details on this point. Of these 10 febrile cases of uncomplicated cirrhosis, 4 presented the hypertrophic form, 4 the atrophic, and 2 had normal sized livers.

In the 56 cases of non-syphilitic cirrhosis, ascites existed in 34, was absent in 8, and was not mentioned in 14. It is interesting to note that in the 13 instances of hypertrophic cirrhosis, ascites was absent but twice, not mentioned twice, and present,

* Guy's Hospital Reports, vol. 42.

contrary to the opinions of some authors, 9 times. On the other hand, abdominal dropsy was absent in 4 out of 19 instances of atrophic cirrhosis, in which it is thought to be rarely wanting, present in 14, and not mentioned in 5 cases.

Icterus, more or less deep, was present in 23 cases, absent in 12, and not mentioned in 21 of the non-syphilitic group. These cases do not confirm Fagge's* statement that where cirrhosis is associated with jaundice the liver is not contracted, as a rule, but is increased in size. For, in the 13 hypertrophic examples jaundice was present 7 times, absent 3 times, and not mentioned 3 times; while in the 19 atrophic examples it was present 10 times, absent 4 times, and not mentioned 5 times. In other words, icterus coexisted with the hypertrophic form in 70 per cent., and with the atrophic in 71.4 per cent.

One point more and I have done. The fatal issue of hepatic cirrhosis in children is brought about in many different ways, but there are three especially frequent, viz., toxæmia, or certain disturbances of the nervous system, peritonitis, and by asthenia, in the production of which hemorrhage plays an important rôle. These three modes of termination obtained respectively in 12, 9 and 8 instances. Pneumonia seems to have been the immediate cause in 3 instances. The following affections held the same relation respectively in one instance: pleuritis, pulmonary congestion, tuberculous meningitis, ulceration of the entire colon, and "diarrhœa with fits."

The toxæmic symptoms in these children, the subjects of hepatic cirrhosis, have been more especially violent fits of crying, and, frequently, of screaming, delirium, dilated pupils, stupor, tremor, twitchings, clonic or tetanic convulsions, rigidity, coma, and hemorrhages from stomach, nose, intestines or kidneys.

In conclusion, it results from this analysis of these 63 cases of hepatic cirrhosis in children—

1st. That most of the established causes of the disease in adults obtain also in children, more especially the use of alcohol, present in 15.8 per cent. of the whole number; syphilis, chiefly hereditary, present in 11 per cent.; tuberculous disease of other

* Guy's Hospital Reports, 1875.

organs than the liver, in 11 per cent. ; also, but much less frequently than these, venous congestion of the liver, peritonitis, and a general tendency to connective-tissue formation in the system.

2nd. That syphilis occasionally tends to a diffuse interstitial hepatitis or cirrhosis, by first inducing an adhesive inflammation of the portal vein.

3rd. That a general arterio-capillary fibrosis is not proved by these cases to be the usual, and probably not even a frequent, cause of hepatic cirrhosis in childhood.

4th. That more than half of the cases of hepatic cirrhosis in children do not appear to be produced by the above-mentioned well-established causes of that affection.

5th. That there is some evidence that cirrhosis of the liver may be very exceptionally induced by the acute infectious diseases—cholera, typhoid fever, measles, scarlatina,—but that proof of this is wanting.

6th. That the habitual use of a stimulating diet, or the absorption of the products of faulty digestion, are probably fruitful sources of hepatic cirrhosis in children.

7th. That it is in harmony with what is known of the causes of hepatic cirrhosis to believe that the bodies known as ptomaines may be capable of exciting a cirrhotic condition, and that investigation of this subject deserves attention.

8th. That the period of childhood most liable to cirrhosis of the liver is from the ninth to the fifteenth year, inclusive, but that it may be congenital and may occur at any age after birth.

9th. That it is twice as frequent in male children as in female.

10th. That its symptoms are essentially the same in childhood as in adult life.

11th. That it is frequently accompanied by pyrexia.

12th. That ascites or icterus, and frequently both together, are of common occurrence in the atrophic and the hypertrophic forms.

13th. That the group of symptoms which have been referred to cholæmia or to cholesteræmia or to acholia, and even sometimes to uræmia, frequently usher in the fatal issue of hepatic cirrhosis in children.

Hospital Reports.

MONTREAL GENERAL HOSPITAL AND MONTREAL DISPENSARY.

GYNÆCOLOGICAL CASES UNDER CARE OF DR. ALLOWAY.

Cases of Divulsion, with Incision of Posterior Segment of Cervix, for relief of Dysmenorrhœa and Sterility.

A. B., aged 26, menstruates every three weeks, duration ten days, and always accompanied with severe dysmenorrhœal pain.

Examination showed evidence of chronic pelvic inflammation. Floor of pelvis was low down, rigid and intensely tender; uterus anteflexed, very slightly moveable, and os discharging glairy mucus; cervix elongated, conoid, and external os extremely small and surrounded by lips extensively eroded.

This patient was kept under the iodine and glycerine treatment for two months. By this time the pelvic floor was quite soft and elastic; uterus had lost all its tenderness, and could be pulled down to the introitus. The patient was quite free from pain and much improved in health. Operation performed and endometrium curetted. Patient left her bed twelve days afterwards. Extent of dilatation $1\frac{1}{4}$ inches.

C. D., aged 28, married three years, never been pregnant; menstruation irregular, generally at intervals of four weeks, but often passing on to the sixth week. Patient states that before marriage she was very strong and well nourished, now emaciated, pale, dyspeptic, and complaining of pain in back, sides and hypogastrium during intermenstrual period. Dysmenorrhœa so severe that she is confined to bed for several days.

Examination shows excessively tender pelvic floor, especially on attempting to raise the uterus to higher level in pelvis. Uterus anteflexed; cervix elongated and conoid; os extremely small and discharging tenacious glairy mucus.

This woman was confined to bed two weeks on hot water injections, which removed in great part the excessive tenderness of pelvic floor. For the next six weeks she attended the clinic for the iodine and glycerine treatment. The operation was performed and uterus curetted. Extent of dilatation $1\frac{1}{4}$ inches. Patient returned to her home twelve days after operation.

E. F., aged 25, married five years, never been pregnant. Menstruation profuse, duration eight days. Severe dysmenorrhœa, followed by leucorrhœa.

Examination.—Chronic pelvic inflammation. Endometritis, cervix small, equally developed, not eroded nor in any way diseased. Uterus has normal forward inclination, but somewhat fixed and painful during indigation.

Patient confined to bed for three weeks on hot water douches, followed by one month of iodine and glycerine treatment. Operation now performed. Dilatation $1\frac{1}{2}$ inches. But instead of doing Sims' posterior incision (when the cervix is unequally developed—posterior segment elongated) I did Simpson's bilateral incision, the cervix being equally developed and of normal size. This patient left her bed on the twelfth day.

The above few cases are reported in a very condensed form ; many symptoms already known to us as nearly always accompanying such cases being omitted. I have operated upon a large number of cases lately for relief of dysmenorrhœa and sterility with very good success, and have now several cases under preparatory treatment for operation. In the April (1887) number of the CANADA MEDICAL AND SURGICAL JOURNAL, under *Hospital Reports*, will be found a description of the various steps of the operation. With regard to the far distant result of the procedure I am unable to speak, as the lapse of time will here be required ; but I can say that all of the cases on which I have operated within the past year have, with one exception, experienced relief from the agonizing dysmenorrhœal pains ; have much improved in general health ; and the endometritis has been apparently cured. The case in whom little benefit resulted, except for the three months following the operation, is a miserable neurasthenic creature, who complains of what she calls "rheumatic" pains in almost every region of her body. This case I have had undergoing the Apostoli electrical treatment, having made three intrauterine applications. This patient has just passed her menstrual period, and tells me that she did not experience anything like so much pain as previously, that she was able to do her regular housework during the flow, instead of remaining in bed as formerly. The flow has also been

less and free from clots, and there has been an absence of the agonizing headaches usual at that time. This case will, during the continuation of the treatment, present considerable interest to me, and will be somewhat of value in the various forms of treatment in severe cases of chronic endometritis and hyperplasia.

