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THE

Montreal Medical Journal

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No. 1.

HEALTH RESORTS IN ARIZONA.

BY

WM. VAUGHAN.

Howsoever physicians may differ with respect to other factors in the treatment of tuberculosis, they appear to be unanimous in regarding pure air as of the first importance. No part of the North American continent offers so great advantages for the open air treatment as the arid region in the southwest of the United States. Of the vast area embraced in this region the territory of Arizona, by reason of its wider diversity of climate, its range of altitude from sea level at Yuma to 6,800 feet at Flagstaff, and the greater number of suitable resorts for invalids, deserves the most attention. I remember Dr. Trudeau saying to one of his patients in the Adirondacks, "How many hours a day do you spend out-of-doors? As many as eight? Do you know that it is quite difficult to spend eight hours out-of-doors daily?" But in Arizona sufferers from tuberculosis can and do spend as many as twenty-two hours, or even more, out of every twenty-four in the open air, with comfort and pleasure, all the year round. Everywhere throughout the territory, the air is singularly clear, tonic, and dry. During a year's residence, there was not one day on which the sun did not shine brightly for several hours.

But the sufferer from tuberculosis needs more than climate. He requires suitable accommodation and good food, and he may require the attendance of a physician. These are not everywhere obtainable, and the physician in the east, who has no personal knowledge of Arizona, is generally unable to direct or advise his patient where to settle. As a result, the patient arrives in the Territory in a condition, more or less, of bewilderment as to his destination, with his temperature increased by a fruitless effort to discriminate between the merits of Phoenix, Tucson, and Prescott, as presented in the highly coloured advertisements of two rival railway companies. Some observations, therefore, on the principal health resorts in Arizona may be of use to Montreal physicians.

It is possible for the patient, when he has been some little time in Arizona, to secure the accommodation and the comforts he requires at one of the numerous ranches in the vicinity of towns in the southern part of the Territory. This is the cheapest way of living, but life on a ranch presents unknown terrors to the sick tenderfoot, and he very naturally seeks for quarters in one of the established resorts. The best of these are Phoenix, Tucson, Oracle, Castle Creek, Hot Springs, and Prescott.

Phoenix, with an altitude of 1,180 feet, is the largest city in the Territory, and the most hospitable to consumptives, several thousands of whom flock to it for the winter months. Its population is variously estimated at from 12,000 to 18,000, according to the time of year, but on comparison with the census these estimates appear to be unduly high. Its municipal improvements include a waterworks system, gas and electric lighting plants, a telephone system, and an electric street railway. For the care of invalids there are besides a sanatorium and a Sister's hospital, several hotels and restaurants and a considerable number of lodging houses and furnished rooms—while good accommodation may be had at some of the ranches in the outlying country. The hotels are generally unsatisfactory; the principal one has excellent accommodation, but provides a poor table. Many of the lodging houses are attractive; and a number of them are provided with screened balconies for sleeping-out, but the cooking, as a rule, is ill done. Furnished houses and cottages are to be had for the winter, and, if domestic help can be got, the patient who has sufficient means finds this by far the best way of living. There are good roads for driving and horseback riding, and there is also a small golf course—the only one in Arizona.

Situate in the centre of the Salt River Valley, the climate of Phoenix during the months of October to April, inclusive, is delightfully mild and sunny. The thermometer rarely falls to the freezing point. The coldest month, February, has a mean temperature of 54°, a mean maximum temperature of about 75°, and a mean minimum temperature of about 43°. There is, therefore, between nightfall and sunrise, a daily drop of 30°. This is the case throughout the year. In the winter months a decided chill is felt at sunset, overcoats are *en règle*, and log fires are comforting. The annual precipitation is about 7 inches. The humidity has very markedly increased in recent years with the development of irrigation, but even now the mean relative humidity for the year is only 38 per cent., being noticeably less in the summer months than in January and February. During the year 1903, Phoenix enjoyed 266 clear days, 60 partly cloudy days, and 32 cloudy. The average hourly velocity of the winds is between four and five miles. The months

of May to September, inclusive, are unbearably hot, and, during that time Phoenix is abandoned by its health-seeking population. It is said, in the Territory, that patients do particularly well in the hot, dry weather, but when the thermometer goes daily above the hundred mark, the heat becomes decidedly unpleasant.

