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Original Communications.

EXTIRPATION OF THE PROSTATE—FREYER'S METHOD.

BY F. P. MCNULTY, M.B., PETERBOROUGH.

My interest in this operation was aroused by following the rather acrimonious correspondence that ensued upon the publication of Mr. Freyer's initial series of cases in the *British Medical Journal* of June 20th, 1901. This correspondence served to show the wide diversity of opinion that exists as to the most suitable operation for chronic prostatic enlargement, some advocating the suprapubic method, others the perineal, and others still the urethral. Even by each of these different routes a variety of operations have been proposed, and whilst this multiplicity of methods may be taken as an index of the earnest efforts made by surgeons to arrive at some safe and suitable operation, it nevertheless emphasizes the unsettled state of the surgical mind. The remarkable success achieved by Mr. Freyer in his operation of total extirpation suprapubically gives ground for the hope that at last a safe and comparatively easy operation has been evolved for this most distressing and widespread malady. This success was so pronounced, and the relief obtained so marked, that I was induced to try by his method to give ease to a patient of mine whose life for a year past had been made miserable by all the evils of catheterism.

This patient was a gentleman, aged 69, who for three years had been suffering from symptoms of enlarged prostate, namely, increased frequency of micturition, so that finally he could retain urine for only one hour during the day and about half an hour at night, difficulty in starting the stream, intermittency of the flow, dribbling and pain above the pubes. At

times there was absolute obstruction, and for some months he had occasional recourse to a catheter. Eventually he found it impossible to pass the instrument, and at this time I was first called in attendance. I found him in the greatest agony, bleeding freely from the urethra and straining ineffectually to pass urine. On enquiry I found that for two or three weeks he had drawn blood at each attempt to pass the catheter, and just previous to my arrival quite a free urethral hemorrhage had followed the introduction of the instrument. I gave him a quarter of a grain of morphia hypodermically, and after some difficulty managed to pass a small-sized silver catheter; about six ounces of foul offensive urine came away. Several false passages had been formed and despite the utmost caution in passing the catheter, pure blood ran through the lumen in alarming quantities. The next day he was removed to the hospital, and during the following two weeks his bladder was irrigated twice daily; this, combined with good-sized doses of strychnia and urotropin, appeared to add to his power of expulsion, and for the next four months he managed to urinate with varying success—occasionally passing the catheter, but each time inducing a free hemorrhage. On the night of Nov. 18th I was hastily sent for and again found him in the greatest distress; he hadn't urinated for nearly eight hours, bleeding from the meatus seemed to be even more free than usual, and on introducing the catheter far back into the urethra, it ran out into numerous false passages. I temporarily relieved him with morphia, aspirated the bladder suprapubically in the morning and again sent him into the hospital. A rectal examination revealed a general enlargement of the prostate, both lobes being quite firm and hard, and the left one quite painful. The hardness of the lobes did not justify the hope that double vasectomy might be of service, and so the patient was prepared for a suprapubic operation. The profuseness of the hemorrhage led me to suspect the possibility of malignant disease near the base of the bladder, but fortunately such was not the case.

With Dr. Boucher assisting and Dr. McGrath giving the anaesthetic, a steel catheter was inserted with difficulty, the bladder well distended with boracic lotion and opened suprapubically. Both lateral lobes bulged well into the bladder, their adjacent surfaces being in close coaptation. There was no indication of a middle lobe. It has been generally held that obstruction in these cases is due to the enlarged middle lobe producing a block at the internal orifice, but in this instance such was not the condition, the lateral lobes being the sole cause of the urinary distress. About two quarts of hot boracic lotion was allowed to flow through the catheter and

out by the wound, the bladder was then mopped as dry as possible and the gland pushed well forward by the assistant with one finger in the rectum. The mucous membrane, covering the most prominent part of the left lobe, was then snipped through by scissors, the tip of the forefinger of the left hand introduced into the incision thus made and gradually worked around the tumor, which became easily separated from its surroundings and enucleated and removed without difficulty. The attachment of the mucous membrane to the tumor was not very intimate and caution, rather than force, was the only requirement for its separation. The right lobe was treated in a similar fashion, but on this side some tight fibrous bands attached to the sides of the tumor had to be torn through before complete freedom was obtained. This was very trying on the finger, especially anteriorally towards the triangular ligament, but by introducing the right index and middle fingers into the rectum and pressing forwards, the tumor was steadied and the separation facilitated. The inner side of each lobe peeled off readily from the urethra, which with the contained catheter was pushed well forward towards the pubic arch while the lobes were being freed in front from the triangular ligament. There was very little bleeding, and this was readily controlled with hot boracic lotion. Only the thickness of the bowel separated the fingers in the rectum and bladder, so that there is no doubt that the entire prostate was removed and not merely adenomatous masses enucleated. The cavity occupied by the prostate, owing to the hot douching, the contractility of the surrounding muscles and inherent elasticity of the tissues, soon became obliterated. A drainage tube was inserted in the suprapubic wound for forty-eight hours and a catheter tied in the urethra—this latter was thought necessary on account of the presence of false passages and the tendency to hemorrhage. The bladder was irrigated daily through the catheter, which was removed on the fifth day, and thereafter readily passed. On December 16th the patient passed eight ounces of urine naturally, and thereafter all urine was voided through the urethra. He was discharged from the hospital on December 23rd, and now, five months after the operation, is able to hold his urine six hours by day and rises only once during the night. There is now no sediment in the urine, which is free from albumin, odorless, and normal in all respects.

In the correspondence which ensued upon the publication of Mr. Freyer's papers, two main objections were urged against the operation. (1) That the prostatic portion of the urethra must of necessity suffer irreparable damage. (2) That the prostate was not removed in its capsule at all, but that

adenomatous masses growing in the gland substance were simply enucleated. A truer conception, however, of the anatomy and pathology of the parts in question clears the ground, and shows in a new light the undoubted value of the operation. The prostate is really composed of two lateral lobes, which in some of the lower animals remain distinct and separate throughout life, as they do in the human male for the first four months of fetal life. After that period their inner surfaces become adherent, except along the course of the urethra, which they envelop in their embrace. The urethra is thus simply bridged above and below by prostatic tissues. These bridges have been termed the upper and lower commissures. In later life, as the lateral lobes enlarge, there is a tendency to revert to the fetal state, and each lobe bulges out into the bladder, becoming thereby more defined and isolated. In this condition the lobes, after their enclosing sheath has been opened and freed, readily strip off the urethra and separate along the commissures, leaving the canal uninjured and intact. Still more remarkable have been the results obtained in certain more recent cases in which this separation could not be readily effected, and in which the urethra was purposely torn across. In the fibro-myomatous forms of hypetrophy there is a firmer cohesion between the lobes than in the purely adenomatous variety, and in a number of instances of the former kind, the cohesion was such that the commissures did not seem to yield, and so it was found necessary *to tear across the urethra anterior to the tumor.* In addition to Mr. Freyer's four or five cases of this kind, Sir Wm. Thompson also reports a similar case in his practice, and in each instance recovery followed, and with it the power of retaining and passing urine naturally. The explanation as to what takes place after such a procedure is as yet purely theoretical. It is held that by contraction the neck of the bladder is advanced to the posterior surface of the triangular ligament, and that direct union takes place between it and the membraneous portion of the urethra, the canal being kept open by the daily passage of a catheter for irrigation purposes. The fact that these cases recover with the power of retaining and expelling urine voluntarily proves that the true sphincter of the bladder lies in front of the prostate, in the membraneous portion of the canal.

The second objection rests upon a misconception as to what is meant by the capsule of the prostate. The normal reflexion of the recto-vesical fascia forms the sheath or covering ordinarily thought of as the capsule; inside of this, however, is a distinct covering designated the "proper" capsule, and minutely described by Sir Henry Thompson in the last edition

of his *Diseases of the Urinary Organs.* His exact words are: "The proper capsule, which cannot be regarded as a mere offshoot from any adjacent fascia, but is a special envelope belonging to the prostate itself, although thin, is firm in texture, and defines clearly the form and limits of the prostate here." It is in this proper capsule that the entire prostate is removed, and the procedure might in fact be spoken of as "extra-capsular" enucleation. If the recto-vesical covering were removed urinary extravasation would naturally follow with probably a fatal result. The fibrous bands uniting the proper capsule to the fascial covering are easily torn through by the finger, but as it is in this space, between the two capsules, that the prostatic plexus of veins runs, caution is necessary to avoid hemorrhage; by keeping close to the tumor with the finger, the bands and adjacent tissue readily peel off and the mass then completely shells out.

Some British surgeons of note are still skeptical as to the practicability of this operation, and Mayo Robson holds that complete removal of the prostate in its capsule is anatomically impossible. However, such opinions must soon give way in face of the remarkable results obtained by Mr. Freyer, who has now published an account of thirty-one cases, and in addition almost daily successful reports are being published by those who have followed closely his method. These reports are such as to engender the hope that this operation will soon establish for itself a recognized place in surgery, and relief thereby obtained from a most distressing and frequently fatal malady.

HODGKIN'S DISEASE.*

By WILLIAM ALLAN, M.B., C.M. (Edin.), Lindsay, Ont.

Gentlemen,—In making choice of a subject for the paper which I was asked to read before our society, I was influenced by finding some notes on a case of Hodgkin's disease which I observed during a few months when surgeon to the Los Angles Polyclinic, and though I must warn you in advance that they are rather scanty and inconclusive, still they may serve "to point a moral or adorn a tale" and engage our minds for a while in the consideration of conditions which, though enveloped in obscurity, still present a glimmer of light here and there allowing us to observe sufficient data on which to form a few definite ideas. The case I refer to is this: On April 8th, 1895, a Swiss, 38 years old, Joe Bisig by name, came to consult me at the polyclinic. He is a large-framed man with well developed muscles, but of pallid complexion; talks rather hoarsely. Twelve years ago he noticed, what he calls, a "little knot" on the left side of his neck, which remained in *statu quo* for eight years. Four years ago when he was working in irrigating ditches, often being in water for several hours at a stretch, he noticed this lump begin to enlarge, a couple of years later he got a hard cough, the gland enlarged still more, and six or seven others enlarged also till a year ago they attained such a size that they interfered with the turning of his head to the left. Some were as large as hen eggs, so he entered St. Vincent's Hospital in Portland, Oregon, and had them removed by Dr. G. A. Smith.

Bisig says he was a little hoarse before the operation and became more so afterwards. Previous to the operation his food often "went the wrong way," making him cough, but since then it stopped doing so. When he coughed after meals it continued till he vomited. Ten years ago he noticed on climbing hills that his breath was shorter than it ought to be, but not enough to interfere with his work. However, four years ago, after the glandular hyperplasia began, his breath became shorter still, and got worse after the operation, though he doesn't think there is any marked difference now. He can walk fast for a block or two, but then becomes winded; feels it most after lifting a heavy weight. Has been pale all his life, like the rest of his family, he says. When in health was above the average in muscular strength. When a boy he tells me he was several times grasped round the neck by "pretty hard fingers." Had gonorrhea a couple

*A paper read at the meeting of the Victoria County Medical Society, April 9th, 1903.

of years ago, but never had syphilis. Used to weigh 215 pounds, but had lost seven or eight pounds before the operation, and some more since At present still weighs about 190 pounds Hasn't been able for hard work, and is employed herding and milking cows.

Physical Examination—Presents a T shaped scar behind the left sterno-mastoid. Numerous, enlarged, hard, separate glands can be felt over the anterior and posterior triangles of the neck on both sides, and behind the angle of the jaw, none much larger than a hazel nut, except some above the sternal end of the right clavicle, which appear to be fused in one mass. Some are enlarged under the sterno-mastoids and continue to be felt until palpation is lost behind the clavicle and sternum. The left infra-clavicular region is tumefied. There is complete dulness with loss of elasticity from the left edge of the sternum extending outwards to the anterior border of the thorax, and downwards to where it merges into the cardiac dulness. Over this area the breath sounds are very weak, and there is neither vocal fremitus nor resonance. Over the analogous area on the right the percussion note is good and the breath sounds strengthened through compensation. At the left base a sonorous râle is sometimes to be heard, but the percussion note is clear on both sides, though the breathing is harsh with expiration sound prolonged on the left side. There is an irritating cough at times with mucoid expectoration, but in which there are no tubercle bacilli. Respirations, 23; pulse, 108. Heart sounds faint, especially the first. Apex beat imperceptible; spleen not perceptibly enlarged, certainly not increased more than half an inch in breath. Liver dulness, five inches from sixth rib downwards, therefore not markedly increased. No ascites, edema nor enlarged veins, unless possibly the external jugulars. No hemorrhages. Inguinal glands very distinct, and the lymphatics hard, rather more marked than ordinarily; but patient says he never remembered noticing them any smaller. Abdomen appears natural. Remains of a papular eruption over his body, and copper-colored spots on his chest, which used to be very itchy. Says it began a year and a half ago after taking iodine or iodides. Urine, natural; specific gravity rather low. Blood looks normal under the microscope; red globules not counted, but evidently deficient in quantity from the paleness of his lips and eyelids, and from the difficulty of getting it to come from a prick in a constricted finger. The nature and distribution of the glandular enlargements, the absence of ulceration suppuration or caseous degeneration in them, their gradual development, the evidence of adenoid growth in the mediastinum, and the general history of the patient's illness, point it out as being a well-marked case of

Hodgkin's disease. He was ordered tincture of iron and Donovan's solution, fifteen drops of each in plenty of water, after meals. He was seen by a colleague on the 9th May, who tells me that he appeared to have improved in condition, and that the glands which were coalesced had become more isolated. I was able to corroborate this observation when he again visited the Polyclinic on June 3rd; he then informed me that he had felt better until he had caught cold a week before, when his dyspnea increased and made him return for some medicine to relieve it. Ordered spiritus etheris co, nitrosi, chloroformi and ammoniæ aromat, equal parts; a teaspoonful as required. Saw him again July 9th; had been a few weeks in the County hospital, as the poor-house is euphoniously termed; had lost weight and was weaker and more anemic looking; the glands didn't appear to have increased much; expressed his intention of returning home to Switzerland. I recommended him to continue taking the iron and Donovan's solution and to pound up ribs and vertibræ of sheep, steep in glycerine, strain and take a teaspoonful after meals. This was the last I saw of the case, which, no doubt progressed to a fatal termination, as usual.