Case of Unusual Injury to Female Urethra.

E. R., appeared at the clinic complaining of incontinence of urine. Age 33, married 20 years, six children, one miscarriage, youngest child five years of age; menstruation regular, but scanty; leucorrhœa profuse. States that it is only within the last three or four months that she became aware of the incontinence. On examination, there appeared to be no trace of the normal urethra, but, instead, a loose flap of thickened tissue about one inch long and half an inch broad. It was irregular in shape, and when raised up disclosed the bladder opening, through which the finger could be introduced into that viscus. The mucosa of the bladder seemed to be rough and granular to the feel and the organ somewhat contracted in size. It appeared as if the condition resulted from a laceration of the urethra on each side during the passage of the head at one of her confinements, probably during unskillful use of the forceps.

The patient has been admitted into hospital, and two operations will be done for her relief. By repairing one side of the torn urethra at the first operation, and causing the patient to rest during convalescence on the opposite side, the bladder will be drained without the urine interfering with union. At the second operation, the other side of the urethra will be repaired in same manner.

Under Hospital Reports in the *British Medical Journal* of December 3rd, 1887, page 1210, a report of some interesting cases of this nature is given by Dr. Braithwaite of the Leeds General Infirmary.

*Case of Delayed Relief of Symptoms of Pelvic Inflammation
after Removal of Uterine Appendages.*

This was an interesting case, showing the necessity of inform-

ing patients of the fact that they may not always obtain relief after abdominal section until, perhaps, twelve or eighteen months have elapsed.

The patient in question, aged 26, had been for some years past a great sufferer from pain due to chronic pelvic inflammation. She had failed to obtain relief through the ordinary methods, and therefore submitted to the operation for the removal of the appendages. In due time after the operation she did not however obtain relief, and when she appeared at my clinic she was in a most wretched state from intense suffering. She had become a useless inmate of a charitable Home, and although the desired premature menopause had arrived, her suffering was still the same. During six months this patient had no other treatment than iodine and glycerine tamponade, and she is now quite free from pain, is strong, and works hard as a general servant in a large family.

L. B., aged 23, unmarried; began to menstruate at 12 years of age, and states that ever since that time has suffered from dysmenorrhœa. The duration of flow has never been less than eight days, recurring regularly every fourth week. About two years ago the flow became very excessive, lasting two or three weeks at a time, there being an interval of cessation only of three or four days. The discharge was composed chiefly of large clots. There has always been some pain in back, sides and hypogastrium, but not sufficiently severe to incapacitate her. She is now intensely anæmic, and unable for the first time to leave her room.

Examination rather unsatisfactory on account of the very tender, rigid, and somewhat immovable condition of the pelvic floor; uterus large and in the normal position; cervix eroded, and os discharging a chocolate-colored bloody mucus.

This case is under the Apostoli electrical treatment, and will be reported on again more fully. She has had two applications of the anode to the interior of the uterus according to the method of Apostoli of Paris, and has had no hemorrhage since first application, now three weeks. She is much improved in health, and is able to walk to my house every second day for accessory treatment.

I have at present a number of interstitial myoma cases undergoing electrical treatment at the hospital with apparent benefit, and will from time to time give to the readers' of the JOURNAL a report of methods and results of this treatment.

A word about the apparatus and technique of application of the electrical treatment in uterine disease. The apparatus, when complete, is expensive, and it is quite an undertaking to arrange satisfactorily. It involves some expenditure of time in the preparation if carried out in the way Apostoli recommends. This difficulty is much lessened however, in hospital practice where skilled assistance is always at hand. In the Montreal General Hospital we have the most complete and satisfactory outfit it has been possible to obtain. The battery consists of 50 Leclanché cells from the Law Telephone Company of New York, upright and horizontal galvanometers, water rheostat, every possible kind of rheophores and electrodes, and that beautifully delicate and interesting instrument, the *thermostat*. The faradic coils are of the most improved make, and give extreme variations of tension and quality. My own consulting rooms I have had fitted up with the same battery cell by the Bell Telephone Company of this city. The other accessory instruments I have obtained from New York, Chicago and Paris.

Reviews and Notices of Books.

Anatomy, Descriptive and Surgical.—By HENRY GRAY, F.R.S. Edited by T. PICKERING PICK. A new American from the eleventh English edition; thoroughly revised and re-edited, with additions, by WM. K. KEEN, M.D. 1100 pp. Philadelphia: Lea Brothers & Co. 1887.

A work which has gone through so many editions as this requires but little to be said about it. The popularity of Gray's Anatomy both on this side of the Atlantic and in Great Britain is not a mere passing one, but bids fair to be permanent. Each successive edition has been improved, until at present Gray's Anatomy is one of the best anatomical text-books in the English language. The American edition, now before us, is edited by that very able anatomist, Dr. Keen of Philadelphia, and has

additions which make it even more complete than the ordinary English work. It is a case of "*O matre pulchra filia pulchrior.*" Many new cuts have been introduced, chiefly of sections through joints and frozen sections of the trunk and extremities. A most important addition has been made to the anatomy of the brain, viz., a number of cuts to illustrate cerebral localization and topography, and also the anatomy of the cerebrum. Altogether, one hundred and thirteen new engravings have been added, many original, and all useful. The text is prefaced with a paper on "The Systematic Use of the Living Model in Teaching Anatomy" by the American editor. A revised edition of "Holden's Landmarks" completes the volume. This edition may be obtained with colored veins, arteries and nerves.

We heartily recommend the book to practitioners and students not only as a text-book, but as a book of reference.

The American Journal of Psychology.

The first number of this new journal has appeared, edited by Prof. G. Stanley Hall, and published under the auspices of the Johns-Hopkins University, which has done so much for science and learning generally in America. The present number contains four original papers, all of them belonging to the domain of psycho-physics; then follows in very fine print a large mass of psychological literature, consisting very largely of reviews of recent books. In reviewing, praise and blame are dealt out in no stinted measure; there is no mistaking the writer's meaning in any particular case, nor his attitude towards the subject as a whole. As illustrating this feature of the new journal, we may point to a review of Prof. Ladd's magnificent work on Physiological Psychology (reviewed also in the November number of this JOURNAL), and which brings into the boldest relief the standpoint of the Baltimore school of psychology. On page 162 there is a glowing picture of the insights that are vouchsafed to the experimenter and to him alone. In fact we are given to understand in the plainest language that there is only one safe road to psychology—the new experimental method. The writer, speaking of Prof. Ladd's work, concludes that "nearly all the defects in the book before us spring from the circumstance that

the facts of physiological psychology are viewed with the eyes of Peter Bell, which, seeing, see not." The tone of this new journal throughout makes one feel that no "old psychology" need apply.