Throughout the year Phoenix suffers frequently from desert sandstorms, which, though usually of short duration, are very disagreeable.

Tucson, altitude 2,400 feet, which lies to the southeast of Phoenix, is the second largest city in the Territory, and is the seat of the University of Arizona. Having a population of about 7,500, it boasts, like Phoenix, of all modern municipal improvements, and has its quota of hotels, lodging-houses, etc. These are by no means so numerous as those of Phoenix, but are similar in general characteristics. Mention, however, should be made of a new hotel, opened in 1903, which is reported to be the finest in the Territory, but, being built in the Mission style and having no grounds about it, is ill-adapted to the entertainment of invalids. There are good roads for riding and driving.

The climate of Tucson very closely approximates that of Phoenix, its annual mean temperature being only 2° less. The months of May to September, inclusive, are uncomfortably hot. The annual precipitation is about $8\frac{1}{2}$ inches of rain, and there is an occasional light fall of snow. Humidity data are not obtainable, but the relative humidity probably averages considerably less than that of Phoenix.

Oracle, altitude 4,500 feet, lies 40 miles due north of Tucson, and is reached by a hard stage drive from that city. The place may be described as consisting of two hotels, a few cottages, and a number of tents erected by invalids. The hotels are only fair, and the life altogether is on the rough side. The driving is fairly good.

The annual mean temperature is 62.7° , the mean for the winter months being 46° , and for July and August 79.2° . The maximum summer heat, however, rarely registers 100° , and creates no discomfort, while the thermometer shows about 15° in the coldest weather. The annual precipitation amounts to 16 inches of rain and about 12 inches of snow. The mean relative humidity is very low, and Oracle enjoys as great a percentage of possible sunshine as Phoenix or Prescott, viz., 85 per cent. Winds are very frequent, but no record of their average velocity is available.

Castle Creek Hot Springs, altitude 1,900 feet, lies in the Bradshaw mountains, about 50 miles northeast of Phoenix and about 28 miles, by a stage drive, from the nearest railway station. The only accommodation to be had is at the Castle Creek Hotel, which entertains guests during the months of November to April, inclusive, and is

closed for the summer. The hot springs furnish the hotel with an unceasing stream of water at a uniform temperature of 114° . Of slight medicinal value, this water, when cooled, makes a delightful table water. The hotel has all modern conveniences, and, while comparatively expensive, is by far the most comfortable in Arizona, and is so constructed as to allow of invalids getting a maximum amount of fresh air. It is well managed, and has a resident physician. There are no roads for driving, but horseback riding on the mountain trails is much indulged in. Entirely surrounded by hills, the climate of Castle Creek, like that of Tucson, very closely approximates that of Phoenix in respect of temperature and precipitation. The hills, however, effectually protect it from the sand storms which are so unpleasant a feature of Phoenix, and the relative humidity is phenomenally low. During the season 1903-1904 this rarely exceeded 30 per cent., was on several days inappreciable, and averaged less than 15 per cent.

Prescott, altitude 5,320 feet, with a population of about 5,000, is a prettily situated mountain town, 150 miles north of Phoenix. It is well built and possesses up-to-date conveniences, including an infant street car service, and a Sisters' hospital. Accommodation for invalids, however, is very scanty. The hotel service is extremely poor, and the lodging-houses refuse to receive sick guests. Until lately, sufferers from tuberculosis have, on that account, had to pass Prescott by, but a beginning has at last been made by the enterprise of a young Canadian doctor,* a graduate of McGill, who has established a camp for the open-air treatment. This is located in a pine grove in a sheltered part of Prescott's mountain park, and from my own experience and an exchange of notes with fellow-sufferers, I think it compares very favourably indeed with any establishment in Arizona. There are good roads for riding and driving and a nice club where good meals can be had by both sexes at a very reasonable price.