The spontaneous and diffuse hyperplasia of lymphatic glands is always coincident with an alteration of the blood, which, although not of the same nature in every case, is always accompanied by one condition, viz., a diminution in the number of red corpuscles. The other changes consist in some cases in a persistent augmentation in number of the white corpuscles as well, so that instead of the ratio being 1 to 3, 4 or 5 hundreds, it may rise to 1-20, 1-10, and even 1-3. Names have accordingly been coined to express these conditions—thus, to indicate the increase of the white corpuscles or leucocytes, John Hughes Bennet, in 1845, called this form leucocythemia, and Virchow, later, leukemia, and in order to emphasize the diminution of the red corpuscles and at the same time connect it with the lesion in the lymphatic system. Hodgkin, in 1832, termed the other form anemia lymphatica, and Wunderlich, in 1866, pseudoleukemia; but usually these cases in which the glands are enlarged without increase in the number of the white globules are called, after its first describer, Hodgkin's disease.

In all of these terms the effect and not the cause of the disease is brought into prominence, and must necessarily remain so until that cause is freed from the obscurity which surrounds it. Whatever that cause is, however, the opinion expressed by Prof. Jaccoud, of Paris, over thirty years ago, that these two morbid conditions are not really different diseases, but merely modifications of one disease, seems to be gaining ground and, at any rate, has never been disproved. Jaccoud pointed out that in

the disease called leukemia one or more of the hematopoietic organs becomes the seat of a nutritive stimulation or irritation which increases their size and a functional irritation which exaggerates their work, giving rise to a great excess of white globules. When this process starts with the spleen the leukemia accompanying is termed splenic, when the lymphatics are the first or sole organs involved it is called lymphatic or glandular leukemia, while in other very much rarer instances where the solitary and agminated glands of the intestine are alone affected it has been termed intestinal leukemia.

So, in making a comparison between leukemia and pseudo-leukemia it is necessary to contrast the glandular form of leukemia with the chronic form of pseudoleukemia. Commencing with their clinical aspect, we remark that the beginning of the disease in both is slow and insidious; a very long time may pass before attention is drawn to it. For instance, Christopher Heath mentions the case of a boy from whom he removed some enlarged axillary glands, and not till six years afterwards did he develop general glandular hyperplasia. And in this case of Bisig we see one enlarged cervical gland remaining quiescent for eight years before active increase commenced, and then two and a-half years more passed before the others took on the diseased process. Generally the first thing noticed by the patient is the appearance of a tumour, a swelling where no swelling ought to be; in other cases it is a gradual increase of weakness without any notable derangement of health or disorder of any organ in particular that first attracts the patient's attention. He feels more easily tired out, is not so fit for his work as formerly, the least exertion is irksome, he becomes dull and apathetic. If he lays off work, he doesn't lose a great deal of flesh for quite a long time, but if he continues active life he soon emaciates. So far these are only symptoms that may be referred to the anemia, and this condition may last for a long time until later symptoms arise which are identical in each, owing their origin to the same cause, viz., the mechanical results arising from pressure. While these enlarged glands continue limited for long to regions away from the neighborhood of organs which their bulk might injure, symptoms will be long in developing, but when they encroach on important organs or nerves they produce such effects as alterations of the voice, dyspnea, vomiting edemata.

In leukemia hemorrhages from the mucous membranes, especially the nasal, are frequent; so also in pseudoleukemia. Eberth, in 1869, mentions a girl of 9 who had frequent hemorrhages from the nose and mouth. Payne mentions a boy of 19 who had abundant epistaxes, though the cervical and thoracic glands were normal. Bohn mentions subcutaneous hemorrhages

like purpura in a man of 56 who eventually died from subacute peritonity. Virchow speaks of the frequency of papular emptions in leukemia, and Trousseau found them so often present in pseudoleukemia that he introduces it in his didactic description of that disease. Mosler, in 1868, called attention to the presence in leukemia of stomatitis and pharyngitis, producing a fungous state of the mucous membrane. Meyer, Bohn and Eberth say they are often initial symptoms in pseudoleukemia. Dyspnea is met with in both, which, as in chlorosis, is partly due to the deficiency of red corpuscles, but is, of course, most prominent when there is also mechanical obstruction from enlarged glands. In both there is usually low fever of a remittent or intermittent type. The causes of death in both are similar—hectic or cachexia, repeated hemorrhages, asphyxia, pleurisy, peritonitis or brain lesions serous or hemorrhagic. There is thus no special difference during the commencement, course, or termination of these affections.

If we now turn to their anatomical aspect we find also a similarity—sometimes a simple hypertrophy of the adenoid cells alone, sometimes an increase of the connective stroma as well; the former being usually the rule in leukemia, the latter in pseudoleukemia, but not invariably—thus Trousseau had a patient under observation who, after consulting several Parisian physicians, went to Berlin to have the benefit of Virchow's advice, and was told by that great authority that his blood was not leukemic. Shortly afterwards the pressure effects of the glandular masses in his neck caused his death, and Virchow made a microscopic examination of the glands and found nothing but proliferation of the adenoid cells—adenoid hyperplasia.

Acute pseudoleukemia, as Julius Dreschfeld points out in a very interesting lecture in the *British Medical Journal* of April 30, 1892, differs only in degree from the chronic variety—it runs its course rapidly instead of slowly. He mentions the case of a strong, vigorous man of 23 who lived only five or six weeks after symptoms of the disease commenced. In this case the mediastinal glands were involded with proliferation of both cells and stroma. The spleen was enlarged, weighing 16 ounces; there were deposits in the liver and kidneys; but none of the superficial glands were enlarged. The patient was anemic and somewhat emaciated. Temperature 100.4° F. Cough and dyspnea were present, being, in fact, the symptoms that led him to enter the hospital. The lincocytes were increased in number, there being 1 white to 40 red. Now, was the altered ratio due to the diminution of red corpuscles or was there an actual increase in the number of white ones? Diminution in number of the red corpuscles is not entirely due to splenic enlargement. Lloyd Roberts, in 1869, published in the *British Medical Journal*

the case of a woman of 26 who had no enlargement of the spleen, or of the lymphatics, yet whose blood had 1 white to 2 red corpuscles—here there may have been a defective transition of white into red globules, though some claim that white corpuscles never change into red ones. This woman was cured in three months. With regard to splenic enlargement in chronic pseudoleukemia, Dreschfeld states his experience to be that it is present only to a limited extent, and then only as a result of metastatic deposits, which sometimes, indeed, produce an enormous enlargement. In this acute case, however, there were no deposits in the spleen, although it weighed 16 ounces.*

The close alliance of all these morbid conditions seems to point to a similarity of causation in them. If we now turn to the search of that cause, it will be appropriate at first to briefly consider the present state of our knowledge concerning the numbers, origin and destruction of the blood corpuscles.

When most of us learned physiology we were taught that the cells in blood consisted of two kinds—the red, of which there were about 5 millions to the c.c., and the white much less numerous, being present in the ratio of 1 to 3, 4, or even 5 hundred of the red. Other smaller irregular bodies were noticed, but considered as disintegrations of the red ones. It is known now that the number of the white corpuscles vary within wide limits under certain conditions—thus the ratio in the splenic vein is 1-60, while in the splenic artery it is 1-2,000. From this it is inferred that a great destruction of red globules takes place in the spleen. They increase largely after a meal and disappear in enormous numbers when blood is drawn from the body. Since our student days these cells, red and white, have been subjected to more rigorous microscopic scrutiny, and another constituent, called blood-plates or tablets, is described, 18 to 250 thousand in the c.c. of blood. These may be shortly noticed and dismissed at present, as the physiologists who recognize them differ so much in the views they entertain regarding them: some think they take part in the coagulation of the blood, others that they are disintegrated leucocytes, which, since they rapidly break up and dissolve in drawn blood, seems probable enough. The behavior of cells under various stains, such as eosine, which Ehrlich employed, has also been observed. The results of these studies, if not productive of much useful information hitherto, has been to multiply names to a rather alarming extent. Certainly nothing should be deemed trivial which tends to the advancement of knowledge; but grave distinctions without equivalent differences are always

* It is well known that the spleen varies in magnitude more than any organ of the body, not only in different individuals, but in the same under different conditions. Its weight ranges from 5 to 7 ounces in the male; but, even when perfectly free from disease, may fluctuate between 4 and 10 ounces.—QUAIN.

to be deprecated, and pedantry, even when scientific, is always ridiculous. For instance, when one enthusiast declares he can distinguish twelve different (?) kinds of leucocytes, the difference depending mainly on their varying bulk, it does seem a case of tweedledum and tweedledee and the veriest virtuosity of science; and that a few of them which take on the eosine dye are called eosinophile, or friendly to eosine, c'.s seems little better, since they seem to possess no other special characteristics and are not clearly associated with distinctive morbid conditions—their friendship or enmity to the ingredients of the microscopist's dye-vats is of little consequence to clinicians so far. Lawson Tait says: "Periodically we have an irruption of new nomenclatures for tumors and cancers, and with their new names the propounders firmly believe they have new truths and new conclusions. But it has not proved so yet. The new words introduce confusion, trouble the seniors, and make juniors feel as if they knew something their fathers were ignorant of—but they do not."

With reference to the formation of the red corpuscles in extra uterine life, it was long believed and is yet, by some, that they are formed from the white ones. Many physiologists now say that they are formed from special nucleated cells in the red marrow of bones, termed erythroblasts, and quite independent of the white corpuscles, whose precursors are called leucoblasts. The erythroblasts are neucleated like the red corpuscles of birds, fishes and reptiles, but are colorless at first. After hemorrhages, the blood-forming power of the red marrow becomes much more active, and greatly increased numbers of these nucleated erythroblasts and their transitional forms, are to be seen, parts of the yellow marrow itself becoming reddish. In this state of affairs the spleen, which is considered to be a kind of red corpuscle factory in the fœtus, again temporarily assumes that function to repair the loss. The liver is said not to share in a similar renewal of prenatal occupation. In the red marrow the erthroblasts are said to be found within the blood vessels, while the leucoblasts appear in the extra vascular tissues. The protoplasm of the erythroblasts is almost always homogeneous, and never granular or mobile, like that of the leucoblasts. The leucocytes are still supposed to be formed in the lymphatic glands, the intestinal adenoid cells, the red marrow of bones and possibly in adenoid structures generally. With regard to the destruction of red corpuscles, the liver is considered one of the chief organs concerned, since the blood in the hepatic vein contains much fewer red cells than that in the portal vein, and there is no doubt but that the bile pigments are derived from the hemoglobin. The spleen also is said to share in the work of destruction, as

cells containing broken-up red corpuscles are found in its pulp, and as similar cells were found in the red marrow by Bizzozero, thirty years ago, it also is credited with powers destructive as well as constructive. This, you see, is blowing hot and cold—but that is nothing to some speculators. Diminution in the number of red cells is a feature in many diseases besides the two under comparison, but whether due to a defect of development of erythroblasts or to an actual increase in the destruction of red corpuscle is not clearly determined. To leukemia there is an actual increase in number of the leucocytes, so much so that the first observers of the disease called it pus in the blood. There is an actual destruction of red corpuscles in other diseases; for instance, yellow fever, acute atrophy of the liver, progressive pernicious anemia, paroxyomal hepatic hematurea. In these cases the cause has been attributed to germ poisons or ptomaines, which may either act directly on the corpuscles, or by leading to an excessive production of the bile acids, since George Harley found that injecting bile or bile acids under the skin of a dog's back had a powerful disintegrating effect on the red globules and gave rise to hematurea, which he qualified as hepatic, and since then ordinary chlorosis has been sometimes attributed to the absorption of ptomaines from the color. On the whole, then, there is no satisfactory conclusion to be arrived at as to the cause of the destruction of red corpuscles in leukemia or pseudoleukemia; but the report of Verdelli in the American Journal of the Medical Sciences for February, 1894, if confirmed by other observers, will do much to unravel the mystery. Verdelli reports two cases of pseudoleukemia and one of leukemia, in all of which, both by culture from the lymphatic gland, and from the blood, and from sections of various organs, he was able to demonstrate the presence of staphylococci pyogenes in pure culture. In one case staphylococci were found in an axillary gland removed three and a half months before death, in cultures from the blood in the heart two hours after death, and in some cultures from glands removed at the autopsy. In the second case, cultures from an inguinal lymphatic, excised twenty-one days before death, yielded negative results, although staphylococci were found in sections of the gland and in cultures of blood from the heart, femoral veins and other organs two hours after death. In the third case, staphylococci were obtained six hours before death in pure cultures from blood out of a finger, and immediately after death from the spleen and various lymphatics. By introduction of these cultures into the peritoneal cavity and subcutaneous tissues, as well as by the introduction of bits of excised glands into the peritoneal cavity. Verdelli says he obtained the following results in rabbits:

1. Enlargement of lymphatic glands, liver and spleen.
2. Round celled infiltration, diffuse and circumscribed, resembling lymphomata, especially perivascular, principally in lymphatic glands, spleen, liver and lungs, less commonly in the kidneys.
3. Slight thickening of the connective tissue in all the viscera.
4. More or less marked and extensive atrophy, and necrotic processes, involving the parenchymatous cell (of lymphatic glands, spleen, liver and lungs, but especially the liver and kidneys) in special relation with the inoculated infectious agent.
5. A slight, but indubitable arteritis, always more pronounced in the spleen and lungs.

All in all, the changes bore a close resemblance to those in leukemia and pseudoleukemia. From a comparison of the two cases of pseudoleukemia the inference is drawn, that the degenerative and neoplastic processes may present great variations in individual cases, the one may preponderate to such a degree that the other may be almost wanting. The fact that micrococci found in the blood and lymphatic system in all three cases were alike, that in one case they were found three and a half months before death, and finally that it was possible to induce in rabbits, anatomic changes resembling those found in leukemia and pseudoleukemia, appears to Verdelli to afford strong confirmation of the view that there is a causal relation between the micro-organisms and the disease. As suppuration was not observed in any of the cases, and only exceptionally in any of the experimental observations, it is to be concluded that the virulence of the micrococci was attenuated, the pallor of the colonies and their decolorization under certain conditions, likewise indicating a lessening of chromogenetic activity.

So much for Buckingham—or rather Verdelli—and as that is the latest thing I have heard on the subject, for whether his experiments have been confirmed or his influences disputed, I know not, so I will now finish what is a long, and perhaps tiresome paper by remarking, as I said at first, that there remains a good deal to be found out yet, before the disease is satisfactorily explained.

Selected Articles.

THE USE OF ANTITOXIN IN THE TREATMENT AND PREVENTION OF DIPHTHERIA.

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The object of this short communication is to give the results of our experience with diphtheria antitoxin in the isolation wards of the Victoria Hospital for sick children of Toronto (*a*) in the treatment, (*b*) in the prevention of diphtheria.