There is a most searching and valuable review of the work of the English Society for Psychical Research. The conservative attitude of this criticism will commend itself generally. There occurs in the same article a passage which has such bearings on biology and medicine that we quote it as it stands :

"In modern biology, culminating in neurology, where so many of both the secrets and the revelations of science are coming to centre, that one might almost say the undevout neurologist is mad, a firm foothold is at length secured in which mind and matter, so long and so widely divorced that from the fallow between them wild and unsightly growths had waxed strong, and thick, and old, have a common interest, and the dangerous chasm between them is slowly closing. Physicians appeal to the imagination with bread pills and placebos, are less ashamed of interest in hypnotism and are less disposed to regard even hysteria as the *summum incognitum*, and the study of insanity as worthy of the briefest of all courses in medical schools, while clergymen and metaphysicians, on the other hand, who used to practice healing arts in the good old time, when 'Godlike was the doctor who was also a philosopher,' are beginning to take some interest in the body and to read books on mind cures, and psycho-physics, hygiene and physiological psychology, and to realize that the student of religion and of idealism cannot, with impunity, neglect the study of the common forms of morbid psychosis. We desire, for our part, to see the psychological movement, which now seems destined to mark the present as the psychological, as the last quarter of a century has been the biologico-evolutionary age, kept in the severest sense, experimental and scientific."

This quotation will show how extensive is the field the modern psychology proposes to cultivate, and by what means this is to be accomplished. Between this almost uncompromising stand and the less exclusive position of Prof. Ladd we have a choice. For our own part we have no hesitation in believing that grand

as the results of experiment may be, they cannot and will not take the place of that old method of introspection which has accomplished much, even if it has failed to reach the goal of perfection. We are opposed to any exclusive methods in the attainment of truth. Has the art of thinking kept pace with the methods of experiment? Does not the latter of itself tend to divert the mind from profound reflection and severe analysis? Are not both necessary for the attainment of truth—are not all methods man can devise to be *combined* to furnish even a modicum of the perfect ideal knowledge?

We suppose the new American school of psychology would not theoretically antagonise this attitude; but every page of this journal either bristles with opposition to the old psychology or looks coldly on it, and “observation and experiment” are the methods, says the reviewer, by which “we prefer to labor.”

We take it that the movement is bound to run a free course and establish how much in its claims are valid and how much specious and unfounded. One thing is certain, the new method will do much for biology and medicine, possibly as much or more than for the solution of the great problems of mind; for this reason, most of all, we welcome this new journal and wish it well.

With the prestige of the wealthy and vigorous University where the new psychology has its chief seat in America; with the learning and ability of its leader and the enthusiasm of its cultivators, we feel justified in looking to the new science during the next ten years to show what it is capable of doing for the thought and progress of our age. That it will accomplish much we feel certain; that it will permanently supplant and render wholly obsolete all other methods of investigating the phenomena of mind we doubt.

A Practical Treatise on Diseases of the Hair and Scalp.—By GEORGE THOMAS JACKSON, M.D. New York: E. B. Treat.

This work is not meant for the lay public, but really aims at being a scientific treatise. The author has succeeded in accumulating all that is known about the diseases of the hair and scalp, and he presents it in a very readable way. The book is divided

into parts. Part I treats of the Anatomy, Physiology and Hygiene of the Hair. Part II, Essential Diseases of the Hair, such as Alopecia, Canities, Sycosis, etc. ; and Part III, which is, perhaps, the most practical and useful of all the parts, treats of the parasitic diseases. Part IV is merely what is got in every text-book, and considers those diseases of the hair which are secondary to diseases of the skin. The book is printed in large type and profusely illustrated. The chapter on alopecia will interest a large number of medical readers personally ; it is very full, all varieties are described, and the contagiousness of certain forms is discussed. The parasitic diseases are well described, and the treatment employed by various authorities given in detail. Every practitioner will be interested in this work, and will derive great advantage, from its study, for there is no class of diseases which gives so much trouble to the family physician as those of the hairy scalp, which are, as a rule, little understood by the average man, who prescribes for them in a very perfunctory and rule of thumb manner. The only fault we have to find with the book is that there is not enough of the author's own personal experience in it.

Drainage for Health, or Easy Lessons in Sanitary Science.—By JOSEPH WILSON, M.D. Philadelphia : P. Blakiston, Son & Co.

This is a short treatise written with the object of pointing out the dangers of deficient drainage both of town and country, and contains some valuable suggestions with regard to the deep-drainage of farms likely to render them both healthy and productive. The unhealthiness of certain parts of the country are due, thinks the author, to the presence of too much water in the soil, and he explains the salubrity of pine forests to the fact that the decaying roots of pine trees form natural drains, while at the same time the layer of dead leaves and twigs upon the ground prevent to a certain extent the uprising of earthy emanations. The chapter on the drainage and surrounding of country houses is valuable, showing the dangers so commonly present. The prevalence of diphtheria in country parts does not become inexplicable when we consider that at most farm-houses garbage

heaps are allowed to stand in close proximity to the well, where the cellars are always damp from the rain-pour of the roof-falling upon improperly constructed trenches and gravitating into the cellar. There are many such farmhouses in this country, and from such places our milk supply comes.

Dr. Wilson's little book represents some well known facts forcibly, but we can scarcely see how it may be useful to sanitary engineers, however it may meet the wants of farmers and legislators. With the same number of pages, much more useful matter might have been included.

A Handbook of General and Operative Gynæcology.

By HEGAR and KALTENBACH. Vol. II. Edited by E. H. GRANDIN. New York: Wm. Wood & Co.

This is Vol. VII of Wood's Cyclopædia of Obstetrics and Gynæcology. Hegar contributes a short chapter upon operations on the tubes, and another upon operations for the cure of prolapse of the vagina and uterus and for the restoration of the vaginal sphincter apparatus. Kaltenbach treats of operations on the uterus, broad ligaments, round ligaments, vagina, vulva and perineum, as well as the operations for the relief of urinary fistula. The chapter upon operations on the uterus is the fullest and best; many of the others are incomplete, especially in their reference to British methods and results. Alexander's operation on the round ligaments is not even mentioned. One may derive from these volumes a fair idea of gynæcology as practised in Germany, but as British and American methods are almost ignored, the value of the work as a general handbook is much impaired.

Diseases of the Female Mammary Glands. By BILLROTH. And **New Growths of the Uterus.** By GUSSEROW. Edited by E. H. GRANDIN. New York: Wm. Wood & Co.

These two monographs form Vol. IX of Wood's Cyclopædia of Obstetrics and Gynæcology. Although giving nothing very new or original, the authors have collected a mass of valuable information which will be found convenient for reference and

study. The subject-matter is well arranged, the style clear, and the translation good; while the reputation of the distinguished authors is sufficient guarantee for the accuracy and reliability of their work.

Manual of Clinical Diagnosis.—By DR. OTTO SEIFERT of Würzburg and F. MULLER of Berlin. Third edition. Revised and corrected by F. MULLER. Translated by W. B. CANFIELD, M.D., Lecturer on Histology and Chief of the Clinic for Throat and Chest, University of Maryland. New York and London: G. P. Putnam's Sons. Montreal: Dawson Brothers.

In a small compass, we have here a manual which compares very favorably with the most esteemed handbooks for this purpose written by English authors. The chapters on the respiratory and circulatory systems are in our opinion especially good. At the end there is a valuable dose table, giving doses of each preparation according to both the common and metric systems. This will prove a great boon to many physicians. The work is one which we have much pleasure in recommending to both the practitioner and the student.

Transactions of the Medical and Surgical Faculty of the State of Maryland. Eighty-ninth Annual Session. Baltimore, April, 1887.

We have received the Transactions, and under the sections on Obstetrics and Gynæcology note the following:

A Review of some current Obstetrical Contributions by the chairman (Dr. Wilmer Brinton). The author pays a tribute to the advance made in antiseptic midwifery by obstetricians all over the world, reciting many illustrations in support of the same. We, however, do not agree with Dr. Brinton when he says, "not that the general practitioner will be able to use antiseptics so well or minutely as is done in well conducted maternities and lying-in hospitals, yet he can approximate to those minutiae in a degree which will make his patient's child-birth practically aseptic." This declaration is very bad teaching, to say nothing of it being untrue. To our mind, there is nothing to prevent

the general practitioner being just as immaculately clean and aseptic as the ever careful specialist.