Prescott has an advantage climatically over the other cities which I have mentioned in being an all-the-year-round resort. The temperature in the hottest months, July and August, is thoroughly enjoyable, while the winter days are bright and sunny. The air is at all times more bracing and tonic than at lower altitudes in the Territory. The maximum summer temperature is about 95° to 98° , and the mean for the months of July and August 73° and 70° respectively. The summer nights are deliciously cool, and a blanket is always needed. The mean temperature for the coldest months, January and February, is 34° and 38° respectively. The nights during this season are quite cold, with a mean minimum of about 18° , but the daily maximum temperature

* J. W. Flinn, M.D. (McGill, '95).

varies between 50° and 60°. Both the cold and the heat are tempered by a very low relative humidity, and the patient is untroubled by sandstorms. During 1903 the precipitation amounted to 16.74 inches of rain, falling chiefly, in sharp, short thunderstorms, in the summer season. There was also a total fall of 18 inches of snow (unmelted) which, under the influence of the bright sunshine, very quickly disappears.

The climate of Prescott challenges comparison with that of Denver and that of Colorado Springs. Thirty feet higher than Denver, and 750 feet lower than Colorado Springs, it has an annual mean temperature of 53°, or some 3° higher than both. The summer temperatures are very nearly alike, but Prescott enjoys a less severe winter, its average wind velocity is considerably lower, and its relative humidity is less than a half of that of either of the other two places. Its percentage of possible sunshine is also higher. In 1903 Denver had a total of 199 clear days, 105 partly cloudy, and 61 cloudy; whereas Prescott had 248 clear days, 96 pretty cloudy, and 21 cloudy.

Flagstaff, altitude 6,800 feet, is noticed in the railway's publications as a health resort, but all my inquiries have resulted in the information that no suitable accommodation for invalids can be obtained there. Its winter is severe, and its altitude is considered to be objectionably high for consumptives.

It may be desirable to add that at each of the five resorts, Phoenix, Tucson, Oracle, Castle Creek, and Prescott, the patient can secure the attendance of reliable physicians, nurses can be obtained, and good milk and fresh eggs are to had in abundance; and that places distant from the railway have to rely largely on the canned product as a substitute for fresh vegetables. No sick person should come to Arizona without money. The cost of living is high, and employment can rarely be obtained.

QUININE AMAUROSIS—WITH REPORT OF A CASE.

BY

G. H. MATHEWSON, B.A., M.D.

During the early part of the present year I had the privilege of studying a case of Quinine Amaurosis, and became so deeply interested in the matter myself, that I thought a short *résumé* of the subject might prove of interest to the members of this society.

According to H. C. Wood, of Philadelphia, the alkaloid quinine was first definitely separated from the other constituents of cinchona bark in the year 1820, and, as it was a much stronger remedy than the bark, soon came into great favour with the profession, especially as a remedy