1. During 1901 there were an unusually large number of cases of diphtheria in the hospital. In spite of every possible care being taken, every now and then a case would be admitted while in the incubation period, and although suspicious cases were immediately isolated, the disease would spread. We had during 1901, then, about 100 cases of the disease, all proved bacteriologically to be diphtheria. All of them, except a few very mild ones, were treated from the outset with antitoxin, and only three died, and one of these was complicated with scarlet fever. Unfortunately, no actual note was kept of the number of cases during that year, and although I believe that 100 very nearly represents the total, still the percentage of deaths loses most of its value, and I only give it as a general statement. The number of deaths is accurate.

Since January 1st, 1902, we have kept a book in which all cases have been entered, with details as to age, sex, number of days ill before being admitted to the infectious wards, treatment, etc., and from this book I take the following facts:

Between January 1st and July 7th there were forty-two cases of diphtheria admitted to the infectious wards, all of which showed the Klebs-Loeffler bacillus. In nearly all cases the bacillus has been of the short variety. All except a few of the mildest were given antitoxin at once on admission, frequently before the bacteriological report had been received, the initial dose varying from 1,500 to 4,000 units. The dose was repeated in a few hours if required. In addition, the throat cases had their fauces painted with Loeffler's solution of menthol and sesquichloride of iron, and where the nose was affected a spray of very dilute corrosive sublimate was used.

Of the forty-two cases thus treated, forty-one recovered completely. One died, a girl aged 13 years, and some details of her case are as follows:

It seems that she had been in the city Isolation Hospital

several weeks before, suffering from diphtheria. She was discharged in May, and was admitted to the Children's Hospital on June 12th for genu valgum. Her history states that she had "kidney disease," and her urine on admission contained albumen and casts. On June 23rd she was sent into the diphtheria ward suffering from a mild attack of faucial diphtheria. So mild, indeed, was the case that she was not given antitoxin. A week later, when her throat was clear and her temperature normal, she developed uremic symptoms, and died very quickly. She was given 3,000 units of antitoxin when the uremia developed, in hopes of neutralizing the toxin that might be irritating the kidney, but no amelioration resulted. The necropsy showed the kidneys to be contracted, markedly cirrhotic and white on section. The left weighed 5 dr. 12 gr., and the right 5 dr. 36 gr.

It is thus scarcely fair to call this a case of death from diphtheria, although that disease undoubtedly precipitated the final result. If antitoxin had been early and freely used possibly that result might have been averted, as the cirrhosed kidneys might have been saved the toxic irritation; but one can only surmise on this point.

On the other hand, would the presence of renal disease have contraindicated the use of antitoxin? A large amount of literature exists upon the occurrence of albuminuria after the use of the serum. C. E. Michael, in a series of analyses from the returns of the Metropolitan Asylums Board of London in 1898, found that the use of antitoxin in diphtheria increased the percentage of cases of albuminuria, but, on the other hand, decreased markedly the occurrence of nephritis. McCullom at the Boston City Hospital found that cases of albuminuria of diphtherial origin more often showed a decrease than an increase in the albuminuria after the use of antitoxin.

There was only one case of post-diphtherial paralysis—a very severe one, involving the muscles of deglutition and of all four extremities. It occurred in a boy of 14 years of age, who had a slight attack of nasal diphtheria as a complication of scarlet fever. So slight was the affection that no antitoxin was used. He recovered completely. Thus the only two of our cases that went wrong were cases in which the disease seemed so slight that antitoxin was not used. Several of the forty-two cases were of a very severe type.

One, boy of 7 years, was not admitted to the diphtheria wards until the fifth day of his illness. His swab had persistently shown only a streptococcus infection until then. His pharynx was most extensively involved, and the disease had spread into both nostrils. He was unconscious and delirious. The case looked hopeless, but he was given 4,000 units of anti-

toxin, and 6,000 more within the next twenty-four hours. He also received 20 c.cm. of antistreptococcus serum, as the infection was a mixed one. Improvement set in at once, and he recovered completely.

I am fully aware that one cannot dogmatize from the results of the use of antitoxin in forty-two cases, but the series helps to swell the enormous mass of evidence in favor of the value of the serum in the treatment of diphtheria.

The most extensive report upon the use of antitoxin has been published by Dr. Otto Jelinek, of the State Institute for the preparation of diphtheria antitoxin in Vienna. He has collated the published reports of all observers in all parts of the world to the close of 1898. Altogether he has records of 127,359 cases of diphtheria in which the serum was used, with 18,088 deaths—that is, 14.2 per cent. From an analysis of 52,521 cases, showing a death-rate of 15.28 per cent., he gives the following most convincing figures:

Those treated	with	antitoxin	on the 1st	day	had a mortality of	5.07 %
"	"	"	2nd	"	"	8.49 %
"	"	"	3rd	"	"	15.56 %
"	"	"	4th	"	"	23.36 %
"	"	"	5th	"	"	30.02 %
"	"	"	after the 5th	"	"	26.36 %

This table includes cases from all parts of the world, in all climates, in hospitals and private practice, amongst the poor and the well-to-do.

One might quote at any length from statistics published by different writers, but suffice it to say that they all tell the same tale of mortality reduced in proportion to the earliness of use and the quantity of antitoxin given.

2. The results of our employment of antitoxin in the prevention of diphtheria have, as far as they go, been equally striking.

In all the institutions devoted to the care of children diphtheria is a frequent and dreaded scourge, and the Victoria Hospital for Children has been no exception to the rule. In spite of every precaution which could be thought of the institution has almost constantly had some diphtheria in it, and the Lady Superintendent informs me that during the five years that she has presided there there have never been two successive weeks in which the disease has been completely absent. Twice a year an exacerbation has regularly occurred, namely, when the children were moved over to the Summer Hospital on the Toronto Island in May, and when they returned to the city in October. The usual increase in cases occurred last June, and threatened to become more serious than the average.

In the first week in July every individual in the hospital was given an immunizing dose of from 300 to 500 units of

antitoxin, and the dose has been repeated every three weeks since. There are, on an average, 165 souls in the institution. Every new patient has been given a similar dose on admission, and every three weeks thereafter. The result has been most gratifying. Not a single case of diphtheria has occurred in the hospital since the immunizing treatment was commenced, that is, for a period of over five months. During this time the usual number of cases have been occurring elsewhere in Toronto.

Dr. William Goldie, the bacteriologist to the hospital, has on several occasions during the last few years examined swabs taken from the throats of healthy inmates of the hospital, and has always found that a considerable percentage of them showed the Klebs-Loeffler bacillus. He has made similar examinations recently, and finds that, as before, a percentage of apparently healthy throats show the bacillus. Thus the germ is present, but its hosts are immune, and hence no diphtheria occurs.

A large amount of literature is rapidly accumulating, showing the good results that follow the use of immunizing doses of antitoxin. A good summary of this evidence up to date is given by Northrup in his excellent article on diphtheria in Nothnagel's *Encyclopedia of Practical Medicine.*

As regards the safety of using these immunizing doses of the serum, our experience has also been in accord with that of most observers. Altogether upwards of 1,000 doses have been administered by Drs. Graham, Wright and Waters, the resident physicians of the hospital. They have been given to patients suffering from all kinds of diseases, and yet in no instance have any serious symptoms been produced. Not a single local abscess has occurred. A certain percentage of the cases have shown eruptions, and in three instances these have been petechial. It is interesting to note that the resident physicians have found that the eruptions occur almost exclusively after the first injections; a few have appeared after the second, and none later on. This point does not seem to have been remarked before.

Our experience with antitoxin, then, would lead us to the following conclusions:

1. Every case of diphtheria should be treated with antitoxin. As a rule, the diagnosis is easily made clinically, and it is better in such cases not to wait for the bacteriological report, but to inject the serum at once. Then, if the diagnosis is confirmed by the bacteriologist, one has "stolen a march" of several hours on the disease; if the case proves not to have been diphtherial, one has at least done no harm.

2. The serum should be administered not only early, but also freely, 3,000 units being an average first dose.

3. This use of antitoxin in no way interferes with the employment of any medicinal or other treatment which may be indicated, but all the latter are of secondary importance during the first few days of the illness.

4. All individuals who are exposed to infection should be given immunizing doses of antitoxin, just as all people who run the risk of smallpox infection should be vaccinated.

5. Five hundred units is the ordinary immunizing dose, but 300 seems to be sufficient for children under 2 years of age. The dose should be repeated at least every three weeks while any danger of infection lasts.—*Brit. Med. Jour.*

CASE OF A MAN BLIND FROM CONGENITAL CATARACT WHO ACQUIRED SIGHT AFTER AN OPERATION WHEN HE WAS THIRTY YEARS OF AGE.

BY A. MAITLAND RAMSAY, M.D., GLASG.,
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A man, aged thirty years, blind from birth, was brought to the Glasgow Ophthalmic Institution on February 24th, 1903. He was one of a family of seven, and although, as far as could be ascertained, there was no hereditary predisposition to blindness, one sister, as well as himself, was born blind, and another (who died at the age of thirty-five years) lost her sight when she was two years old. The rest—a brother and three sisters—are said to have been able to see perfectly well. The sister who was born blind, now thirty-three years of age, was brought up in the Blind Asylum, but the patient himself was allowed to run about as he pleased, no attempt to educate him having ever been made. He became, however, so familiar with the country district (a few miles from Glasgow) in which he resided, that he could go about without the slightest fear; and his hearing was so acute, that he knew at once if there was anything unusual on a road along which he was walking, and thus he never had any difficulty in keeping himself out of danger. The "sense of obstacles" spoken of by psychologists, was indeed developed to such a degree that he hardly ever came in contact with what might be in the way; he seemed to perceive the obstruction as he approached, and was thereby enabled to avoid it. As he passed along a road he could tell a wall from a hedge by the sound of the air coming through the leaves and branches of the latter. He could easily go on an

errand to any house in his native village, for the resonance of his footfall—quite different in sound when he was passing a building from what it was when he was opposite an open space—enabled him, perfectly familiar as he was with his surroundings, to count the houses as he passed, and thus to turn corners, and finally to stop at the one which he wanted. In a strange place, however, he could never trust himself to go about without a guide, because his sense of hearing conveyed nothing to him beyond the difference between passing buildings or open spaces, and number could not come in to render the auditory impressions definite. Experience taught him in the same manner to find his way about the garden in which he worked, and he learnt to pluck flowers, to arrange them in bunches, and to pack them in boxes for the market, not only without the slightest difficulty, but with very great accuracy. He distinguished different blossoms partly by touch, but chiefly by smell, and by dint of asking questions he got at last to know so much about their form and color that he could arrange them in a bouquet. He recognized the presence of strangers in the house chiefly by the sense of hearing—for example. he could discriminate persons whom he knew by the sound of their respiration, and he was at once cognisant of any breathing with which he was unfamiliar. Besides this, however, he said that if he came into the house when any strange person was there he experienced a sense of "fulness." He was unable to put this in clearer terms, and the feeling may correspond to that ascribed by Wardrop, in 1813, in his "History of James Mitchell, a Boy Born Blind and Deaf," to a highly developed sense of smell. Occasionally he worked in the harvest field and he could bind the corn and arrange the stooks as well as any of the other laborers. He said that he was even able to build the sheaves on a cart and naïvely added that although the load might not look "elegant," yet it always remained firm on the cart. At other times he assisted in trimming turnips with a large sharp knife, and only on one occasion did he cut himself. In the winter he was employed by a farmer to feed cattle, and as he walked along the byre, his sense of hearing guided him unerringly to the stalls where the cows stood, so that he had no difficulty whatever in carrying food to them and placing it in the troughs.

The eyes were small and deeply sunk, and they moved continuously in the sockets, and there was a very pronounced alternating convergent squint. The irides were natural, the pupils were active, and the intraocular tension was normal, but both lenses were completely cataractous. The patient was quite unable to distinguish objects, although he could tell day from night, and could easily perceive a light and locate it

accurately; and in this he resembled the boy Mitchell who could clearly discriminate light; but, unlike him, he does not appear to have had pleasure in its brightness, and, as he seems to have had no perception of bright colors the opacity was probably more complete. As the cataract seemed to be the only obstacle to vision, I resolved to operate, and I extracted the lens from the right eye on March 11th, and that from the left eye a week later. Prior to the former operation I made a preliminary iridectomy in order to test the vulnerability of the ocular tissues. Chloroform was administered as the patient was quite unable to control the movements of his eyes, and this ocular restlessness proved afterwards to be very troublesome, the constant motion under the dressings causing so much irritation that the bandage had to be removed and dark spectacles substituted. Both lenses were small and shrivelled and the nucleus of the right was calcareous. For about ten days after the operation on the left eye, the patient appeared to be quite dazed and could not realize that he was seeing. The size of everything in the ward seemed to be very much exaggerated, and on that account he had great difficulty in interpreting what he saw, but as he is inquisitive and has a keen desire for knowledge, he took from the outset a most intelligent interest in his own case and asked numerous questions of his fellow patients. The first thing he actually perceived was the face of the house surgeon. He said that at first he did not know what it was that he saw, but that when Dr. Stewart asked him to look down, the sense of hearing guided his eye straight to the point whence the sound came, and then, recalling what he knew from having felt his own face, he realized that this must be a mouth, and that he must be looking at a face. Once he properly understood what vision meant, he made very rapid progress, and his extraordinary retentive memory enabled him to take full advantage of everything that he was told. He was quite ignorant of color, but learned to distinguish hues very quickly. The first tint that he saw was red. A red blanket lay across the foot of his bed. He asked what it was and was told and never afterwards did he have the slightest hesitation in discriminating red again. He was shown a narcissus, and on being asked to describe it he immediately recognized the flower and knew from his old bouquet-making experience that it was white and yellow, but he now for the first time also became aware of the little red band in the centre, and at once called attention to it. When he was shown a bunch of daffodils he recognized them by their smell and immediately said that they must be yellow. The color that took him longest to master was green, but he can now name all ordinary tints readily and correctly. His difficulty with green is hard to explain

unless it be that with green he has no smell-association such as he had with colored flowers. Unlike Locke's blind man, who imagined that "scarlet was like the sound of a trumpet," he does not seem to connect any distinct ideas with particular colors except that he said that red gave him a feeling of pleasure, and that the first time he saw yellow he became so sick that he thought he would vomit. The latter feeling, however, has never recurred.

He rapidly learned the letters of the alphabet, and figures, and he will soon be able to read and to reckon. From the very first he saw everything in its actual position, showing that the retinal inversion of a picture is interpreted psychically without any education.