Dr. Goodman of Louisville, Kentucky, read a paper on "Ergot after Labor." The author sustains the position of withholding ergot from parturient women except upon rare occasions, such as post-partum hemorrhage. We agree with the author in the main, in regard to the use of ergot, which will certainly shortly become unfashionable. Independent of hemorrhage, however, we would still recommend it after labor in delicate women who have feeble reconstructive powers, and in whom there is a great lack of muscular power and nerve force, often especially marked in the involuntary muscle and nervous system of the uterus. Such women are very liable to subinvolution, passing, after repeatedly recurring pregnancies, to a state of chronic metritis with its attendant evils.

Dr. William T. Lusk reported his successful case of Cæsarean section, which took place at Bellevue Hospital in March, 1887. Dr. Lusk used an elastic ligature above the cervix, the Lembert stitch, and did not resect any uterine tissue or partially separate the peritoneum. He used silk-worm gut sutures thirty-four in number for the uterine wound, and silver wire for the abdominal. A drainage-tube was placed behind the uterus; 1 to 5000 solution of hydrg. bichl. was used during the operation. Convalescence was uninterrupted, with exception of the formation of a few mural abscesses in the line of the abdominal wound. This is the first successful Sanger Cæsarean section to the credit of American surgeons.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, October 28th, 1887.

JAS. PERRIGO, M.D., PRESIDENT, IN THE CHAIR.

PATHOLOGICAL SPECIMENS.

Parasitic Onychia.—DR. JOHNSTON exhibited (1) a microscopic section of a nail showing parasitic onychia. The specimen was sent him by Dr. Bell, who had believed the case to be of this nature. The chains of trichophyton were seen in moderate numbers in the deeper layer of the nail and between the nail and its

bed, though a mass of dry porous tissue formed over the bed of the nail was free from the parasite.

DR. BELL gave the following history of the case: Miss E., aged 20, in scraping the back of her thumb nail about a year ago, cut through it about the middle. A light brown spot developed at this point and gradually extended to its free margin, and then began to grow backwards towards the cicatrix. It was painless. When seen the anterior two-thirds of the nail was dull and dry-looking, yellowish-brown in color, and raised from its bed at the free anterior margin to the extent of nearly half an inch. The tissue between the nail and its bed, at the margin, was quite dry and cancellated, resembling the cancellated structure of a dry bone. The nail was removed by slitting down the centre and removing the two portions separately. This cancellated structure was separated from the nail-bed by a thin fibrous layer, beneath which the nail-bed was absorbed. Owing to its peculiar appearance the nail was macerated and sections cut through the diseased part. On examination, there showed in considerable quantities the mycelium and spores of the trichophyton, resembling the fungous as seen in *tinea circinata* rather than as usually seen in *T. tonsurans*. There was no history of *tinea* on this patient's skin, nor, as far as she knew, on other members of her family.

Broncho-Pneumonia.—(2) A microscopic section through the lung of a sheep in a case of broncho-pneumonia, where great numbers of the embryos of *strongylus filaria* were found in the alveoli, which were filled with exudation, and there was severe bronchitis and peribronchitis of the smaller tubes. The adult forms were not found within the bronchi, having probably been coughed up. The embryos are not able to develop beyond this stage in the lung.

Amputation of the Thigh.—DR. BELL exhibited a patient whose thigh had been amputated for periosteal sarcoma. (The specimen was exhibited at the last meeting.) This patient was 18 years of age, and at the time of operation was in a very bad condition. His temperature ranged from 100°F. to 103½°F., his pulse from 120 to 140 per minute, and he was greatly emaciated. Amputation was performed by the circular method, about two inches below the base of the trochanter major, on the 3rd of October, and from that time his condition improved with extraordinary rapidity. His temperature remained steadily at 98½°, and he rapidly regained flesh. The dressing was changed once only on the eighth day, and finally removed on the twenty-fourth day after operation, when the stump was soundly and perfectly healed.

Osteotomy for Bow-legs.—A child $3\frac{1}{2}$ years of age was shown to the Society, on whom Dr. Bell had performed double osteotomy. The condition was the result of rickets, from which the child had perfectly recovered. The operation had been done by MacEwen's method, and had resulted very favorably. Photographs were shown of the child's legs before operation.

Discussion.—DR. RODDICK referred to the good results obtained by Dr. Bell using bone drains. His experience with this mode of draining was not so favorable, as he found that the bone drains were too rapidly absorbed. While he congratulated Dr. Bell on the excellent results obtained in his operation for bow-legs, yet he could not agree with the necessity for the operation. Dr. MacEwen, who introduced the operation, does not recommend its application in patients under 9 years. He (Dr. Roddick) had obtained quite as good results from the use of mechanical contrivances in children even older than the patient. He thought that in most cases subcutaneous fracture is to be preferred to osteotomy, as it is a less serious operation, and offers less risk. While opposed to operations in most of these case of deformity, he thought it was more often called for in knock-knees than in bow-leg, as the former requires much longer and more painful treatment.

DR. SHEPHERD said that in one of the few times he had used bone drains he found patient's temperature had risen and the drain plugged with a clot. He always prefers using rubber drains, which he cuts down to three-quarters of an inch at end of twenty-four hours. In Germany the "single dressing" mania often results disastrously to the patient. In German hospitals he was frequently shown single dressing-cases where the temperature chart indicated an unhealthy condition of the wound. He had seen Dr. Bell's patient before operation, and could heartily congratulate him on the success of his operation. With regard to the osteotomy case, he referred to the erroneous but common opinion that all cases of bow-legs result from rickets. The peculiarity is often hereditary, and is quite normal in many of the anthropoid apes.

DR. ARMSTRONG referred to Dr. Levis' system of drainage. He uses solid rubber strings placed side by side, instead of tubes, thus obviating the danger of plugging.

DR. GURD said he had seen very good results from treatment of bow-legs by improving the general health. He had great faith in the efficacy of good hygienic surroundings and the use of tonics in such cases. Instruments have proved unsatisfactory.

DR. BELL, in reply, stated that the drains used were made from chicken bones, by the method recommended by Dr. MacEwen of Glasgow. These could be obtained as hard or as soft as desired. In the case of osteotomy, the curve in the child's legs was greatest just above the malleolus, so it could not be treated by subcutaneous fracture.

Notes on Acetanilide.—DR. McCONNELL first briefly stated what was known about acetanilide or antifebrin up to the present time. It was procured from aniline acetate, is a white powder resembling santonin, insoluble in water, but soluble in alcohol. It is neither alkaline nor acid, and resists the majority of reagents. Belongs to the order *Phenylacetamides*, quite different from the orders containing the majority of antipyretics, viz, the Phenols and Chinolins. Actions claimed for it are that it rapidly reduces the temperature in febrile states, without producing any untoward effects; that it is also hypnotic and analgesic, being especially useful in relieving pain linked with nerve alterations. In poisonous doses it will destroy oxyhæmoglobin, changing it into methæmoglobin. It is inexpensive, being only 10 francs per 1 kilogramme in France. Had used it in about 20 cases, 16 of which he had records of—9 were cases of typhoid fever—in all of which the temperature was promptly reduced. The following case may be regarded as typical of its action in this disease:

Girl aged 9; Oct. 25th was seventh day of fever; at 5 P.M., five grs. acetanilide were given, when pulse was 120, respirations 28, and temperature $105\frac{2}{3}^{\circ}$.