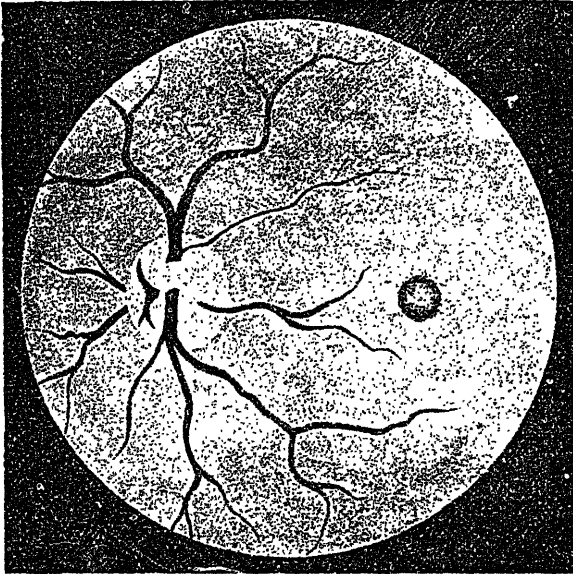
for malaria. Although, as early as 1829, Berandi reported that in experimenting with healthy persons, he had noted tinnitus aurium, and temporary amblyopia after doses of from 15-20 grains of quinine, it was not until the year 1841 that we find a record of fully-developed blindness from the toxic effects of the drug. In that year Giacomini reported a case which occurred in the practice of his friend, Dr. Giacometti, of Mantua. This case is of special importance not only on account of its priority, but still more so from the fact that the patient before taking the quinine was in robust health, so that there could be no doubt as to the causal relation between the alkaloid and the symptoms. A full description of the case can be found in the *Dictionnaire de Médecine* (2me edition, Paris, 1842, art. Quinine), which can be found in the library of McGill Medical College, and from which I have taken the following abstract:—"A man between 45 and 50 years of age took at one dose between 180 and 200 grains (12-15 grammes) of sulphate of quinine, which he mistook for cream of tartar. He was seized at first with precordial pain, nausea, vertigo, and faintness, and was unable to make the least movement. Eight hours after the ingestion of the drug Dr. Giacometti saw him, and noted his condition as follows—Temperature above normal, extremities cold, lips and fingers livid, breath fetid, respiration slow and sighing, pulse regular but very feeble, voice faint, pupils dilated, sight and hearing almost abolished, very thirsty. He gradually improved but was unable to stand up on the fifth day. Sight and hearing improved daily, but only after a long time were they restored." While it is stated that sight was restored, we cannot be certain that the visual fields were normal. Garofolo of Gratz, and DeGouvea of Rio Janeiro have each reported a case where blindness was caused in a healthy individual by the ingestion of quinine. Garofolo's patient took 225 grs. of quinine in mistake for magnesia, while DeGouvea's patient attempted suicide by taking 300 grs. at a dose. In 1847 Dr. Wm. Baldwin, an American physician, reported the case of a negro girl, six years of age, who was given by his orders 24 grs. of quinine in one day, 12 grs. the following day and 8 grs. on the third day, or a total of 44 grs. in three days. Shortly after the last dose the child became restless, then blind with marked dilatation of the pupils, and a few hours later died. Dr. Baldwin quotes another case that occurred in the practice of a friend, in which blindness came on after large doses of quinine. He was so impressed by these two cases that he performed a series of experiments on dogs, and found that after toxic doses of quinine, the dogs invariably showed restlessness, became blind, with great dilatation of the pupils, and later had convulsions, became comatose and finally died.

He published a vigorous article citing these facts with reports of

the two cases mentioned above, and strongly deprecating the large doses in which quinine was given at that time.

Some idea of the reckless way in which the drug was prescribed in those days may be gathered from the following examples, which could easily be multiplied from contemporary literature.

A certain Dr. Wharton in a paper in the *American Journal of Medical Sciences*, published in 1844, states that his routine treatment for severe cases of malaria was the administration of eight grains of quinine every hour (or every second hour, according to the severity of the case), for 24 to 48 hours, i.e., 96 to 192 grains in 24 hours, and fur-



FUNDUS IN QUININE AMAUROSIS (DIAGRAMMATIC.)

(1.) The spot at macula is much larger than that seen in cases of embolism of the central artery of the retina.

(2.) All the vessels shown are veins, except the two small twigs at nasal side of optic disk, which are arteries.

ther states that in one severe case he gave 240 grains in this manner, i.e., in about 30 hours, without bad results.

In France a certain Dr. Bazire gave his wife, who had malaria, 240 grains in a short time and then 375 grains at a single dose with the result that she became blind and unconscious. At this juncture, fortunately for her, the doctor himself developed malaria and at once began an energetic course of treatment on himself. He took at a dose 900 grains of quinine, and then followed this up by taking *five ounces* during the next ten days, from the effects of which he died.

After a protracted illness Mde. Bazire recovered a fair amount of vision. From time to time cases of blindness from overdoses of quinine were reported, but it was not until after the discovery of the ophthalmoscope by von Helmholtz, in 1851, that the interior of the living eye could be examined in situ, and the description of the symptoms produced in man by the toxic effects of quinine was rounded out by a picture of the fundus oculi in this condition.