One of the things that gave him peculiar pleasure was looking at the face of a watch which he had borrowed from a fellow patient. Within a day or two of his having got the loan of it he astonished me by announcing that he was able to tell the time. When I asked him how he had learned so quickly, he explained that he did not understand the figures on the dial, but he had been told how to count the hours, and that each space between the "black marks" meant five minutes. When asked to distinguish between a ball and a toy brick he looked at them attentively for a considerable time, his hands meanwhile moving nervously, as if he were trying to translate what he saw by comparing it with an imaginary tactile impression, and then he described both correctly. He explained that he was so much in the habit of handling objects that he had come to have a "notion in his mind" regarding the form of things. He could count accurately after he had looked at objects one by one and seemed to derive much help in his calculations by pointing with his finger. Here again he seems to translate touch into vision and to arrive at a perception of the whole through the perception of the individual parts. He cannot take things in at a glance. He does not see the passers-by on the opposite side of the street quickly. He looks most intently and moves his head backwards and forwards and from side to side as if trying to get a view of them all round before he can make up his mind what he is seeing; in a room, however, he can distinguish things much more quickly. With any complex outline, however, or group of outlines, he still has considerable difficulty, though pictures are no longer to him, as they were at first, mere masses of confused color.

He was able to estimate size and distance more readily than might have been anticipated, although he said that he felt that if he were out of doors by himself he would be "wandered." From the time he got out of bed after the operation he could guide himself with ease through a doorway and walk about on

the level, but he had considerable difficulty in ascending a stair, because the steps seemed so high that to begin with he raised his foot much farther than was necessary, and without meaning to do so, went up two steps at a time. Whenever he discovered his mistake he began to pay attention to the rise of each, and he has now no difficulty in estimating their height. This, of course, was part of his difficulty of judging distance, though when he first looked out of a window on to the street and saw the pavement below, he said that he felt that if he had a stick he should be able to touch it, and thus he had not the feeling recorded of the boy operated upon by Cheselden in 1728, who thought that all objects he saw "touched his eyes," just as he had formerly got his impressions of things by pressure against the skin. Unlike him, also, the patient did not retain his faculty of moving easily about in the dark. Before the operation he could guide himself fearlessly through a ward without coming in contact with the beds or any other obstacle that might be in the way, but since he has been able to see he says that he has lost all that feeling of confidence, and when his eyes are shut he is afraid to move, and is impelled to open them to ascertain where he is going—so much so that he does not know what he would do if he again became blind.

The squint and ocular restlessness are less pronounced than they were, but the patient has still very little control over the movements of his eyes. When he is requested to look in any particular direction he is unable to cause the oscular muscles to do what he wishes, and the balls oscillate, and one or other turns inwards to such an extent that a portion of the cornea is hidden by the inner canthus. This want of control renders it very difficult to make a satisfactory ophthalmoscopic examination, but as far as can be made out the fundus oculi is normal: indeed, the functional activity of the optic nerves since the cataracts were removed is very remarkable, and is in striking contrast to the purposeless muscular movements. Disuse has crippled the function of the latter, but seems to have have had but little effect on the activity of the former. The eye is a receptive organ and the light that gained access to the retina through the opaque lens proved stimulus sufficient to maintain the optic nerve in health, while the want of visual power deprived the coördinating centre in the brain of all stimulus to develop, and hence the ocular muscles are not trained to obey the dictates of the will.

I am indebted to Mr. W. G. MacDonald, one of my students for bringing this case under my notice.—*The Lancet.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, T. M. McMAHON, H. J. HAMILTON, AND INGERSOLL OLMSTED.

Aneurysmal and Periaortic Pains. By DOCTOR SERGIO PANSINI, of Naples.

The author refers to several illustrative cases which he had published, and which prove that the pains depend on injury of the periaortic plexus. He then proceeds to a study of the various kinds of pain that present themselves in cases of aneurysm.

Thoracic aneurysms give rise to two kinds of pains (*a*) those due to direct compression, and (*b*) radiating pains.

(*a*) The former depend on the direct injury done by the aneurysm to the adjacent organs. Of these the only sensitive ones in the chest are the pleura, the intercostal nerves and the bones. Pleuritic pains are rare, as the aneurysms develop slowly. Injuries to the intercostal nerves do not occur without coincident destruction of the ribs. We have to deal, therefor, only with pains due to pressure on, and consequent destruction of, the bony walls of the thorax. These "bony" pains, caused by the aneurysm, are due in a particular manner to irritation of the periosteum, that tissue of the bone richly supplied with nerve filaments. In contrast with the radiating pains, the bony pains are more frequently continuous, heavy, deep-seated, limited in extent. These, too, are occasionally intermittent. The pressure caused by the aneurysm varies according to the internal pressure of the sac (and this depends directly on the blood-pressure, and on the various conditions which modify the latter) and also the thickness of the sac-walls. Although we frequently see an aneurysm enlarge, we not rarely see one preserve its size—unchanged, and sometimes see one, under appropriate treatment, and even with only a strict hygienic regimen, somewhat diminished. In microscopical sections of the walls, we are at times amazed on discovering throughout the whole thickness of the sac, a rich vascular network, newly formed—whose function must be either to prevent the mortification of the clots or to re-absorb a portion of them. It thus happens that the phenomena of pressure are in a certain degree variable. We can thus understand how the bony pains, though differentiated from those truly nervous by the characteristic of continuity, are only relatively so.

Head insists strongly that the local pains, or those of compression, diminish with direct pressure. I do not say that this cannot happen, but it must be in very rare cases. From our experience it is rather the contrary that happens—that on the seat of the extending aneurysm there is often sensitiveness to pain on pressure. In some cases the patients cannot bear slight percussion or even palpation. This is found chiefly in aneurysms of rapid growth. Rather is it true that that pain is limited to the seat of the aneurysm or somewhat beyond; and this is not constantly so, as in more than one case, the patients have described the pain as starting from the aneurysm and radiating beyond it.

But it is also to be noted, that there are cases in which the patients have not been aware of the presence of an aneurysm until they have seen a pulsating swelling on the sternum, or in the region of the ribs, or when the osseo-cartilaginous walls were already ulcerating. As a result of close questioning of such patients, it has been found that pains were absent, or so light that they were unnoticed. We have, therefore, been convinced that the so-called local pain is, at least in part, not a pain of the thoracic walls but a pain of the aneurysm walls, or rather of the walls of the ruptured artery; whether this is the visceral or splanchnic pain due to the injured nerves of the artery, whose external correlative is the radiating pain,—that is the chief object of this study.

However, it would be a grave error if, in the presence of a pain situated in some part of the walls of the chest, the physician were not to search first of all, in the region affected, for the origin of the pain; and it would be a serious oversight, if in the presence of a continuous pain in the walls of the chest, he were not to consider the possibility of an aneurysm, especially if that pain corresponded with one of the favorite seats of aortic aneursym, namely, the sternal, the anterior costal and the left dorsal regions. When the pains in the dorsal or vertebral region are diffused towards the left dorsal region, special attention must be paid to them. As we know, an expansion of aortic aneurysm on the lateral walls is not possible, owing to the presence of the lungs. On the right posterior wall it cannot occur without symptoms of compression, especially of the superior vena cava, which cannot easily pass unobserved. In this position, aneurysm is a rarity. Schrötter had one case, which was published by Weinberger and Weiss, and one occurred in my own practice during the past year. (I shall make this the subject of a separate paper). It is on the left posterior thoracic wall that aneurysms occur, which easily remain undiscovered on examination, and which are found only on autopsy, whether aneurysms of the left angle of

the arch or those of the descending thoracic aorta. Whether the pain be in the left median and dorsal region or in the median and antero-lateral regions, careful search must be made for any visible pulsation; let the respiration be suspended and search be made for any abnormal pulsation, by palpation. If the pain be posterior, let one not overlook Baccelli's method, that of bimanual palpation. Special attention must also be paid to abnormal dulness, particularly in the sternal region, and also to unusual strength of the arterial tone, not otherwise explicable.

(*b*) We come now to the *radiating* pains, and we shall seek to determine their seat, extent, form, duration, course and frequency.

1. They are usually *occipito-cervico-scapulo-brachial*; sometimes *facial;* sometimes *intercostal* and *precordial.* The occipito-cervico-brachial type is the most frequent. Lewachow was the first to call attention to the occipital pains. Both the brachial and the cervico-occipital neuralgias are very rare, and the occipital particularly. (Erb, Gowers). Iastrowitz calculates that genuine occipital neuralgia represents about 1.9% of the neuralgias in general and justly observes that if it seems more frequent, that depends on its being symptomatic of quite different affections, as those of the cerebellum, the vertebræ, the meninges, myalgias, posterior migraines, otalgias, and even injuries in the neck to the auricular branch of the vagus. Erb notes that occipital neuralgia, besides being diffused towards the neck and the arm, is diffused towards the parietal and frontal regions more often than towards the ear, and towards the cheek and the lower jaw as far as the chin. This second diffusion we have frequently found, and as is to be inferred from reported cases, we must recognize the existence of a facial aneurysmal neuralgia and of an aneurysmal headache.

Genuine or idiopathic brachial neuralgia is not frequent, while as Erb observes, brachial neuralgias are frequently found with *angina.* Erb adds that brachial neuralgia is more often found in women than in men, and in anemic and hysterical subjects.

Intercostal neuralgia is more rare. In our cases, when it was present, it was for the most part bilateral.

Precordial pain is most frequent; wanting often at the commencement, but never in the course of the disease, if we understand it in the wider sense, as applying not only to pronounced pain but to cardiac oppression.

These neuralgias alternate in a certain measure: occipital neuralgias become cervical and brachial. Their diffusion and extension is preferably from one region to another of the same side, rather than from one region to a similar one on the opposite

side. They may be bilateral, but they are always prevalent on one side.

2. They are of *varying intensity*, but are usually in the first stage of the aneurysm of notable intensity, and of a type now lacerating, now (and this is most frequent) excruciating or burning. *They are frequently accompanied by a pricking sensation and numbness.* These sensations are felt usually in the arm, at the elbow, sometimes in the neck.

3. In no case have we observed objective disturbances of sensibility, in the sense of diminution of sensibility to touch, puncture, heat, cold. We have not found in the affected parts any hyperesthetic zones. On this point new observations must be made, as the hyperesthetic zones of Head have been so fully proven by other facts, that we must accept them.

4. Contrary to the teaching of Head, these neuralgias are accompanied by *real painful points*, the most important of which I have already mentioned, occipital, mastoid, subauricular, cervical, supra- and subspinous, brachial. The presence of these points is important for two reasons: (1) Because it is a characteristic worth ascertaining and proves that the presence of these painful points is not exclusively characteristic of direct neuralgias, but also of radiating neuralgias; (2) because it proves that the place of pain is deep-seated, whether in the bone, muscle or fascia.

5. These pains are clearly paroxysmal and preferably nocturnal. This is why they are mistaken for syphilitic or rheumatic pains, especially as they are often manifested after ordinary rheumatic causes.

6. They are never accompanied by paralysis or muscular atrophy—there is a slight trace of numbness at the height of the attacks, just as in angina pectoris.

7. They are soon, if not at the beginning, accompanied by a feeling of cardiac or epigastric distress, with troublesome cough, dyspnea, hoarseness, sometimes vomiting, and often paralysis of the recurrent. In other words, the phenomena characteristic of angina soon present themselves, occasionally typical attacks of angina pectoris. This alone ought to prove that these pains are *anginous.*

8. They are wont to be manifested from the beginning of the disease—the chief diagnostic importance of this symptom. Cardarelli wrote: "Often, before the aneurism reveals itself by physical signs, one is led to suspect it by such symptomatic manifestations." Huchard recently confirms the same opinion that for a long time these pains are the only symptom of aneurism. They occur among the earliest signs in most of the cases. (The author then refers in detail to eight of the cases reported by him, in which these pains were the only indications

of the disease for varying periods from nine months to eight years, before any physical signs appeared.) Really then, the radiating pains are a premonitory symptom of aneurism, and sometimes the earliest and even the only one for a certain period of time.

9. From our observations we can affirm that these pains are not only frequent, but very frequent. Examining the material of 34 aneurisms of the thoracic aorta observed in our hospitals during eight years, I find that these pains were found in 24 cases or in the proportion of 75 per cent. The same inference is drawn from the records of cases in private practice.

10. Finally, they are little benefited by the ordinary anti-rheumatic remedies, but are relieved by rest, morphine, large doses of iodide and sometimes, as in Case 1, by mercurial preparations.—*Translated from Giornale Internazionale delle Scienze Mediche, by* HARLEY SMITH.

(*To be continued.*)

SURGERY.

IN CHARGE OF EDMUND E. KING AND HERBERT A. BRUCE.

Resection of the Knee without Opening the Joint.

G. Marion (*Arch. Gen. de Med.*, February 17th, 1903) is astonished that the present method of resecting tuberculous knee-joints is not attended by more relapses, seeing that the healthy tissues are divided by a knife previously inoculated by the tuberculous foci. To avoid this he has devised a method of removing the whole joint without opening it, and has performed the operation nine times. He acknowledges that Wolkowitch adopted the same principles in 1896, but employed a different method. Marion's operation is divided into six stages: 1. The classical curved incision, commencing high up laterally, and passing well below the tubercle of the tibia, is made; the skin only is dissected up, and the dissection is carried to well above the upper limit of the subcrural pouch. The ligamentum patellae is divided one cm. above the tubercle and the incision extended along the lateral fascial expansions. The periosteum of the tibia, just above the tubercle, is divided horizontally, and this serves as a valuable landmark with regard to the level to which the dissection of the soft parts from the popliteal space should be made before section of the tibia. 2. The quadriceps is divided above the patella with a curved incision until the plane between it and the synovial

pouch is reached: the muscle is then separated in this plane from the diseased synovial tissue as far as its upper limit, when the middle fibres inserted into it are divided with a knife. The separation of the pouch from the anterior surface of the femur is easily made with the finger or a blunt instrument. 3. The femur is divided, after protecting the soft parts in the popliteal space by a flat retractor passed behind the bone, by a narrow saw with a movable back, so as to leave a V-shaped end. The section is made anteriorly at the upper level of the synovial pouch, and is carried obliquely downwards and backwards towards the condyles: posteriorly at the same level in the popliteal space, and is carried forwards and downwards to a point where the former terminated. 4. In the middle line the popliteal vessels and nerves are easily separated with the fingers, laterally the muscles are cut long, for fear of wounding the joint. The dissection is continued to the level on the tibia marked in (1). 5. The tibia is divided so that the upper part is shaped like an inverted A, to be received into the angle formed in the femur. 6. The tourniquet is removed and all hemorrhage controlled. No bone sutures are used. The soft parts are carefully sutured, especially the ligamentum patella, to the quadriceps. A drainage tube is inserted between the bones and the contents of the popliteal space. In spite of all precautions a tuberculous focus may be encountered, (*a*) by inadvertently opening the synovial sac, (*b*) incising a fistula or synovial extension, (*c*) by sawing through a focus in the bones. In these cases even the chances of infection are reduced to a minimum, and it is only necessary to change the instrument. Obviously any infected tissue not dealt with by this method is removed by fresh section of bone or dissection. The dressings are removed on the twenty-fifth or thirtieth day, when the drainage tube is removed. It is most important that the parts be immobilized for several months. Nine cases are cited: in one, suppuration necessitated amputation; in another, a synovial diverticulum could not be dissected out and was cauterized, and the patient died several hours later of general tuberculosis. The remaining seven were completely cured. Consolidation of bone occurred in two to six months, except in one case, where the patient removed the immobilizing apparatus. The cases were observed two to three years after operation. A superficial fistula occurred in one case three years after operation, but no further details are given. Marion claims that (1) that the results are at least as favorable as those by the ordinary method; (2) in no case has the immediate reproduction of tuberculous foci occurred; (3) the consolidation is unaffected by the removal of the peri-articular fibrous tissue proving as firm and as rapid. The objection to this method is that it sacrifices six to

seven per cent. of the limb; this can be remedied by a high boot and tilting of the pelvis. It should be reserved for cases where the bones are affected, as shown by marked tenderness and enlargement. He does not employ it when the synovial membrane only is involved, in which case synovectomy or arthrectomy are indicated.