5.00 p.m.	—	Pulse 120,	resp. 28,	temp. $105\frac{2}{3}^{\circ}$	—Face and general surface pale, dry, and hot.
5.10	"	" 120,	" 28,	" 105°	—Pink flush on both cheeks, pulse stronger.
5.20	"	" 120,	" 32,	" $104\frac{1}{3}^{\circ}$	—Forehead, neck and trunk moist, and whole surface of reddish hue; somewhat more restless.
5.30	"	" 112,	" 32,	" $103\frac{1}{3}^{\circ}$	—Has become tranquil and fallen asleep; skin moist. no visible perspiration.
6.00	"	" 120,	" 30,	" $102\frac{1}{3}^{\circ}$	—Surface in same condition; still sleeping.
6.30	"	" 108,	" 24,	" $100\frac{1}{3}^{\circ}$.	
7.00	"	" 102,	" 24,	" 100°	—Asked for a piece of bread.
7.30	"	" 102,	" 24,	" 100° .	
8.00	"	" 108,	" 25,	" $100\frac{1}{3}^{\circ}$	—Skin has become dry.
8.30	"	" 108,	" 30,	" 101°	—Pulse diminished in volume and of less force.
9.00	"	" 112,	" 30,	" $101\frac{1}{3}^{\circ}$	
9.30	"	" 112,	" 30,	" $102\frac{1}{3}^{\circ}$	

10.00 p.m.—Pulse 116, resp. 28, temp. $102\frac{1}{2}^{\circ}$
 10.30 “ “ 120, “ 30, “ $103\frac{1}{2}^{\circ}$
 11.00 “ “ 120, “ 32, “ 103°
 1.20 a.m. “ 120, “ 30, “ $103\frac{3}{4}^{\circ}$

Oct. 26, 11 A.M.—Mother states child appeared to be very feverish from 12 to 8 A.M., and was restless and drank milk frequently. Six grs. were given to-day; same effects observed, only there was more perspiration, and temperature became normal, remaining so for only an hour. Temperature subsequently rose on the 30th to 106° , and on the 31st to $106\frac{2}{3}^{\circ}$, but was always reduced to about normal; but the doses were increased to 8 grs. Three and four doses were required in the 24 hours to keep the temperature at or about normal, child resting quietly after each dose and taking nourishment freely at present date, Nov. 7th. It would seem in this case that the temperature, after the effects of acetanilide have passed away, rose higher through its action.

Discussion.—DR. PROUDFOOT had used acetanilide in painful affections of the eye, such as iritis and glaucomata, in doses of 10 to 15 grs. He found it reduce the temperature and relieve the pain almost instantly. If the pain was not relieved in one hour, he usually repeated the dose.

DR. STEWART said he had very little experience in the use of the drug. He had, however, administered it in five-grain doses to relieve the lightning pains of locomotor ataxia, and found it very efficient. He regarded it as dangerous to give powerful drugs in fever cases to reduce temperature, as these act on the oxyhæmoglobin, thus reducing the patient's powers of resistance.

DR. REED stated that from Dr. Charcot's recommendation he had used it, but had not been able to relieve pain. He had found it reduce the temperature for a time, though not sufficiently to encourage him to continue its use.

DR. PERRIGO said that the drug failed entirely in a case of malaria, in which he had tried it.

DR. RODDICK congratulated Dr. McConnell finding something to relieve the distressing headache of typhoid. He had given it in a case of erysipelas, but it had no effect on the temperature.

DR. BLACKADER had also administered the drug in erysipelas with very little effect. The German authorities state that it is without effect in scarlet fever and erysipelas. He thought, however, that the anodyne properties of the drug would keep it in the pharmacopœia.

In reply to remarks of Dr. Stewart that its action on oxyhæmoglobin was an objection to its use, DR. MCCONNELL said this only occurs to any appreciable extent when over-doses are

taken. The antipyretic action is almost altogether exerted through the nervous system, and chiefly the vaso-motor. The want of effect in cases referred to by Drs. Reed and Perrigo was owing to its having been administered in too small doses.

Selections.

HUMPTY-DUMPTY AND HIS MEDICAL ADVISERS.

Humpty-Dumpty had a great fall, and, feeling rather sore, said to himself, "Now I will go and see a doctor, who will cure me at once." So he put on his hat, and walked along until he came to a street of large houses. On the door of these houses were brass plates, and behind these brass plates were the doctors who cured everything. Then he walked up to one of them, and knocked at the door, and rang a bell marked "Professional," to show that he had come on business, as he had had a fall and felt sore, and wanted to be made well again. Presently the door was opened, and Humpty-Dumpty was shown into a waiting-room, where there were two or three others, who scowled at him for coming into the room, and went on pretending to read the daily paper and last year's *Punch*. After a long time he was shown into the doctor's private room, and said "Please, doctor, I have had a fall, and am sore, and I want to be made well." Now, this doctor was an ear-specialist, so he took a tube and looked down his ear, and said he could see it quite plainly. Then he said, "Have you the ear-ache?" "None at all," said Humpty-Dumpty. "Ah!" said the doctor, "you will have it the day after to-morrow. These falls are dangerous things; but we will do our best. I will prescribe a lotion which you must pour in at one ear and let it run out of the other. Then stuff them up with cotton-wool, and keep in a quiet room, away from all noise, and come and see me again as soon as you feel worse." Then Humpty-Dumpty paid his two guineas and went away joyfully to the chemist. Presently he said to himself, "Perhaps, after all, this man doesn't quite understand my case." So he went to another door, and in due time was shown in to another doctor. Again he said that his name was Humpty-Dumpty, and had had a fall. But this doctor was a throat-specialist, so he put a small looking-glass on the back of his neck and a long feather down his throat, which tickled him so much that he had a fit of coughing. "Ah!" said the doctor, "I see it all now. The arry-glottidean epiblast is in a sadly suppressed state." Now, when Humpty-Dumpty heard that his epiblast was wrong, he thought it was all up with him, and that he should never again be able to indulge in his favorite pastime of sitting on a wall. "But I don't feel anything wrong in my throat," he said faintly. "Wait a bit,"

said the doctor, "and you will see how I shall bring it out in the course of a week or so. I will prescribe you a vapor, which you must inhale, and as soon as you feel choky, insufflate this carminative powder, and call here every morning, in order that I may apply some luminous paint." Then Humpty-Dumpty paid his two guineas and went off to the chemist. "Perhaps," thought he, "this time also my case has been mistaken, so I will try again." And he went off to another house a little farther on, where he found several ladies, all looking extremely ill, and the horrid truth flashed across him that he must be in the abode of a ladies' doctor, and that these were the victims. He at once seized his hat, and ran out of the house before anyone could catch him, and arrived, breathless and perspiring, on the doorstep of a mansion, with a brass-plate, on which the name of Sir Monger Pill was inscribed. "Now," thought Humpty-Dumpty, "I shall be right at last." So he went in, and before he could speak Sir Monger said, "Dear me, a bad case indeed. Breathing rapid, perspiration copious, pulse bounding," because he did not know that Humpty-Dumpty had just escaped from a ladies' doctor. "Lucky you found me at home," said he, and wrote prescriptions for draughts and pills, and told him to call again in three days. Then he said he must be off, so Humpty-Dumpty paid him two guineas, and told the story of his fall to the butler instead, who told him he ought to see a surgeon. Off then he went to Mr. Sniker Snee, and told all about himself. Mr. Snee said that it was a very serious case, that it might have been better and could have been worse, and that he must wear a plaster-of-Paris jacket, with an iron bar down his spine, for three years in order to get better. So Humpty-Dumpty went home, and felt very sad, and made his will. Then he thought he would try and eat some dinner, and have a glass of champagne to keep up his spirits. After dinner, he felt so much better that he amused himself by putting all the pills and medicines in a row, and thinking which he should begin on. But as he meditated, he fell asleep; and when he woke up in the morning he had quite forgotten about his fall. He found, however, that his pet dog had eaten the pills and expired, and that the landlady's cat had licked a plaster and gone into a fit. Later on, the miasma which was exhaled from the floor led to the taking up of the boards. Underneath them were found the bodies of the rats and mice who had perished from spontaneous combustion owing to their having partaken of an ointment. So Humpty-Dumpty never allowed himself to be ill again, for fear that he should share the fate of the poor animals, and he lived happily ever afterwards.—*Vanity Fair*.