According to de Schweinitz the first complete description of the changes that occur in the fundus oculi in fully-developed cases of quinine amaurosis was given by Voorhies in 1879. Voorhies' patient was a young lady, who, while visiting in a part of the country where malaria was prevalent, fell ill with this disease. On the advice of a friend (not a physician) she took an ounce of quinine on each of three successive days. On the second day she became much prostrated, with a feeble pulse and marked pallor of the face. Her hearing was slightly impaired, but she was absolutely blind. The pupils were of normal size and reacted to light. There was no trace of retinal vessels whatever, and the optic discs were chalky white. The choroidal vessels were empty and the fundus appeared of a pale yellow colour. Under inhalations of amyl vitrite and injections of strychnine she gradually improved (though it was ten weeks before any improvement could be noted), and finally could read J. No. i., but had extreme contraction of the visual fields which was permanent. When examined, more than a year later, no retinal vessel contained blood except one small twig in the left eye. The optic discs were still perfectly pale, and the visual fields extremely contracted, the greater (vertical) diameter of the field was only four inches at a distance of two feet. *i.e.*, the patient had telescopic vision and must have experienced considerable difficulty in walking about. The vertical diameter of the visual field in my own left eye is 34 inches at a distance of 2 feet, so that the patient's field had been reduced to less than one-eighth of what it should be.

In 1881 Knapp of New York described three cases, and in the same year Dr. Buller described a case which occurred in Montreal. Since that time many cases have been recorded, and in 1889 Prof. I. E. Atkinson, of the University of Maryland, published a valuable paper entitled, "Some of the Graver and Rarer Forms of Cinchonism," in which he strongly condemned the reckless way in which the profession prescribed quinine, and in support of his position gave abstracts of forty-nine cases of quinine blindness drawn from the medical literature of all countries.

The history of my case is as follows:—On March 4th, 1904, Mrs. M., a healthy woman, was confined. The labour (which was her second)

was quite normal and the case progressed favourably until March 6th, when symptoms of septicæmia appeared. On March 7th, besides local treatment, her physician prescribed a mixture containing $3\frac{3}{4}$ grains of quinine sulphate and $5\frac{5}{8}$ m. of Arom. Sulph. Acid to the dose, 4-6 times daily. This mixture did not seem to agree with the patient, as on several occasions she vomited after having taken it, so, on March 9th it was stopped, and powders, each containing 10 grs. of quinine sulphate, with 15 grs. of bismuth subnit. and 3 grs. of soda bi-carb. were substituted. These powders were to be taken three times a day in divided doses. On March 12th the patient was in a muttering delirium. On the 14th she was still delirious, and it is worthy of note that a prominent feature of the delirium was the occurrence of visual hallucinations,—she saw “street-cars upside down on the ceiling.” On the following morning it was discovered that she was absolutely blind, with widely-dilated pupils which did not react to light. Her hearing was impaired also, and she at different times spoke of the noise in her ears. Her physician states that she could always be roused when spoken to in a rather loud voice, and that her apparent deafness was due in part at least, to her mental condition. At the time when the blindness came on, the patient had taken between 150 and 180 grains of quinine during a period of eight days. The total quantity prescribed was $202\frac{1}{2}$ grs. but of this many doses had not been given, owing to the condition of the patient and the indifferent care given her by those of her household.

About this time, March 15th, the bodily temperature began to maintain a lower level, and on the succeeding days the amount of quinine was lessened. The patient gradually passed from a state of muttering delirium into a condition of dullness and apathy, and was in this latter condition when admitted to the Western Hospital, under Dr. Perrigo, on March 24th. Her pelvic condition was diagnosed as salpingitis and she was given, in addition to local treatment, 2 grs. of bisulphate of quinine t.i.d. which latter was only stopped when I suggested that her blindness was probably due to quinine intoxication. On March 25th I made a careful examination of her eyes with the following result:

It is to be noted that while this examination was made ten days after the onset of the blindness, it is likely the appearance of the fundi did not differ much from the initial condition since quinine had been given continuously, and the experience of Nettleship, Demicheri, Stathakoupolos and others proves that even small doses of the alkaloid will cause a return of the symptoms in those who have suffered from quinine blindness. The condition was the same in the two eyes,—pupil widely dilated and reacts but slightly to light. Tension normal.