(In tuberculous conditions of the knee-joint, which necessitates resection, one of the most serious complications is reinfection. We have looked upon the method above described as one that will be of great advantage in this line of surgery. The details of the operation are so completely given, and the description so lucid, that we have taken the privilege of copying it in its entirety. While the operation is undoubtedly young, at the same time the proportion of cures is exceedingly good, and we look forward to this as being a well accepted procedure.)

Suture of Wounds of the Heart.

At a meeting of the Societa Lancisiana degli Ospedali di Roma on January 24th (*II Policlinico: Sezione Pratica*, February 14th, 1903) P. Milesi reported a case of suture of a wound of the heart. The patient, a man aged twenty-five, was admitted into the Santi Antonio Hospital half an hour after being stabbed with a knife in the left side of the chest. He was in a state of extreme collapse, unconscious, and passing urine and fæces involuntarily. The radial pulse was imperceptible. Respiration was frequent and superficial. At the upper border of the left sixth rib, one and a half cm. from the edge of the sternum there was a wound two and a half cm. in length, from which black blood was oozing. Light percussion of the heart area did not reveal any increase of dullness; on auscultation the heart sounds could be heard very faint, but unaccompanied by murmurs. There was no effusion into the pleura. The sixth rib was resected to the extent of four cm. for exploratory purposes. Then an incision reaching down to the costal cartilage was made from the insertion of the sixth rib on the left, upwards along the margin of the sternum to the upper border of the fourth rib; it was then directed outwards along the third intercostal space nearly to the outer edge of the pectoralis major. The fifth and fourth ribs were cut through with the periosteotome, and the intercostal muscles in the fifth, fourth and third spaces divided. The upper border of the flap measured seven cm. and the lower six cm., the sternal edge being 8 cm. in length. The wound in the pericardium was enlarged with forceps to the extent of six cm.; the opening gave exit to an enormous quantity of blood, and a penetrating wound of the right ventricle about a centimetre and a half in length was seen. To check the bleeding, Milesi compressed the

edges of the wound in the cardiac wall between his thumb and forefinger; he then passed a silk suture through the whole thickness of the wall at the middle part of the wound and tied it. This stopped the bleeding almost entirely, but for greater security three other superficial sutures were inserted. After careful toilette of the pericardial cavity, the pericardium itself was stitched up with single sutures except at the lower part, where a tiny piece of iodoform gauze was left between the edges of the pericardial wound. After toilette of the pleural cavity the thoracic flap was replaced in position and fixed with a double row of sutures. Another piece of gauze was left in the pleura, both it and the one in the pericardium projecting through the space left by the resection of the sixth rib. After the operation, which lasted forty-five minutes, auto transfusion was carried out and normal saline solution and stimulant agents were injected. The patient rallied, his radial pulse could be felt, and he was able to answer a judicial interrogatory with perfect clearness of mind. Soon, however, increasing weakness became manifest, and death occurred fifteen hours after the operation. At the necropsy the pericardial sac was found clean, and the suture of the heart perfect. In addition to the wound of the right ventricular wall, one of the musculi papillares was found to be severed, and there was a perforating wound of the intra-ventricular septum measuring eight millimetres in length. At the same meeting, G. Pacori related another case of suture of a wound of the heart; the patient, a man of forty-five years, died during the operation.

Experiments in Heart Suture.

Merrill Ricketts, of Cincinnati (reprint of a paper read before the Western Surgical and Gynecological Association, Chicago, in December, 1901) record the results of an experimental research on suture of wounds of the heart. Twenty-five dogs were used in the experiment. Penetrating and non-penetrating wounds of the heart were made and closed with sutures of different material. Interrupted silk sutures were found to be the best. No special aseptic precautions were taken, as all pathological conditions were desired. Ricketts found that the pericardium may be entirely removed without death resulting. Either of the coronary arteries may be ligated at its base without producing death. In a certain class of cases he says it is best to suture the pericardium to the chest wall that drainage may be perfect. It is ideal to suture during systole, but one may be satisfied to secure perfect suturing in systole or diastole. Even though the auricular is thinner than the ventricular wall, it may be sutured with equal success. Owing to this difference in thickness, the percentage of penetrating

wounds of the auricles is much greater than those of the ventricules. Knotting of the sutures should be firmly secured, otherwise they may become untied by the constant action of the heart. The sutures should pass through the bottom of the wound when non-penetrating, and through the endocardium when panetrating. If not from the latter the wound may become enlarged from within. Sutures should not be made tight enough to cut the heart tissue. The mortality is less in wounds of the right than those of the left auricle and ventricle. Bleeding is more severe in wounds from sharp instruments than when due to bullets. Among his conclusions are the following: Injuries and diseases of the heart may be dealt with on the same surgical principles as other parts of the body. The application of surgical principles in certain cases of aneurysm of the heart will, no doubt, be accomplished by suture, electrolysis, or the injection of gelatine or something of a similar character. A cardiac abscess should be incised and drained. Tumors of a pedunculated character on the external surface of the heart can and should be removed. Pedunculated tumours with the cardiac chambers can also be successfully removed. Parasitic cysts (animal or vegetable) when upon the external surface of the heart or in its wall should be incised and drained. Mitral stenosis, hypertrophy, and dilatation of the heart, will, sooner or later, find complete or partial relief within the domain of surgery. Injuries involving the myocardium are subject to the same surgical principles as injuries to other important organs of the human body. Lacerated or incised, penetrating or non-penetrating wounds of the heart should be sutured. Suturing or any other surgical procedure should not be discontinued because the heart may cease to pulsate. The work can and should be completed within a much shorter time on a quiescent heart. All means should be resorted to, while the suturing of the myocardium is being completed, to re-establish the heart's action. Drainage of the pericardial sac is necessary in many cases of injury of the heart. Exploratory incision of the pericardial cavity and its contents has been shown by both experimental research and operations upon the living human body to be exceedingly rational, valuable and justifiable. Exploration of the heart itself by puncturing it with a needle or knife to localize a foreign body, or to detect pathological conditions within the myocardium or its chambers, will at no far distant day be found useful, necessary and recognized as an accepted surgical procedure. Ricketts bases this hope on the fact that nine of twenty-seven cases that have been recorded of heart wounds treated by suture have recovered.

(Within the past three years surgery of the heart has come

somewhat to the front, and, in all probability, the experiments that have been carried on will lead us to a more systematic resort to surgery in accidents involving the heart, that has heretofore been in vogue. We have reprinted the above article as being up-to-date, and exceedingly thorough in its detail).

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN.

Deformity from the Injection of Paraffin.

Holbrook Curtis (*Laryngoscope*, April, 1903) presented at the New York Academy of Medicine a young lady who had been operated upon by the injection of paraffin for the removal of a depression at the junction of the lip and nose. This had been done by a physician who claimed to be skilled in the injection of paraffin for the removal of deformities wherever situated. In this instance the paraffin had escaped, and had made two tumefactions on the sides of the nose and border of the orbits, producing an exceedingly unsightly effect. The question was, how could this be best removed?

Dislocation of Bones of Nose due to Polypi.

Kelson (*Jour. Lar., Rhin. and Otol.*, May, 1903) showed a case occurring in a man aged sixty years. The patient had suffered from nasal polypi for fifteen years and nasal deformity for six years. The left nasal bone was separated from the frontal, ethmoid and superior maxilla, and was perforated from pressure. The patient had no headache, and only slight mucopurulent discharge.

Operation for Relief of almost complete Adhesion of Soft Palate to Posterior Pharyngeal Wall, the Result of Tertiary Syphilis.

Herbert Tilley (*Jour. Lar., Rhin. and Otol.*, May, 1903). In this case—female, aged twenty-three years—two operations to afford relief had already been performed, but had been entirely unsuccessful. Fearing free hemorrhage during operation, laryngotomy was first done. The soft palate was then completely separated from the pharyngeal wall, and a strong silver wire passed from before backwards through one side of the soft palate close to its junction with the hard palate, and about half an inch from the middle line. The distal end of the wire was then made to re-pierce the soft palate close to its fore-

margin, and from behind forwards. By this means a short segment of the wire rested on the posterior surface of the soft palate. The free ends of the wire were then passed from behind forwards and attached to the corresponding incisor tooth and cut off short. A similar procedure was then adopted on the other side of the palate.

One of the wires cut its way out in about ten days, and the other in a fortnight, but healing of the raw posterior side of the palate had partly taken place, and a considerable opening remained. This was stretched each day for three weeks by the house surgeon, passing a finger up behind the palate and exercising traction. Three weeks after all treatment was over the result seemed to be excellent.

Adenoma of Palate.

Gordon King (*Orleans Parish Medical Journal*, March, 1903) gives the history of two cases occurring in negroes. The first, male, aged forty-six years, had large smooth circumscribed tumor in right half of soft palate. The growth was enucleated through a vertical incision. The second was in a woman aged twenty-five years. The tumor occupied the left tonsillar region. This was also removed through a crucial incision under cocaine anesthesia.

The Treatment of Syphilitic Disease of Mucous Membrane of Mouth and Throat.

Anton Lieven, of Aix-la-Chapelle (*Journal of Laryngology, Rhinology and Otology*, May, 1903). This is a long article translated by A. J. Hutchison, and is confined to the systemic and topical treatment in the secondary and tertiary stages. In both conditions he looks upon mercury as the sheet anchor to be relied on. Of the three methods of administering the drug—by the mouth, hypodermically and by inunction—he considers the first as the least effectual, and the second as by far the most valuable method. The hypodermic injections are given in two forms—either the injection daily, or on every second day, of a solution of a soluble salt of mercury; or the injection of an insoluble salt in the nates, in the hope of gradual absorption. Of the soluble salts he prefers hydrargyrum succinimidatum; of the insoluble salts, calomel. The third method, by inunction, he does not consider to be any better than the second, although he allows that it is the most active of the three methods in producing results, and in Germany may have the largest following. The plan is, on appearance of secondary symptoms, to give a large number of daily inunctions, then to give the patient a rest for six months, repeat the treatment, another rest, and so on until three or four series of treatments have been given. During the second

year, iodide of potassium is given also in pretty large doses. It is useful in removing the pains in the head and bones as well as in reducing fever. It possesses no power to kill the bacillus of syphilis, but acts as an absorbefacient, and hence is of use in treating gummata.

In the recurrence of secondary lesions of mouth, tongue and throat, the mercurials sometimes lose their effect, and in these cases the administration of large doses of the iodides is often followed by a cessation of the attacks.

Of local applications to the plaques he considers chromic acid, sixty to ninety per cent., as the best treatment, the patient's mouth in the meantime being washed out every half-hour with some cleansing antiseptic fluid.

In tertiary conditions of all kinds, he advises large doses of iodides, giving from three to ten grammes per day, according to the conditions.

Of the preparations which are taking the place of iodide of potassium, he instances iodalbacid and iodipin. He also advises the use of sarsaparilla, as an addition to the mercurial and iodide treatment.

Chronic Edema of Tongue—Amyloid.

Dundas Grant (*Jour. Lar., Rhin. and Otol.*, May, 1903) gives the history of a case occurring in a woman aged forty-five years. The condition had existed for twelve months. There was some difficulty in swallowing, but no pain. There was also slight hoarseness; the larynx was the seat of a pale, somewhat solid edema of epiglottis and aryepiglottic folds; the cords were normal and mobile, though the left one was restricted in its excursions. There was no ulceration, but the palate and pillars of the fauces, especially the left one, were somewhat thickened.

The patient had been losing flesh for three years, and had lost color likewise. There was no albumen in urine, no history of prolonged suppuration, no suppurating gingivitis, no evidence of tuberculosis or specific disease, no enlargement of glands; the spleen was perceptible and liver dulness considerable. The growth was believed to be one of amyloid enlargement.

Sore Throat due to the Pneumo-Bacillus of Friedlander.

Nicolle and Hebert (*La Presse Med.*, May, 1902): The pneumo-bacillus of Friedlander is rarely found in the throat, even in the saprophytic condition. These writers found it twenty-four times in 3,670 specimens of pharyngeal exudation examined in their laboratory. In eleven of the cases it appeared to play an important part in the production of false membrane. Twenty-two cases have now been reported in all,

in which this bacillus produced sore throat with false membrane, resembling diphtheria in appearance, but not in symptoms. They specially report the following case: A child, aged twelve years, complained of pricking in the throat. There was a whitish diphtheritic patch on one tonsil. Next day there was false membrane, tough, adherent, with bleeding surface on removal. No symptoms except slight throat discomfort, no fever, pulse normal, no eruptions, good appetite, false membrane coated for several weeks without spreading. Then it disappeared. Pathological examination revealed Friedlander's pneumo-bacillus, but no Klebs-Loeffler.

The Results of Treatment of Laryngeal Cancer by Means of the X-rays

Bryson Delavany (*Laryngoscope*, Dec., 1902,) says that after careful investigation he has failed to find a single case of carcinoma of the larynx reported as cured by the use of the X-ray treatment. Still he considers the treatment justifiable in average cases, as preliminary to surgical operation, as it may retard the advancement of the disease, while preparation is being made for radical excision.

On Thyroid Grafts.