CANADA

Medical and Surgical Journal.

MONTREAL, JANUARY, 1888.

THE SOURCES OF SYPHILIS IN WOMEN.

A few weeks ago Professor Fournier read an elaborate paper before the French Academy of Medicine, a report of which appears in *La Semaine Medicale*. The paper is based upon a statistical analysis of his private office practice for the past twenty-seven years, and is intended to refute the common misapprehension that syphilis is a disease derived only from debauchery and dangerous only to those who voluntarily expose themselves to it. Many argue that it does not seek out its victims like variola, typhoid or diphtheria, but must be sought; and as the exposure is voluntary on the part of the victim, they urge that public prophylactic measures are unnecessary, but that personal continence should be insisted upon.

Deducting doubtful cases, he has had in his office practice 837 cases of syphilis in females, which he divides into two main groups :

1. Cases whose origin was sexual..... 842
2. " " " " otherwise..... 45

The second group (5.07 per cent. of the whole) he calls "Syphilis of the Innocents," and subdivides as follows :

- 7 cases of hereditary syphilis.
- 4 " " syphilis contracted during infancy.
- 8 " " " conveyed to wet-nurses by a nursling hereditarily infected.
- 5 " " " " to midwives by patients (on fingers or hands).
- 12 " " " " to infants by infected nurses or maids.
- 2 " " " " by vaccination.
- 2 " " " " by catheterising the Eustachian tube.
- 1 " " " " by rape.
- 4 " whose origin was unknown, but evidently not venereal.

The first group of 842 cases where the contamination arose from sexual relations, he divides into

- 366 Prostitutes.
- 230 Married Women.
- 256 whose social condition was not ascertained.

He was able thus to class 586 of his patients as either married women or prostitutes. From the 220 married women he deducts the following :

- 10 who admittedly contracted syphilis from a lover.
- 10 who did not admit infection from a lover, but whose husbands were examined and found healthy.
- 2 where both husband and wife had syphilis, and it was impossible to ascertain which infected the other.
- 34 where the husband was not examined.

Deducting these 56 cases, he had 164 married women who had been infected by their husbands. Of these 164 husbands he found

- 72 had contracted syphilis before marriage.
- 39 " " " after marriage.
- 53 uncertain as to the time.

Thus after the elimination of all doubtful cases he finds that in his practice nearly 20 per cent. of those who contracted syphilis from sexual causes were married women who were infected through no fault of their own.

Adding in the 5 per cent. of the second class, he concludes that in his experience at least 24 or 25 per cent. of the cases contracted the disease innocently and undeservedly. He concludes a powerful and eloquent appeal for the inauguration of public prophylactic measures as follows : " To institute a public prophylaxis against syphilis is really to protect every one ; it is to undertake a crusade of public utility, a crusade worthy of the efforts of every one—doctors, hygienists and administrators—it is, in a word, to sanitize in a general way and in the public interest."

NOTES AND COMMENTS.

The public and the profession of Philadelphia have recently been much exercised on the subject of leprosy, as two or three cases have been under the care of Dr. Van Harlingen, who read a paper, and showed the patients, at the County Medical Society. The newspapers took up the question, and the Board of Health requested Dr. Van Harlingen to give the address of the unfortunates, but he refused. An unsuccessful attempt was made to return the patients to Brazil, from which country they came. Finally the health authorities succeeded, and the lepers are now strictly secluded in the Municipal Hospital. The matter of interest is in connection with the contagiousness of the disease upon which professional opinion appears to be undergoing a very decided change. The strongly adverse report of the Royal College of Physicians in 1867 did much to counteract the old view, and the general acceptance of the non-contagiousness of the disease cannot be better illustrated than in the words of the cautious and learned Hirsch, who says (*Geographical Pathology*, 1881), "The communicability of leprosy has not been proved hitherto by a single unambiguous fact." The discovery of the lepra bacillus has added interest to the disease, and a majority of the recent investigators are strong antagonists. Graham of Toronto, who has published the only exhaustive account of Tracadie, N.B. settlement (this *JOURNAL*, Vol. XII), concluded that the disease was imported from without, and finding favorable conditions was propagated from one person to another by contagion. Mr. Fletcher's account (*Canadian Practitioner*, 1881) of the Cape Breton lepers contains facts difficult to explain on any other views, and they have recently been used by M. Besnier in support of the contagious nature [see editorials in *Brit. Med. Jour.*, Nov. 12th and 19th, 1887]. Gardner's remarkable case [*Brit. Med. Jour.*, 1887, Vol. I] seems to prove positively that the disease may be transmitted by vaccination. The rapid increase of the disease in the Sandwich Islands can scarcely be explained in any other way.

Like Syphilis, it is probably a fixed contagion, and requires to be directly brought in contact with the abraded surface.

Possibly, too, there are conditions of the system [or tissues] which render individuals insusceptible, otherwise it is difficult to account for the immunity recorded in instances in which there was the closest intimacy, even that of husband and wife. Certainly the advocates of segregation have a strong case, but I doubt very much if, in a community like Philadelphia, alarm need be aroused by the presence of a couple of lepers, and the poor victims who had enjoyed a blessed ignorance of the nature of their disease might have been allowed to remain at peace under the supervision of such a careful dermatologist as Dr. Van Harlingen.

It is not surprising that Charles Darwin, whose father, Robert Waring, and celebrated grandfather, Erasmus, were successful practitioners, should have been sent in 1825 to join an elder brother at the Edinburgh medical school. The fact is referred to at some length in the autobiographical chapter which is included in the recently issued "Life and Letters. The two sessions there spent do not seem to have influenced in any way the future life of the great naturalist, who seems to have suffered severely from the lectures—the only mode of instruction at that time—which "were intolerably dull." He speaks of Dr. ——'s [it must have been *Monro, tertius*] lectures on human anatomy as exciting disgust, and says "it has proved one of the greatest evils of my life that I was not taught dissecting, for I should soon have got over my disgust; and the practice would have been invaluable for all my future work." Evidently his lack of interest was due in great part to absence of practical instruction, for during the summer, in his father's office, he took the greatest pleasure in the study of cases, and at one time had at least a dozen patients. He seems to have had an instinctive horror at the sight of blood, a trait derived from his father, who, curiously enough for a practitioner in those days, "could scarcely endure to see a person bled." A love of specimens and of collecting, which had developed at school, was encouraged by the Students' Plinian Society for the Study of Natural Science, before which Darwin read his first paper.

Dr. Parvin's paper on injuries to the foetus [*Med. News*, Nov.]