Vision=P.L.? The optic disc is extremely pale, with a dull surface, such as is seen in optic atrophy, and its border is sharply defined. There is a slight haziness of the fundus (due to opacity of the retina), which is more marked about the optic disc and macula than elsewhere. In the macular region there is a rounded red spot about 1-3 the size of the optic disc. This spot is not of an intense red colour, but rather a fainter red than the pericentral area of the normal macula, and, although it stands out rather prominently from the hazy retina, it is not sharply defined at its periphery. The most striking feature in the fundus is the extreme constriction of the retinal arteries. On the optic disc a thin column of blood can be seen in two or three of the largest arterial trunks, but even this faint red thread disappears before the edge of the disc is reached, except in one or two branches, where it can be seen to continue to a point just beyond the disc border. Elsewhere in the retina the arteries are absolutely bloodless and either can not be seen at all or appear as bloodless greyish-white structures, like the "ghosts of vessels," as one writer has aptly said. Even on the optic disc some of the large arterial branches contain no blood. The veins were slightly paler than normal, and showed more constriction where they entered the optic nerve, but otherwise exhibited no abnormality. This slight pallor of the veins was probably due, in part at least, to the haziness of the retina. Although the eyes were examined almost every day, no change was noticed until April the 7th, when it was found that the pupils reacted more promptly to light, and the patient was able to see fingers moving, when held close to the face. On April 10th marked nystagmus was noted. On April 11th she could count fingers held close to the face, and it was noted that the retinal arteries contained more blood. At this time it was observed that on or near the optic disc the arteries contained a narrow column of blood, as described above, but as one followed the course of any of these vessels into the retina this blood column disappeared entirely and the vessel was quite bloodless until the equatorial region of the eye was reached, where it rather suddenly became well filled with blood.

Several vessels which on the optic disc and in the neighbouring part of the retina contained no blood were well filled towards the equator of the eye.

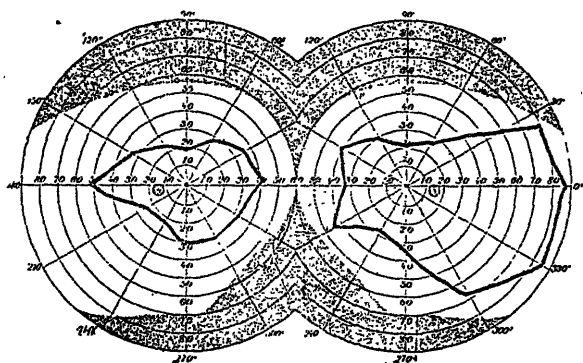
In none of the arteries was there to be seen at any time the appearance that has been described as "blood cylinders," i.e., multiple breaks in the blood column.

From this time on vision gradually improved. On April 15th V=fingers at 15 feet. Field much constricted. At this date one could see with the ophthalmoscope many dilated capillaries arranged in a

radial manner about the optic disc, which latter was still of chalky whiteness. This condition was not present earlier. On April 29th patient could go about the ward, but walked slowly and aided herself by holding on to beds, etc. V both eyes=F. 20 feet. May 11th nystagmus has been absent for some days. Pupils of medium size and react promptly to light. The dilated capillaries referred to above are not nearly so noticeable.

All the retinal arteries now contain a continuous bloodstream, from the centre of the optic disc to the equator of the eye. The arteries are, however, better filled toward the equator. R. V.=6-36. L. V.=6-36. The visual fields are still very much constricted and the construction is concentric. The patient is absolutely blind for red and green, but can distinguish blue with a fair degree of certainty. The accompanying charts show the extent of the fields on this date. On May the nineteenth the state of vision was R. E.=6-36 and Jaeger No. 6; L. E.=6-36 and Jaeger No. 9.

R.E. Fields for White. L.E.



Red and Green are not recognized in any part of field, while Blue can be recognized with a fair degree of certainty at point of fixation.

We have here very poor vision and the narrowing of the fields makes locomotion more difficult still. Her physician was of the opinion that the patient was changed mentally, being more easily excited to laughter, etc., than she had been before her illness.