Christiani (*Revue Méd. de la Suisse Romande*, Oct. 1902.) The writer, in previous papers, reported the results of experiments upon birds and reptiles, and showed that it was possible not only to get thyroid grafts take, and become organized, but also to hypertrophy. He followed some of his grafts up for five years, and found them true, active thyroid glands. He found that, as the thyroid, to perform its function, requires an immense blood supply in proportion to its size, the smaller the graft the better would be the result.

In man the only form of grafting justifiable is subcutaneous —and the chances are greater if taken from man. It is always best to have a minute piece of thyroid taken from a healthy human gland—something easily accomplished where operations upon the neck are common.

The patient having been prepared by a course of thyroid feeding, several small incisions are made through the skin. Then with a blunt-pointed instrument, little pockets are burrowed in the subcutaneous tissue. Six or eight may be made, radiating from each incision—and into the bottom of each pocket is placed a small piece of healthy thyroid gland, about the size of a grain of wheat. The supposition is, that the pieces being small, they can be readily supplied with blood from the surrounding tissue, and by this means be converted into small, active, thyroid glands. Further details are promised later.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES W. F. ROSS, ALBERT A. MACDONALD, K. C. McILWRAITH, AND HELEN MACMURCHY.

The Treatment of Septic Infections with Intravenous Collargolum Injections.

The *New England Medical Monthly* for April has an article on the above by Dr. Credé, Surgeon-in-Chief to the Dresden-Johannstadt Municipal Hospital.

"The intravenous injection of collargolum by no means does away with the use of unguentum Credé; on the contrary the great majority of the cases can be cured by ointment inunction, which is more readily employed and more agreeable to the patient. But where the skin is not sufficiently absorptive, where inunctions are painful, and where the infection is so virulent that the greatest possible rapidity and energy of action is required, the intravenous injections are indicated. . . . The syringe, which should hold from 5 to 10 grammes (1¼ to 2½ drams), should not be cleansed with chemical solutions, but should be sterilized by boiling followed by distilled water or alcohol. . . . A few drops of the new collargolum in water should give a nice clear brown color; while the decomposed collargolum gives a turbid, grey emulsion. . . . The technique of the intravenous injection in subjects with well filled visible veins is extremely simple. A bandage or handkerchief is tied around the pendant arm tight enough to render the veins at the elbow tense and swollen. The detached needle is inserted through the cleansed skin into the vessel, the flow of blood shewing when its point is free within the vein. The canula is steadied with the left hand, and the syringe, not quite filled with the silver solution, is attached; a small amount of blood is then drawn up into the solution, so that any air bubble that may be present rises to the top of the fluid and is not injected. During the injection the arm is steadied in a horizontal position to facilitate the rising of the air. Introduction of the needle attached to the syringe, and determining the fact of its introduction into the vien by the mobility of its point is liable to occasion error. . . . Collargolum is not absorbed when employed subcutaneously; but it may possibly be absorbed when injected into very vascular muscular tissue. . . . The solubility of the improved collargolum allows the use of a 2 per cent. solution; so that 2 to 10 cubic centimetres (½ to 2½ drams) or 0·08 to 0·12 grams (1¼ to 1¾ grains) suffices for an injection. When the collargolum is employed in time, before the brain and heart have lost their powers of resistance, and before metastases have occurred, there is a plain improvement in a few

hours after its introduction into the blood. The patient becomes quieter, and feels better; sweating may set in, and the pulse and temperature improve. In severe cases the improvement may be short and transitory, and the injection must be repeated in eight to twelve hours; but it usually persists for from twenty-four to thirty-six hours, about as long as the silver remains in the body. The quicker the improvement disappears the sooner must the silver be given again and the larger the dose required. . . . Cumulative action does not occur; as many as twenty injections have been given to one patient, though Credé himself never gave more than seven. Credé puts on record the fact that neither in his own extensive experience nor in that of others has there ever been any mishap from the intravenous collargolum injection; there has been no undesirable general reaction, nor any trouble from the local puncture of the vein. . . . The cases include severe phlegman and gangrene, general sepsis, puerperal fever, pyemia, septic osteomyelitis, septic polyarthritis, ulcerative endocarditis, severe erysipelas, peritonitis, erythema uodosum, anthrax and hopeless cases of phthisis. Those that had still powers of resistance got well almost without exception. K. C. M.

Acute Hydramnios.

Dr. W. E. Fothergill, of Manchester, exhibited, at a recent meeting of the North of England Obstetrical and Gynecological Society, the placenta from a case of acute hydramnios which terminated in the birth of quadruplets. Labour came on at the thirty-second week. The children all died within twenty-four hours of birth.

Uterine Inertia in the First Stage of Labour. Embolism. Fatal Result.

The patient had previously had the left ovary removed and passed safely through her third pregnancy to term, the membranes rupturing early. Complete uterine inertia followed, without any other symptom. The fatal heart giving warning that it was time to interfere on behalf of the child, labour was concluded by dilating the cervix with Barnes' bag and the application of forceps. But little blood was lost and the patient did not appear unduly exhausted. As the attending physician was about to take his leave, the patient complained of a choking sensation and said she felt that death was impending. She was very pallid and the pulse was rapid, none of the remedies administered had any effect and death took place six and one-half hours after delivery. No autopsy was permitted, but the fatal result was thought to be due to embolism.

[Case reported by Dr. Marshall, of Glasgow.]

The Surgical Treatment of Puerperal Pyemia.

A paper on this subject is contributed to the *Lancet* of April 11th, 1903, by Ernst Michels, M.D., Berlin, F.R.C.S., Eng., Surgeon to the German Hospital, Dalston, London. Dr. Michel's case is probably the first successful case in Britain where the method of ligaturing one of the main venous trunks connecting the primary seat of infection with the circulation has been employed in the treatment of pyemia. This method has been recognized for some ten or twelve years and was definitely suggested by J. C. Simpson, M.D., Edin., in a paper published in the Edinburgh Hospital Reports for 1898. Dr. Michel's patient was 28 years of age and this was her fourth pregnancy. The temperature rose to 106·4, antistreptococcic serum, subcutaneous saline injections and all other treatment proved useless, and the case assumed a hopeless aspect. A slight fulness was noticed in the left niguinal region below the navel, and guided by this appearance the surgeon made an incision from the tip of the eleventh left rib to the anterior iliac spine and thence forwards and downwards parallel to Poupart's ligament, and found that the swelling was due to the thickened and dilated ovarian vein. This was ligated below the swelling and the vein slit open and evacuated, the contents being a soft thrombus containing pus. The patient made a remarkable recovery. The temperature fell to normal within thirty-six hours and remained so. The large wound healed slowly, and the patient, who was admitted to the German Hospital on December 15th, 1902, was able to leave her bed on February 5th and left the hospital well and strong early in March, 1903. H. M.

Salt Solution in Eclampsia.

At a meeting of the Obstetrical Society of Philadelphia the subject of eclampsia was fully discussed. Referring to the use of normal saline solutions, Dr. Norris said: "I would like to give a word of warning as to the use of salt solution. I have found in some cases that an excessive amount of salt solution has aggravated the condition of the kidneys, has produced edema of the lungs, and helped to do the very thing which we aimed to avoid. I should place as a limit one quart of salt solution and no more until free diaphoresis, diuresis, or catharsis has occurred. When there is some edema of the lungs it should not be employed at all. I have seen edema of the lungs aggravated and the patient's serum run out of her mouth as the result of too free use of salt solution. Large amounts of salt solution are of the greatest value when *profuse* catharsis from saline purgation has occurred. K. C. M.

OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN.

Chronic Trachoma Amenable to the X-Ray.

H. F. Cassidy and F. C. Bayne (*Journal Eye and Ear and Throat*) put a patient who had suffered from granulated lids, for nine years, and who had been treated by many specialists in Baltimore, under this treatment. The treatment was applied through the closed lids; the exposures were given at a distance of twelve inches, and a spark gap of one-sixteenth of an inch, for three minutes, repeated at first every ten days, then every five, then tri-weekly. The treatments caused excessive lacrymation which, however, diminished on successive exposures, and finally ceased. The time of exposure was gradually lengthened to five minutes, and the spark gap to one inch. After the sixth treatment the patient declared herself better—the eyes pained less, the discharge lessened, she was able to do away with her dark glasses, and could read a little. By the twentieth exposure one eye was entirely free of trachomatous granules. By the thirty-fifth exposure both eyes were free. The patient now uses her eyes constantly without discomfort.

Re-Examination of Myopes.

In a discussion on the treatment of myopia, Dr. Schweinitz stated his belief that "every youthful myope should be suspected of a tendency to increase, and should be re-examined at regular intervals, which intervals should not exceed in length twelve months, and that at each such examination full and prolonged mydriasis should be employed."

Eye-Strain in Youth and its Modern Treatment

A. L. Ramsey (*Med. Record*, abstracted in *Med. Review of Reviews*) has drawn the following general conclusions:—

1. Eye-strain cannot be recognized too early in youth.
2. Its scientific investigation by modern methods and its radical correction may favorably modify both physical and mental development.
3. The neglect of an existing eye-strain may in time allow it to exhaust the reserve nerve capital of the sufferer and produce untold ills both of body and mind.
4. No child should ever be allowed to begin education until it is known that its eyes are properly fitted for the work.
5. Legislative enactment should, and surely will in time, compel an eye examination of every child before it enters the public schools.
6. Teachers should also be instructed in the rudimentary steps of vision testing.
7. Tests for maladjustment of eye muscles should be made

upon every child as thoroughly and intelligently as tests for errors of refraction are made prior to its education.

8. A knowledge of the possible effects upon mental and physical development cannot be too widely disseminated among parents and teachers.

9. The direct causal relationship between "eye-strain" and nervous diseases is too well established to-day to require further proof, or even to justify further discussion.

10. The modern methods of testing for anomalies of adjustment of eye muscles are the only ones that can furnish us with scientific and accurate information.

The time has happily passed when any oculist can instruct a patient to simply follow some object held before the eyes with the eyes, and then on that test alone give a final decision as to whether maladjustment of the eye muscles exists or does not exist. Two decades ago this was about all that anybody knew about eye muscles. To-day the mere tyro would not dare commit himself on such tests.

11. The cure of disease to-day is intelligently based on the search for its cause rather than on an indiscriminate use of drugs; and the prevention of diseases is rapidly becoming more important to the medical mind, and also to the laity, than its cure.

12. The detection of "eye-strain" in youth is an important step in preventive medicine, and the arrest of a nervous leak may save many a child from a permanent breakdown when an adult.

13. The study of facial expression and head posture is destined to become an important aid in diagnosis.

14. The governing boards of institutions for the feeble-minded, the epileptic and the insane will sooner or later be compelled to investigate more carefully and earnestly than in the past the eye conditions of their inmates.

The Carbo-Glycerine Tampon in the Treatment of Diffused and Circumscribed Inflammation of the External Auditory Meatus.

N. Sack (*Monatschr f. Ohrenheilk*) has used this treatment exclusively for ten years. The canal is first carefully cleaned and thoroughly dried; then a tampon of cotton saturated with a ten per cent. solution of carbo-glycerine is introduced, deep into the ear. The tampon must be large enough to exert considerable pressure on the inflamed walls of the canal without, however, causing too much discomfort. It is left in the ear twenty-four hours, and is changed every day for three or four days, when most cases will be well enough to take care of themselves at home. Dr. Sack thinks no other method acts so well as this, although in severe cases leeching or incision may be needed in addition. J. T. D.

PEDIATRICS.

IN CHARGE OF ALLEN BAINES, W. J. GREIG, AND W. B. THISTLE.

Diagnosis of Tubercular Peritonitis—(KISSEL, *Arch. f, Klin, Chirurg*, Vol. LXV., Part II.)

As a result of the study of fifty-four cases of tubercular peritonitis, the author comes to the following conclusions:

1. Tubercular peritonitis is more common in children than is generally supposed.
2. It may be stated as a general rule that all cases of so-called spontaneous ascites are due to tubercular peritonitis.
3. Not infrequently the exudate in the peritoneal cavity will disappear under general tonic treatment, and the child will regain complete health.
4. In the majority of cases the onset of the disease is imperceptible. The parents first notice that the child becomes pale and thin without apparent cause.
5. The presence of a coincident serous pleurisy is strongly confirmatory of the diagnosis.
6. Thickening of the parietal peritoneum is a most valuable sign.
7. This can be readily elicited before adhesions have formed by picking up a fold of the abdominal wall and palpating the peritoneum between the thumb and finger, providing the examiner is accustomed to the palpation of the normal peritoneum.
8. In exudative peritonitis the fluid obtained by tapping is rich in albumen and has a high specific gravity.
9. In many patients who present no subjective symptoms and very few objective ones, the whole peritoneum is covered by large tubercular masses.
10. Chronic ascites due to tubercular pericarditis is rarely seen, but when it does occur it is difficult to diagnose.
11. Only in rare cases does tubercular peritonitis have an acute onset.

Prognosis of Tubercular Peritonitis—(*Archives*, February, 1903, by G. A. SUTHERLAND, London, Eng.)

Conclusions:

1. In uncomplicated cases the prognosis is good.
2. In tuberculous pleurisy the prognosis is also favorable.
3. Prognosis is less favorable in the case of:
   (*a*) Strong family history of tuberculosis.
   (*b*) An infancy passed under bad hygienic and dietetic conditions.

(*c*) A constitution of feeble resisting power.
(*d*) A history of severe infective illness in early life.

4. Prognosis less favorable in the presence of one or more of the following symptoms:
(*a*) Continuous pyrexia.
(*b*) Persistent diarrhœa.
(*c*) Rapid pulse.
(*d*) Recurrent acute exacerbations.

5. Also less favorable in the presence of any of the following complications:
(*a*) Tuberculous ulceration of the bowel.
(*b*) Extensive caseation of the mesenteric lymph nodes or of tubercular masses.
(*c*) Local suppuration from infection through lymph nodes or the intestines.
(*d*) Obstructive symptoms from bands or matting of the bowels.

6. Prognosis is bad in the case of the following complications:
(*a*) Rupture of a suppurating node.
(*b*) Perforation of an intestinal ulcer.
(*c*) Pulmonary tuberculosis.
(*d*) Tubercular meningitis.
(*e*) General miliary tuberculosis.

7. Prognosis not appreciably affected by simple laparotomy.

Medical Treatment of Tubercular Peritonitis—(*Archives*, April, 1903, by LEONARD GUTHRIE, London, Eng.)

Laparotomy. Of 41 cases, 14 were operated on and 7 of these died; while of 27 cases treated medically only 4 were fatal, and in 3 of these cases death was due to peritonitis (septic) due to perforation or rupture of lymph node abscess.

The author believes that these cases will recover as well without as with operation, unless some such complication be present as suppurating lymph nodes, adhesions, bands and strictures, when, of course, an operation should be performed.