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reminds me of an interesting experience which I had in the North-West in 1886, which is worth placing on record. Mr. Fred. Brydges had kindly met our party at the Portage to take us over the Manitoba and North-Western Road, and he mentioned that two days before, a woman, while in the water-closet on the train, had given birth to a child, which had dropped to the track and had been found alive some time after. I was so incredulous that he ordered the conductor to stop the train at the station to which the woman had been taken that I might see her and corroborate the story. I found mother and child in the care of the station-master's wife, and obtained the following history: She was aged about 28, well developed, of medium size, and had had two previous labors, which were not difficult. She had expected her confinement in a week or ten days, and had got on the train to go to see her husband who was working "down the track." Having a slight diarrhoea she went to the water-closet, and while on the seat labor pains came on and the child dropped from her. Hearing a noise and groaning, the conductor forced open the door and found the woman on the floor in an exhausted condition, with just strength enough to tell him that the baby was somewhere on the track, and to ask him to stop the train, which was running at the rate of about 20 miles an hour. The baby was found alive on the side of the track a mile or more away, and with the mother was left at the station where I saw her. She lost a good deal of blood, and the placenta was not delivered for some hours. I saw no reason to doubt the truthfulness of the woman's story, and the baby presented its own evidences in the form of a large bruise on the side of the head, another on the shoulder, and a third on the right knee. It had probably fallen between the ties on the sand, and clear of the rail, which I found, on examination of the position of the hole in the closet, was quite possible.

WILLIAM OSLER.

MCGILL UNIVERSITY.

ANNUAL DINNER OF THE UNDERGRADUATES IN MEDICINE.

The undergraduates in the Faculty of Medicine of McGill University held their annual dinner at the Windsor on Friday, December 2nd, 1887. The reunion of the medical students is perhaps the most enjoyable of the social events connected with McGill. Year after year, as the Faculty progresses and provides for the largely increasing demands on its teaching, the dinner seems to grow apace in extent and in the number of those attending it. The McGill students take an interest in the dinner, and their *esprit de corps* is shown in the enthusiasm with which they rally once a year for an occasion of good fellowship and social amusement, in company with the professors and benefactors of the College.

The dinner was held in the Ladies' Ordinary of the Windsor. There were about two hundred students present. The tables were tastefully decorated with flowers and plants. The dinner was served in the best style of the Windsor, and was worthy of the good name of the house. During the dinner some choice selections of music were given by Patton's orchestra.

Mr. J. H. Bell, B.A., '88, occupied the chair. To his left sat Sir Donald A. Smith, Prof. R. P. Howard (Dean of the Medical Faculty), Professor Wilkins, Professor Mills, Dr. Buller, Professor Penhallow, Mr. E. B. Ibbottson, and Dr. James Bell. To his right sat Prof. Johnson, Prof. Girdwood, J. J. Curran, Q.C., M.P., Dr. Shepherd, Dr. Geo. Ross, Dr. J. C. Cameron, Ald. Richard White, Dr. James Stewart (Registrar), and Mr. Geo. Beers. Among those present were Dr. Ruttan, Dr. Wyatt Johnston, Dr. Rodger, Dr. Browne, and Dr. W. Maclure. The vice-chairmen were Messrs. J. E. Orr, '88, E. W. Gemmill, '89, and H. H. Coleman, '90.

The committee in charge of the arrangements for the dinner was composed of Messrs. J. Hewitt, '88, chairman; Geo. Ross, A.M., M.D., honorary secretary; W. J. Delaney, '89, secretary; H. McL. Martin, '91, treasurer; R. P. Howard, M.D.; G. E. Fenwick, M.D.; R. L. MacDonnell, M.D.; W. R. Sutherland, M.D.; W. G. Johnston, M.D.; J. E. Orr, E. W. Gemmill, A. H. Coleman, '90, C. P. Jento, '90, and W. Troy, '91.

After dinner, the CHAIRMAN, on behalf of the students, bade their guests welcome. They took it as a proof of the kindly feelings which the citizens of Montreal had for the students when they had representative public men of the city present to join

with them in their social rennions. He specially thanked the Dean and Professors for their patience, and regretted that their beloved Principal, Sir William Dawson, was absent through illness. He also regretted the absence of Dr. Roddick, who was unable to be present. To the men of the fourth year he would say that he felt sure they did not want to have another students' dinner, but he trusted the men of the second and third years would continue the good example of having an annual reunion. (Applause.)

The SECRETARY read letters regretting their inability to be present from His Excellency the Governor-General, Sir William Dawson, Sir James Grant of Ottawa, Walter B. Geikie, Dean of Trinity, Toronto; Harvard Medical School, Judge Church, Hugh McLennan, Hon. J. J. C. Abbott, Mayor, the American Consul, Dr. Rottot, Jos. Hickson, John H. R. Molson, S. Finlay, W. C. McDonald, Thomas Workman, Prof. Kerr, Q.C., Judge Mackay, Prof. Bovey, E. B. Greenshields, and Dr. Roddick.

The following was also received :

“ PHILADELPHIA, PA.

“ Would I were with you to-night; blessing on my Alma Mater,
WM. OSLER.”

After the toasts of “ the Queen ” and “ the President of the United States ” had been duly honored,

MR. J. E. ORR, 1st Vice-President, proposed “ Our Sister Universities,” extending to the representatives of the sister universities a cordial welcome. They had made a new departure this year in trying to bring together the representatives of sister universities from other parts of Canada and from the United States. He was exceedingly glad to have occasion to welcome a representative from one of the oldest and most celebrated of medical schools on the continent—Pennsylvania University.

MR. PREVOST, of the University of Pennsylvania, returned thanks for the hospitable manner in which they had welcomed him as a representative of his University. He congratulated the University of Pennsylvania on having such distinguished men as the greatest living biologist in the world, an Agnew, a Pepper, a Wood, and, he might say the greatest of all, an Osler—(applause)—whose untiring zeal, great ability and manly bearing had made a lasting impression on the University of Pennsylvania. (Applause.)

MR. SMITH, of the Toronto University, in responding, congratulated the men of McGill on the ample opportunity afforded them in their University and hospital practice for the study and

knowledge of their profession. He referred to the new Faculty of Medicine established in the Toronto University, and trusted that it would follow the noble example and traditions of old McGill. (Applause.) Speaking of the generosity of the citizens of Montreal in aiding the work of McGill, he spoke of the liberality to McGill of Sir Donald Smith and Sir George Stephen, the mention of the names of those benefactors being received with enthusiastic applause.

Mr. Palling, of Trinity Medical School, Toronto, Mr. Robinson, of Queen's University, Kingston, Mr. Hennessey, of Bishop's College, and Mr. Royal, of Victoria, suitably acknowledged the toast.

MR. J. J. CURRAN, Q.C., M.P., met with a warm and hearty reception. He desired to express his deep gratification at being present at such a vast gathering and to thank the undergraduates for their kind invitation. He was always pleased to find himself amongst the intelligent youth of Canada—the hope of our country. (Cheers.) He hastened to say this, because he wished to be in advance of his hon. colleague, Sir Donald Smith, the junior member for Montreal, who was always anxious to be considered one of the boys. (Laughter and loud cheers.) That was the only pang of jealousy that his hon. friend felt towards him (laughter), but there was no occasion for it, as Sir Donald's name would be honored as one of the greatest benefactors of McGill University. (Cheers.) As it was, he could not do honor in a proper way to the toast of McGill University. The fame of the institution had gone abroad far beyond the confines of our own Dominion on the continent of America; it was in high repute not only in the mother country, but on the continent of Europe. They had heard that evening of the great names that had made their Alma Mater famous, and seated around their festive board were young gentlemen from distant lands who had been attracted by the fame their school of medicine had attained. (Cheers.) The fame of Canada would owe not a little of its splendor to McGill College and kindred institutions. He hoped the College would go upward and onward, achieving greater results in the future than in the past. (Cheers.) He would propose the toast of "McGill University," wishing for it long years of still greater usefulness and ever-increasing renown amongst the educational establishments of our land. (Prolonged cheers.)

PROF. JOHNSON, Vice-Principal of the University, responded. He regretted the absence of Sir Wm. Dawson, who had desired him to express sympathy with the object of the reunion. He

considered it a most important thing among educated men that there should be unity. A chaotic mass of people without educated leaders could not make material or moral progress, and meetings such as this did much to foster that unity.