As regards the treatment that was given the case, I followed that usually adopted, namely, tincture of nux vomica, with nitroglycerine. Amyl nitrite inhalations were given on three occasions. Many drugs have been vaunted, such as potassium iodide, amyl nitrite, strychnine, nitro glycerine, and some authors have spoken highly of the use of electricity, but it is very doubtful if any treatment has much influence on this condition. Of the cases on record a large proportion have

recovered, more or less completely, with no treatment beyond the withdrawal of the quinine. The improvement in my case began almost immediately after the quinine was stopped. The symptom-complex that we call quinine amaurosis has been summed up by Prof. Atkinson (who, by the way, is not an oculist, but a physician) as follows:—

1. Transitory blindness, complete or incomplete, usually developing suddenly. "This blindness may be more complete than in any other recoverable condition and is comparable to the blindness of optic atrophy" (Browne).
2. Colour blindness. As sight returns most patients will be found to be colour blind, partially or completely. The colour sense gradually returns and may ultimately become restored.
3. Wide dilatation of the pupils. The pupils are irresponsive to light, but are said to respond to accommodative effort. It is to be inferred that the dilatation is due to the blindness and that there is no implication of the third or sympathetic nerves.
- (4). There is pallor of the optic discs and extreme diminution of the retinal vessels, both veins and arteries. In many cases this is permanent. In cases examined early by the ophthalmoscope a whitish haze with cherry-colored spot has been observed at the macula, as in cases of embolism (Browne, Buller, Gruening).
- (5). There is contraction of the visual field. This is extreme and expands slowly. There is no reliable evidence that it ever regains its normal extent. "The contraction is concentric or elliptical, with the longest axis in the horizontal direction" (Knapp).
- (6). Impairment of hearing (at times of total deafness), with tinnitus appears to be present almost invariably.

Besides these symptoms, which may be considered as practically of constant occurrence, there are many which are less common, such as nystagmus, anæsthesia of the cornea, ring scotoma, etc.

In one case (Dickinson's) there was a true optic neuritis which, as Atkinson points out, was probably due to malarial infection and not to the quinine. Optic neuritis from malaria has been frequently seen (Galezowsky, Hammond, Poncet). In addition to the ocular symptoms, certain general symptoms can generally be found, such as gastric disturbance (vomiting, etc.), diarrhœa, difficulty in respiration delirium (sometimes with visual hallucinations), prostration and mental hebetude. As the patient in the vast majority of cases is seriously ill before taking the quinine, these constitutional disturbances are frequently ascribed to the toxæmic effect of the disease, and do not attract any special attention. The amount of quinine which must be taken before blindness is induced is not as yet accurately determined, but in most of the recorded cases of complete amaurosis a large quantity has been taken either at a single dose or in divided doses spread over a short period.

Geo. de Schweinitz states that the amount has varied from 15 grs. to 1 oz. in twenty-four hours. The duration of the blindness varies considerably, in some cases lasting but a few hours, in others for weeks and even months, while in two cases, those of Calhoun and Claiborne, the blindness was permanent. In my case, complete blindness lasted for over three weeks; in Voorhies' case for ten weeks, while in that of Michel the blindness was total for seven months. In typical cases, and the majority of recorded cases are typical, there should be no difficulty in making a diagnosis. The sudden onset of complete binocular blindness, coming on simultaneously in the two eyes, associated with the fundus changes described above, and accompanied by tinnitus aurium and deafness in a patient who has been taking quinine in large quantities, makes a clinical picture which is quite pathognomonic. Complete embolism or thrombosis of the central artery of the retina produces changes in the fundus much like those seen in quinine amaurosis, but simultaneous occlusion of the central retinal artery in the two eyes must be extremely rare; if indeed it ever occurs at all. Lucien Howe says, "Simultaneous embolic plugging of the central artery in each eye has been described, but it is an exceedingly rare condition," but gives no authority for his statement. I have not been able to find the record of any such case, but A. von Graefe and Nettleship both report cases where both eyes were affected by embolism of the retinal artery, but they were not attacked simultaneously. In Von Graefe's case the second eye was not affected until two years after the other had been lost, while in Nettleship's case twelve days had elapsed before the second eye was attacked.