Medical treatment. This is purely symptomatic. There is nothing unusual in his methods, unless it be the emphasis he places on absolute rest in the pure country air. He mentions a case which was sent for three weeks to the country to recuperate for an operation, but when the time arrived to return the patient was so well that operation was unnecessary.

W. J. G.

Editorials.

THE COTTAGE HOSPITALS.

The "Minto Cottage Hospital" scheme is exciting much interest at present in Toronto and other cities of Ontario. We learn various particulars respecting the undertaking from the lay press. The object is to place a number of perfectly equipped cottages or pavilion hospitals in those parts of Western Canada into which immigrants are now pouring. There will, it is hoped, be so many of these useful institutions, that no settler will be farther away than half a day's drive from one of them. Each hospital will have a competent nurse in charge, who can in cases of emergency call in capable assistants.

We are told that "the West" is a land of vast distances, and passenger rates are so high that the expense prevents many at present from going to places where they can be nursed during illness. Each of the new Cottage Hospitals will be a great educational centre for its surrounding district. The general work accomplished will be as follows: All such diseases as fevers, ague and rheumatism will be cured, or at least treated; all injuries will be also treated; all the homesteaders will be educated as to the laws of hygiene relating to food and sanitation. Each Cottage Hospital will "represent a haven of rest to the newly arrived settler who lives in a small shack rudely thrown together without any attempt to do more than afford shelter for the first season."

We are assured that this "scheme was developed and put into practical working order at a most auspicious moment, and it remains for wealthy and patriotic citizens to facilitate as far as possible the progress and extension of this most admirable form of educational and philanthropic work." Some of our Canadian friends think that we have already sufficient machinery in this country for charitable purposes, and what we really need now is more oil. We have our hospitals and other charities well organized, and many think it would be more economical to give these struggling institutions money which they so much need. For instance, they say, that the moneyed men of this province would serve suffering humanity more by

contributing to such a charity as the Free Sanitarium for Consumptives at Gravenhurst, than by giving to a new fund which will be largely expended in providing new machinery.

LICENSURE RECIPROCITY BETWEEN STATES.

We learn from the *New York Medical Journal* that the subject of reciprocity as to licenses to practise medicine between the different States of that country is still in a very unsatisfactory position—perhaps worse even than in this country. The experience of New Jersey, which for a few years had reciprocity with a sister State has been disappointing. The State Board of Medical Examiners now reports that "as a result of this system differences repeatedly arose between the reciprocating State boards over the educational standing of the applicants." As a consequence the "differences" became so serious that even this limited reciprocity was abandoned.

This is most unfortunate and very discouraging to physicians in the United States who desire to have some system whereby a license to practise will cover the whole country. Although many suggestions have been made as to the best way of breaking down obstacles, nothing practical seems to come to the front. Great Britain was for a long time in a similar position. As Lord Lister pointed out when in Toronto in 1897, in former days a graduate from Edinburgh could not practise south of the Tweed. The present method of giving the General Medical Council of Great Britain controlling power in the matter of licensing seems to work well, although it is not satisfactory to all parties.

We in Canada hoped for great results from the passage of Dr. Roddick's Bill. The recent action of Quebec, respecting which we published an excellent editorial from the *Mail and Empire* in our last issue, is discouraging. We should not lose heart on that account, however. The French Canadians are as a rule reasonable and fair minded, but very conservative and timid about making radical changes. We believe, however, that time with necessary knowledge as to the provisions and object of the Bill will change the views of the majority in

Quebec. We shall rely to a great extent on Dr. Roddick, who has done so much to clear up misunderstandings, between many of the provinces. May he continue his exertions until he has fully completed his work.

THE CARE OF FEEBLE-MINDED WOMEN.

We hope the Government of Ontario, in considering this question, will not lose sight of the fact that it is too late to begin this care in the adult life of feeble-minded persons. We would respectfully ask the Minister of Education to obtain from Inspectors and Principals of Public Schools in Ontario the number of feeble-minded children in our schools, and embody these statistics in the returns of the Education Department.

There are also such institutions as the Mimico Industrial School, the Alexandra Industrial School, and especially that department of the Andrew Mercer Reformatory, (wisely termed a school by the Government) under the Principalship of Miss Elliott, where girls who are young, and yet must evidently be detained in such an institution, are placed. We are quite certain, for instance, that the principal and officers of these schools, would be able to say whether those who have been under their charge for some years are really fit to take care of themselves.

We commend to the Government the example of the Roman Catholic Church in this regard. It was well said by Lord Macaulay that the Church of Rome is the incarnation of human wisdom, and we are informed that no girl is allowed to leave the orphanges and similar institutions of the Roman Catholic Church in Ontario who is mentally incapable of protecting herself. That church finds a place for these children, where they will be taken care of and safe. Why does not the Province follow the example? We have in Ontario some who can only misuse man's or woman's estate to their own degradation and to the degradation of society. It is evidently the duty of the State to provide guardianship for them with honest and pleasant labor for all who can work.

In London, Leicester and Birmingham there are "After-Care Committees" of the School Boards who are working along these lines, and we hope the Government of Ontario will avail themselves of the information and experience of these committees.

There is another aspect of this question. Certainly both boys and girls who are mentally unable to take care of themselves should alike be cared for by society, unless their own families are able to take care of them. But it must be said that physicians whose work lies in certain departments of Maternity Hospitals know well how frequently their patients come there because they were mentally incapable of protecting themselves. The Government of this Province could easily get from resident officers of Maternity Hospitals such information as would amply justify them in the expenditure of public money to prevent the increase of the pauper, imbecile and criminal classes.

The expenditure of a few thousands in this generation will save the Province thrice that sum or more in the next generation.

THE ONTARIO MEDICAL ASSOCIATION.

In former issues we have given particulars as to the work of the committees who are making preparations for the next meeting of the Ontario Medical Association to be held June 16th, 17th and 18th. There is little to add now, excepting the fact learned from the secretary, Dr. Parsons, that several more papers have been promised. The members throughout the Province will get information as to all details in the preliminary programme which is being prepared as we go to press. The decision to hold a three days' meeting meets with general approval. We have every reason to suppose that we shall have a large and interesting meeting.

BANQUET OF TRINITY GRADUATING CLASS.

The graduating class of Trinity University held a banquet at the Arlington Hotel, Toronto, on the evening of May 21st. The "guests of honor" were Drs. Geikie, Temple, Sheard, Teskey and Bingham. Drs. Teskey and Bingham delivered short special addresses, while Drs. Geikie, Temple and Sheard responded to the toast to the Faculty. Dr. M. J. Perkins presided. Speeches were also delivered by Messrs. Hillis, Milne and Hodgson, representing the Fourth, Third and Second years, respectively, and also by many members of the graduating class.

BANQUET OF WOMEN'S MEDICAL ALUMNAE.

The annual banquet of the Alumnæ Association of the Ontario Medical College for Women was held in the college building, 291 Sumach street, on the evening of May 21st. Among those present were the five graduates of this year, Dr. Eliza R. Gray, of Owen Sound, Dr. Jennie Hill, of Mitchell, recently returned from China, and the majority of women practitioners in Toronto.

BANQUET OF THE TORONTO GRADUATING CLASS.

The graduating class of this year of the Faculty of Medicine of the University of Toronto, held a banquet at the King Edward Hotel on the evening of May 23rd. Speeches were delivered by Professor Adam Wright, the "guest of honor," E. A. Gray (the chairman), O. T. Dinnick, J. L. Biggar, R. F. Foster, Eugene De Haitre and S. C. Yin. The speeches of the last two worthy representatives of French Canada, and China, respectively, were especially interesting. In addition the hotel orchestra provided *good music, and the new doctors sang many jolly* songs. Altogether a most enjoyable evening was spent.

Queen's Medical Faculty, Kingston, will celebrate the jubilee of its foundation next October. The installation of the new Principal will take place at the same time.

DISTINGUISHED MEDICAL GRADUATES OF THE UNIVERSITY OF TORONTO.

The following medical graduates of the University of Toronto have attained marked recognition in a number of universities and colleges in the United States:.

R. R. Bensley, B.A., M.B., Assistant Professor in Anatomy, University of Chicago; B. A. Cohoe, B.A., M.B., Instructor in Anatomy, Cornell University, Ithaca; B. C. H. Harvey, B.A., M.B., Associate in Anatomy, University of Chicago; V. E. Henderson, M.A., M.B., Assistant Demonstrator of Physiology, University of Pennsylvania; A. H. Montgomery, B.A., M.B., Demonstrator in Anatomy, Cornell University Medical College, Ithaca; J. B. MacCallum, B.A., M.D., Assistant in Physiology, University of California; W. G. McCallum, B.A., M.D., Associate Professor of Pathology, Johns Hopkins University, Baltimore; T. McCrae, B.A., M.B., M.R.C.P. (Lond.), Associate in Medicine, Johns Hopkins University; L. F. Barker, M.B., Professor of Anatomy, University of Chicago; N. M. Harris, M.B., M.R.C.S. (Eng.), L.R.C.P. (Lond.), Associate in Bacteriology, University of Chicago; T. B Futcher, M.B., Associate Professor of Medicine, Johns Hopkins University, Baltimore; N. B. Gwyn, M.B., Instructor in Medicine, University of Pennsylvania; T. S. Cullen, M.B., Instructor in Gynecology and Abdominal Surgery, Johns Hopkins University, Baltimore; D. G. Revell, B.A., M.B., Instructor in Anatomy, University of Chicago.

Hyperchlorhydria, a Symposium.

The June issue of the *International Medical Magazine* will be devoted to a symposium on this most important gastric subject, than which none more important have ever been published in any American journal. More than half a dozen of the leading European specialists will contribute, among whom are Prof. C. A. Ewald, Berlin; Prof. George Hayem, of Paris; Prof. Carl von Noorden, of Frankford; Dr. L. Kuttner, of Berlin, and Prof. Rosenheim, of Berlin. The selection of contributors from this side of the Atlantic has been equally happy, and the following will take part: Prof. John C. Hemmeter, of Philadelphia, on "An Experimental and Clinical Study of the Etiology of Hyperchlorhydria"; Dr. Allen A. Jones, of Buffalo, on "The Effervescence Test for Gastric Acidity"; Dr. Boardman Reed, of Philadelphia, on "A Further Development of the Benedict Effervescent Test of Gastric Acidity"; Dr. John A. Lichty, of Pittsburg, on "The Relation between Hyperchlorhydria and Neurasthenia"; Prof. Fenton B. Turck, of Chicago, on "The Treatment of Hyperchlorhydria"; Dr. A. Robin, of Newark, Delaware, on "The Etiology of Hyperchlorhydria"; Dr. Max. Einhorn and others.

Personals.

Dr. James H. Cotton, Toronto, will sail for Europe, June 27th.

Dr. Francis J. Burrows, of Seaforth, is doing post-graduate work in Baltimore.

Dr. J. M. H. Gillies (Tor. '97) is engaged in post graduate work in London, England.

Professor Wm. Osler, of Baltimore, sailed from New York for England, May 27th.

Dr. T. D. Archibald (Tor. '01) of Toronto, sailed for England early in May. He is now in London.

Dr. A. M. McFaul, of Stayner, has been appointed one of the license commissioners for West Simcoe.

Dr. James F. W. Ross, of Toronto, returned from Algonquin Park, May 30th, and resumed practise June 1st.

Dr. Victor H. McWilliams (Tor. 99), of Peterborough, was married to Miss Josephine Sheppard, June 3rd.

Dr. J. M. Elder, of Montreal, has gone abroad for the summer. He reached London about the middle of May.

Dr. F. W. Marlow (Trin. '00) has passed the examinations for Fellowship of the Royal College of Surgeons, England.

Dr. Edgar Macklin, of London, Ont., is now in Edinburgh, Scotland, and will go to London, England, in a few weeks.

Dr. Arthur B. Wright (Tor. '02), has recovered from an attack of diphtheria. He left the Isolation Hospital, June 2nd.

Dr. L. M. Murray, of Halifax, has been appointed Provincial Bacteriologist for Nova Scotia, in the place of Dr. Halliday, deceased.

Dr. Alex. McPhedran, of Toronto, will start for Europe in the latter part of June. He expects to return in about two months.

Congratulations to Dr. Brefney O'Reilly, Trinity's latest medical gold medallist. Dr. Brefney will sail for England, June 20th.

Dr. Albert F. Reynar, of Palgrave, County of Peel, was severely burned by an explosion of chemicals, May 16. After the accident he remained two weeks in the Toronto General Hospital.

Dr. W. A. Young, of Toronto, attended the meeting of the American Medical Association held in New Orleans during the first week in May.

Drs. Charles W. McLeay and Basil Harvey, of Watford, have sailed from New York for Naples. After spending a few weeks in Italy, they expect to visit Vienna, Berlin, Edinburgh and London.

Dr. V. E. Henderson (Tor. '02), Assistant Demonstrator of Physiology, University of Pennsylvania, expects to visit his relatives in Toronto in the latter part of June, and will remain about a month.

Dr. J. A. Kennedy (Trin. '00) formerly of Toronto, went to South Africa three years ago, and is now in Zululand. He was recently appointed Lieutenant-Surgeon to the Umvati Mounted Rifles, volunteer corps.

The following have become Licentiates of the Royal College of Physicians of London: F. S. Pope, E. G. Weir, graduates of the University of Toronto; E. W. Allin, M. R. Blake, graduates of the University of Trinity College.

Dr. W. Beattie Nesbitt, M.P.P., of Toronto, and Dr. Samuel M. Henry, of Harriston, delivered addresses, May 25th, at Harriston, on the occasion of the laying of the corner stone of the new Methodist Church, in that town.

Dr. Norman McLeod Harris (Tor., '94), has been appointed first assistant in Bacteriology, under Dr. E. O. Jordan, in the University of Chicago. Dr. Harris had previously occupied a similar position for some time at Johns Hopkins University, Baltimore.

Great sympathy is felt for Dr. and Mrs. Chas. J. Hastings, of Toronto, in their recent bereavement. Their son Victor, aged 7, a bright, happy and healthy boy, died from meningeal hemorrhage about forty hours after a fall on the head while at play. It is doubly sad because it is their second bereavement within a few months.

June 1903

Obituary.

E. H. STOWE, M.D., A PIONEER.

Dr. Emily Howard Stowe, of Toronto, who was the first woman to practise medicine in Canada, died at the residence of her son, in this city, on the 30th of April, 1903.

Dr. Stowe was born in Norwich, Ontario, and was engaged for some years in teaching, being principal of a school in Brantford before her marriage. She began to study medicine in 1865, at the New York Medical College for women, and graduated in 1868. Settling in Toronto, she built up a large practise, and took an active part in more than one movement to advance the education of women.