MR. E. W. GEMMILL proposed the toast of "The Dean and Professors." - The toast was cordially received.

DR. HOWARD, the Dean, briefly acknowledged the toast, and asked Dr. Geo. Ross to respond.

DR. GEO. ROSS, Professor of Clinical Medicine, who met with a hearty reception, was glad to meet the students and join them in doing honor to their common university. It should not be forgotten that the professors were graduates of the University just as well as the students themselves expected to be, anxious to do honor to the University so eloquently referred to by Mr. Curran. He joined with the students in a most hearty and cordial welcome to those gentlemen who had taken the trouble to come from other Universities in Canada and the United States to join in their festivities. They felt all the more in sympathy with the student from Philadelphia owing to the fact that one of their most prominent teachers was a late graduate of McGill, and no one who knew Dr. Osler was surprised at the enthusiasm with which his name had been received. (Applause.) Another reason why such a meeting as this was fruitful of much good would be found in the fact that they had an opportunity of meeting the benefactors of the University. They all recognized the enormous obligation they were under to the public-spirited citizens of Montreal to assist pecuniarily the Faculty of Medicine. (Applause.)

DR. GIRDWOOD also responded. He thanked them kindly and sincerely for the cordiality with which the toast of the Dean and Professors had been received. He thanked them for the prescription the students had prepared for them in the dinner, a prescription which he partook of with pleasure. (Laughter.) Wherever the graduates of McGill had gone they had carried with them the reputation which the students and professors of the past had made for McGill. He enjoined the students to keep that reputation at its present high standing. He complimented the public-spirited citizens whose liberality had enabled them to place such ample facilities at the disposal of the students—facilities which he regretted he had not when he was a student. Much as had been done, much remained to be done, and he trusted that other generous citizens would assist them in their determination to advance McGill University. He asked the

students to look on the professors as brothers, and to come to them for advice and instruction. (Applause.)

Mr. Delaney then sang a charming solo in capital voice.

MR. W. G. STEWART proposed the toast of "Our Benefactors." They were proud of their University and proud of their benefactors. But for men like the generous citizens who aided their University they would not have such a University as they had to-day, nor would they have that brilliant gathering to-night. Their Alma Mater was doing a great work, and they pointed with pride to the fact that their professors of to-day were once students of the College. Their early benefactors had gone the way of all flesh. Men of noble principle and lofty mind laid the foundation of the great structure they had now. McGill, Caldwell, Sutherland, McDonnell, Stephen, and, later, Cameron, were names to be revered. In modern days they had as a benefactor Sir William Dawson—a man of great intellectual attainments, a man of culture and of noble Christian character, who obtained the highest position in the scientific world. He would always rejoice that he had Sir William Dawson for a teacher and a friend. How was McGill to keep pace with the times, for medical science was always on the advance, if they were not to receive aid from noble men? Head and shoulders over all others who had lavished his aid on the University was Sir Donald Smith. (Cheers.) They rejoiced that Sir Donald was with them to-night, and they accorded him a right hearty welcome. "The quality of mercy is not strained, but droppeth like the gentle rain from heaven to bless both him that gives and him that takes." He felt sure that Sir Donald Smith had as much pleasure in giving as they had in receiving. Day after day the students recognized the generosity of Sir Donald in their magnificent College, and not only the students, but thousands of the poor in after times would rise up and bless the names of Smith and Stephen. (Cheers.) He also returned thanks to Dr. J. C. Cameron for his recent benefaction to the College.

The toast was received with enthusiasm and hearty cheers for Sir Donald as he rose to respond.

SIR DONALD SMITH, M.P., said:—I wish that the toast had been assigned to some one else, but I will endeavor to respond to it in a few words. I should like to say one word to my friend and confrère, Mr. Curran. If I could possibly find fault or take exception to anything coming from my friend Mr. Curran, it would be that now and on every occasion he endeavors to detract from that veneration due to age by calling himself my senior.

[Laughter.] I quite assure you that I am not displeased with him this evening at all events, because by making me his junior it brings me nearer to the boys. [Applause.] Now and at all times I do feel very near to the young man in spirit, in interest and in sympathy. [Applause.] Sitting as I am privileged to-night beside your honored Dean, and looking at the rows of young men who are entering on the same profession, I am glad to see that you recognize in him one who has attained a position in his profession of which he may well feel proud, and that you regard that position with pride, too. You must feel with very great satisfaction that you have such worthy teachers, who are able and anxious to send you forth prepared to do honor to the high reputation of McGill. It has been well said by Mr. Stewart that the benefactors of McGill or any other medical school are not alone the men who give a little money, but the men who give their time, talent and energy to the school as your professors do. [Applause.] The position of the teacher is never a remunerative one. Anyone in the noble profession of medicine, if he cared for money, could make a great deal more than by teaching. It is because your professors are anxious for the honor of their University, and because they desire to educate worthy successors of themselves, that they devote their time and talents. When you find McGill turning out a man like Dr. Osler, who is a teacher of his profession in one of the first medical schools of the United States, you have reason to be proud of your Alma Mater. [Applause.] It gives me very great pleasure to hear from Professor Johnson that the art faculty for ladies is progressing so well, and that the announcement was received with the greatest cordiality by you. There may be different opinions on the subject of introducing ladies as members of the medical profession, but I am sure you will all join me in saying that we ought to be glad that women are willing and determined to advance themselves in learning as far as they can—[hear]—and that you will receive all most cordially who come to your University to be so instructed. With those ties which commence at the altar and continue through life, is it not well that our helpmates should be those who are scholarly, who are intelligent, and who can discuss matters on a par with yourselves? Coming to your own profession, is it not well that women should be instructed so as to become intelligent associates with you at the bedside of the sick, and that they should be intelligent associates we may hope that here, as it is in England and elsewhere, that some of the most educated ladies shall become nurses in the hospitals as well as in private families? It would be a very

great benefit, as I am sure you will all admit. With regard to the benefactors, I think it would be better if they were not so prominently brought forward on one occasion and another. All that any man could do by giving part of his means is very little indeed compared with what is done without pay in the profession itself. Let us hope that those who have the means will join together in assisting McGill, not only to maintain it in its present very high position, but by furnishing means to enable it to go forward and always keep in the front rank no matter what the advance in the science of medicine and surgery. I thank you very greatly for the generous way in which the toast of the benefactors of the University has been received, and of your kindly notice of my name in connection with it. To say more would be to say what I ought not to say. [Cheers.]

The toast of "The Ladies" was proposed by the chairman, and responded to by Mr. Wheeler.

The "Class of '88" was proposed by the second vice-chairman and responded to by Mr. N. D. Gunne.

A pleasant evening was brought to a close soon after midnight.

Medical Items.

CHANGES IN THE MEDICAL FACULTY OF MANITOBA COLLEGE.

—A meeting of the Medical Faculty of Manitoba College was held on the 10th ult. to fill the vacancy in the Deanship and the chair of Surgery, occasioned by Dr. Kerr's resignation, and the chair of Medical Jurisprudence and Toxicology rendered vacant by Dr. Sutherland's retirement. Dr. J. W. Good was temporarily appointed to the chair of Surgery for the rest of the session. No action was taken in connection with the Deanship. Dr. McArthur was appointed Professor of Medical Jurisprudence; the appointment is regarded by the profession as an excellent one. The resignations of Drs. Kerr and Sutherland take effect on January 1st.

—Dr. A. H. Walker has opened a "Weir-Mitchell Sanatorium" at 38½ George Street, Hamilton, Ont. The number of cases demanding this form of treatment are constantly on the increase in this country, and we hope that Dr. Walker will receive that support from the profession which his energy and enterprise deserve. For particulars as to terms, etc., see our advertising pages.