Her life was a busy and useful one, and her interests were wide. She was of Quaker ancestry, and possessed many of the good qualities characteristic of the members of the Society of Friends.

She won her way against all the difficulties that pioneers must meet, and her perseverance, industry and ability, as well as her personal efficiency and charm won her many friends and admirers.

CHASE CHEVERS, M.D.

Dr. Chevers, a retired British Army Surgeon, who lived in Kemptville, a village near Brockville, for about twenty years, died May 21st, aged 79.

CHARLES SELBY HAULTAIN, M.D., L.R.C.P., LOND.

Dr. Haultain, Assistant Surgeon to the Northwest Mounted Police, died at Battleford, N.W.T. May 21st, aged 40. He received his medical education in Trinity Medical College, Toronto, and his degree, M.D., from Trinity University. He then went to England and spent some time in London. After returning to Canada he lived in Toronto for a short time. He became attached to the Royal Grenadiers, and served with them in the Riel Rebellion. After the Batoche battle he became attached to Steele's Scouts in the pursuit of Big Bear. He then joined the Northwest Mounted Police, being appointed Assistant Surgeon, holding this commission up to the time of his death.

Book Reviews.

Saunders' Medical Hand-Atlases. Atlas and Epitome of Human Histology, including Microscopic Anatomy. By DR. J. SOBOTTA, of Wurzburg. Edited, with additions, by G. CARL HUBER, M.D., Junior Professor of Anatomy and Histology in the University of Michigan, Ann Arbor. Philadelphia and London: W. B. Saunders. Toronto: J. A. Carveth & Co.

Twenty volumes or more of this excellent series have now appeared, and that on Histology will be found equal to any of its predecessors. The text is brief, but sufficient both for the student and the general practitioner, while great pains have been taken to render the illustrations accurate and perfect in detail. Perhaps those illustrating the skin and the special sense organs are among the best.

The Care of the Baby. By J. P. CROZER GRIFFITH, M.D., Clinical Professor of the Diseases of Children in the University of Pennsylvania Hospital. Philadelphia, New York and London: W. B. Saunders & Co. Toronto: J. A. Carveth & Co.

This book, which is primarily intended as a manual for mothers and nurses, will be found useful also by students and young practitioners. The present is the third edition (the first edition was issued in 1895), and it has been carefully revised and brought up-to-date. There is probably no better book of its kind.

Practical Points in Nursing. By EMILY A. M. STONEY, late Superintendent of the Training School for Nurses, Carney Hospital, South Boston, Mass. Philadelphia, New York, London: W. B. Saunders & Co. Toronto: J. A. Carveth & Co.

The third edition of this excellent text-book on private nursing has been thoroughly revised and a good many additions have been made, but unfortunately, not by the author, whose early death was a great loss to the nursing profession in America.

The book is eminently practical and complete, and worthy of a place in every nurse's library. The book is well illustrated, and the Dose-List, Glossary and the Appendix on Food for the Sick add much to the value of the book.

The Journal of Tuberculosis. A Quarterly Magazine devoted to the Prevention and Treatment of Tuberculosis. Edited by Karl von Ruck and Silvio von Ruck. Vol. V., No. 1. Asheville, N.C.: A. H. McQuilkin.

The usual Review of Current Literature, an editorial on "The Relation of Human and Bovine Tuberculosis," three original translations and six original contributions form the contents of the *Journal* for June, 1903. Of the original articles, one of the most interesting is Dr. Eisendrach's paper on "Tuberculosis of the Cervical Lymph Glands." He recommends operation unless the case is very mild, or the child is debilitated or anemic, or the family history is tuberculous,

and there are suspicious signs at the apices of the lungs. Other articles are on "The Cinnamic Acid (Hetol) Treatment of Tuberculosis," "The Early Diagnosis of Tuberculous Laryngitis" and "The Urinary Calcium Excretion in Tuberculosis."

A System of Physiologic Therapeutics. A practical exposition of the methods, other than drug-giving, useful in the prevention of disease and in the treatment of the sick. Edited by SOLOMON SOLIS COHEN, A.M., M.D., Senior Assistant Professor of Clinical Medicine in Jefferson Medical College, etc., etc. Vol. V., Prophylaxis, Personal Hygiene, Civic Hygiene, Care of the Sick. By JOSEPH MCFARLAND, M.D., Philadelphia; HENRY HUFFMAN, M.D., Philadelphia; ALBERT ABRAMS, A.M., M.D., San Francisco; W. WAYNE BABCOCK, M.D., Philadelphia. Illustrated. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1903. Canadian Agents: Chandler & Massey, Limited, Toronto.

This volume treats especially of the "Preservation of Health and the Prevention of Disease," seeking a basis for intelligent prophylaxis in a study of morbid processes and their causation. It is an epitome of what is essentially the natural history of medicine, including the important facts thus far learned regarding the origin, dissemination and prevention of disease. Part I. is divided into four sections: 1. The Origin of Disease; 2. The Diffusion of Disease; 3. The Prevention of Disease; and section 4. Prophylaxis of Special Infections. Part II. bears upon Civic Hygiene. Part III. on Domestic and Personal Hygiene, Nursing and Care of the Sick-room. The editor deserves to take special pleasure in this volume, as it reflects the greatest credit on all concerned, and clearly proves that the subjects of prophylaxis and of treatment should always be considered together. We commend this "system" to the consideration of all careful post-graduate students and practitioners of medicine.

A Text-Book of the Diseases of the Ear, for Students and Practitioners. By PROF. ADAM POLITZER, of Vienna. Translated at the personal request of the author, and edited by MILTON J. BALLIN, M.D., and CLARENCE L. HELLER, M.D. Fourth edition, revised and enlarged, with 346 original illustrations. London: Balliere, Tindall & Cox, 8 Henrietta St., Covent Garden. 1902.

Seldom have we the pleasure of giving notice in these pages of a work which merits such unstinted praise. Politzer, of Vienna, is recognized the world over as the leading authority on diseases of the ear, and a great teacher who takes infinite pains with those who attend his clinics. Canadian graduates who have studied under him, now resident in this country, will be glad to know of this new translation, and should avail themselves of the opportunity of securing a copy of this treatise, which surpasses others on this subject. The translators—Dr. Milton J. Ballin and Dr. Clarence L. Heller—have, with some assistance from Dr. Edward Law, of London, done their part splendidly. We can with confidence, knowing the author, commend this volume to all interested in aural diseases.

DERANGED UTERINE FUNCTIONS.

By JAMES A. BLACK, M.D.,
Hospital Department, Pennsylvania Reform School.

It is safe to say that to the average physician, who is confronted almost daily with the ordinary cases of suppressed and deranged uterine functions, no other class of cases is so uniformly disappointing in results and yields so sparing a return for the care and time devoted to their conduct.

Patients suffering from disorders of this nature are usually drawn from the middle walk of life, and, by reason of the pressure of household duties or the performance of the daily tasks incidental to their vocation, are entirely unable, in the slightest degree, to assist, by proper rest or procedure, the action of the administered remedy.

Many of these patients, too, suffer in silence for months, and even when forced by the extremity of their sufferings to the physician, shrink from relating a complete history of their condition, and absolutely refuse to submit to an examination. Authoritative medical teaching and experience unite in forcing upon the attendant a most pessimistic view of his efforts in behalf of these sufferers under such conditions.

It is in this class of practice, where almost everything depends upon the remedy alone, that a peculiarly aggravating condition of affairs exists. A very limited list of remedies of demonstrated value is presented for selection, and I believe I am not wide of the mark in saying that, in the hands of most practitioners, no remedy or combination of remedies hitherto in general use has been productive of anything but disappointment.

Some time ago my attention was drawn to Ergoapiol (Smith) as a combination of value in the treatment of a great variety of uterine disorders. Its exhibition in several cases in my hands yielded such happy results that I have used it repeatedly in a considerable variety of conditions, and with such uniformly good results that I am confirmed in the opinion that its introduction to the profession marks an era in modern Therapeutics. In the treatment of irregular menstruation and attendant conditions I have found it superior to any other emmenagogue with which I am familiar, in the following important particulars:

1. It is prompt and certain in its action.
2. It is not nauseating and is not rejected by delicate stomachs.
3. It is absolutely innocuous.
4. It occasions no unpleasant after-effects.
5. It is convenient to dispense and administer.

The following clinical notes will afford a general idea of its action in a variety of cases:

CASE 1.—Mrs. ——— came to me presenting the following symptoms incident to a delayed menstruation: Persistent headache of a neuralgic character; dull, aching pain in limbs and lumbar region; cramp-like pains in abdomen, and considerable nausea. The menstrual period was overdue seven days, but as yet there was no appearance of flow. Her periods had always been occasions of intense suffering, but had never before been delayed. I began the use of Ergoapiol (Smith), with some misgiving owing to the irritable condition of the stomach. One capsule every three hours was administered without any aggravation of the gastric distress. In twenty hours a normal menstruation was well under way; the flow was slightly increased over that observed on former occasions. The pains had subsided. Ergoapiol (Smith) was administered, one capsule three times a day, during the menstrual period, which terminated in five days. The patient was instructed to return for a quantity of the remedy several days before the next menstrual period. She did so, and, following directions, took one capsule three times a day for three days before expected menstruation. She subsequently reported that during the period—lasting five days—there had been practically no pain, and that the amount of flow was, as far as she could judge, normal.

CASE 2.—Miss ———, aged 30, had been a sufferer for years with dysmenorrhea. For about three years had suffered with leucorrhea, particularly annoying after each menstrual period. Had undergone treatment at different times for the leucorrhea and dysmenorrhea, but had never experienced permanent benefit. She had been obliged to spend the couple of days of each period in bed. She consulted me about one week before her period. Examination revealed a purulent discharge oozing from os cervix and a rather large uterus. There was no displacement. She was put upon Ergoapiol (Smith), one capsule three times a day. The onset occurred one day earlier than was expected and was attended with considerable pain. The patient was, however, able to attend to her usual duties, a state of affairs such as had not been experienced for some years. At the onset of the flow Ergoapiol (Smith) was administered, one capsule every two hours. The effect was astonishing. In eight hours the pains had well-nigh subsided and there was practically no discomfort, except some pain in back.

CASE 3.—Miss ———, aged 21, had suffered for two years with irregular and painful menstruation. Had commenced to menstruate when 16, menses being very scanty, but regular and accompanied with but slight degree of suffering. Was never of a very robust physique, but in the main healthy. When

about 19, considerable nervous trouble was inaugurated by grieving over a great bereavement, and the menses became more and more painful. The anguish became such a horror to her that she frequently resorted to morphine, partly to allay pain and partly to procure sleep. Fortunately she had not, as yet, contracted the habit, but the tendency was undoubtedly in that direction. When first consulted by her, examination was not granted. Menses appearing shortly afterward, was called upon to afford relief. Flow was very scanty and clotted. There were sleeplessness, terrific headache, pain in back, constipation, etc. Ergoapiol (Smith) was administered, one capsule every three hours. Flow was considerably increased, there was a gradual lessening of all the suffering, and almost complete relief in twelve hours. This young woman had been placed upon Ergoapiol (Smith), one capsule twice daily for one week preceding appearance of menses, and has passed through several periods with very little suffering. An examination made recently showed a marked retroversion and very sensitive cervix. A properly applied supporter will doubtless work considerable benefit in her case, but it cannot be disputed that the comparatively easy menstruations occurring recently, in spite of the displacement, were due entirely to Ergoapiol.

CASE 4.—Miss ———, aged 18, had always been regular in menstruating. Could get no history of any previous disorder within patient's knowledge. Contracted a heavy cold about time of menstrual epoch, and was much alarmed by non-appearance of flow. Discomfort was not marked. Ergoapiol (Smith), one capsule three times a day, was prescribed. Reported later that flow was established in twenty-four hours after treatment was commenced. The delay in this case was about four days.

CASE 5.—Mrs. ——— consulted me, giving the following history: Three months previously had had a profuse uterine hemorrhage occurring about the time of menstrual period. As she had for a number of years menstruated only at intervals of about six or seven weeks, the fact that menstruation had been suspended for six weeks before the date of trouble was not especially significant. The hemorrhage, which was at no time alarming, had continued for several days. Since that time there had been an almost constant wasting and at times a considerable flow. Her condition was practically invalid. Examination revealed a gaping os, a cervix exceedingly tender and abraded, and a large uterus. Before resorting to curettement it seemed advisable to try other measures. Ergoapiol (Smith), one capsule every three hours, was prescribed. In about twenty-four hours there was a decided increase in the discharge, which consisted of clots and considerable debris. There were some pains, of a cramp-like nature. The discharge began to

grow less in about four days and ceased entirely in one week. There was a marked improvement in general condition. Local treatment entirely removed the tenderness and abraded condition of cervix. Ergoapiol (Smith) was administered several days before next menstrual period and resulted in a very satisfactory period. In this case it appears to me the remedy saved the patient the ordeal of curettement, acting as a prompt uterine stimulant. Her condition locally and generally has since steadily improved.

Do Drugs Ever "Cure"?

In the layman's mind there is absolutely no doubt of the power of drugs to produce a "cure." To cure a disease by means of a drug or a combination of drugs, seems to him no more wonderful than to patch up a piece of broken china with a little cement. The same idea existed in every physician's mind up to seventy or eighty years ago—and is still entertained by a good many old-fashioned doctors. The study of pathology changed the prevalent notion of the "curative" power of drugs; it was seen that a dose of ammonium carbonate could have no direct effect on a consolidated pneumonic lung, nor could a dose of opium produce a retrograde metamorphosis in an inflamed peritoneum. It, therefore, became fashionable to sneer at drugs as curative agents. The *vis medicatrix naturæ* does it all—without it drugs are worthless. Admitting that this is so, that the real cure is produced by Nature, do not the drugs help toward a cure, by helping Nature to exert her curative action, by removing obstacles, by clearing the sewer pipes, etc.? When a man breaks his leg and a skilful surgeon puts the fragments in proper position, applies a splint, and the fragments unite without leaving the least trace of deformity—who has produced the cure? The surgeon? He has and he hasn't. Because, without Nature's reparative process, without the callus, no surgical skill would be of any avail. We have many such instances in very old people, in whom in spite of the best treatment the fragments refuse to unite. But, on the other hand, without the fragments being put in the proper position, a great deformity may result, or the fracture may remain ununited in spite of a superabundance of Nature's reparative callus. And so it is with drugs in the hands of a skilful physician. Nature produces the cure, but drugs coax Nature to stop her mischief, tide the patient over the danger period, and thus give Nature a chance.—*Merck's Archives.*