The patients who have embolism nearly always have arterial disease, and besides this they do not present the other symptoms so characteristic of cinchonism. Further, the blindness in embolism or thrombosis is almost, without exception, permanent. Occasionally acute retrobulbar neuritis may cause sudden blindness, and a certain amount of retinal ischemia, but in such cases there is orbital pain, headache, pain on moving the eyeball, and if they recover, the peripheral field is restored before the central, while the reverse order is seen in quinine amaurosis. More than one hundred cases of this peculiar condition have been placed on record, seventy-one of which I have been able to study, and I have compiled the following table showing the final state of vision:—

1.—No. of cases where vision became normal or nearly so,	38
2.—No. of cases where vision was permanently impaired to a moderate degree	21
3.—No. of cases where vision was permanently impaired to a high degree	4

4.—No. of cases where vision was fair, but the visual fields were so contracted that the patient had difficulty in getting about	4
5.—No. of cases where the blindness remained complete and permanent	2
6.—No. of cases where death resulted	2
Total	71

In two cases, it might be added, there was permanent deafness. Grouping classes 1 and 2 together, we have 59 cases that recovered good vision out of a total of 71 cases, or 84 per cent., so that while the blindness is extreme and recovery may be long delayed, we can say that the prognosis for the recovery of vision is good.

When we consider the wholesale way in which quinine is prescribed, especially in malarial districts, we are struck by the fact that during the eighty years that have elapsed since quinine has been in use only about 100 cases of quinine amaurosis have been recorded, i.e., one case and a quarter per year, and the smallness of the number seems the more strange when we consider the striking nature of the symptoms in this condition. Granting that some cases may be overlooked in out-of-the-way localities, the fact remains that in places where oculists can be consulted very few cases are seen, and we are forced to the conclusion that there must be an unusual susceptibility to quinine in those in whom the amaurosis develops. This susceptibility may be constant, and correspond exactly to idiosyncrasy to belladonna, or to potassium iodide or calomel, which are known to every doctor, or, on the other hand, the idiosyncrasy may be due to lowered vitality of the individual at the time. Knies has pointed out that those who have suffered from quinine amaurosis have, almost without exception, been in very poor condition generally from the effects of malaria or typhoid fever, etc. The susceptibility of human beings to quinine varies to a remarkable degree. H. C. Wood states that he saw complete temporary amaurosis in a lady after the ingestion of 12 grs. of quinine sulphate, and Geo. E. de Schweinitz has seen the same effect after 15 grs. given during a period of 24 hours.

On the other hand, it is well known that many persons can stand large doses of quinine without bad effect. Dr. Clapton, for instance, cites the case of a soldier who took an ounce at a dose with no more effect than a mild stupor, while de Schweinitz says that, when a house-surgeon, he gave 80 grs., in less than 24 hours, to a man who had malaria without causing the slightest disturbance of sight or hearing, and a multitude of similar cases might be cited. H. C. Wood thinks

that in these cases, where large doses are taken with impunity, a large proportion of the drug passes unchanged through the intestines. It is possible, too, that in some cases the patient has become habituated to the drug, and so less susceptible. While these extremes of susceptibility are to be found, the experiments of Barabaschew clearly prove that large doses of quinine are never without danger. Barabaschew gave to a series of healthy individual doses of from 2.4 to 3.6 grammes (41 to 55 grs.) of quinine sulphate, with the following results:—

- (1) Acute gastritis, with temporary increase in central visual acuity.
- (2) Pallor of the face, dizziness, in some cases going on to loss of consciousness, somnolence, ringing in the ears, and miosis rapidly passing into mydriasis.
- (3) Marked constriction of the retinal vessels and pallor of the optic disc. Pulse at first more rapid, then slowed.
- (4) Concentric contraction of the visual fields.
- (5) Lessening of visual acuity, and in one case temporary blindness. This blindness lasted half a minute, and recurred ten times at intervals of 10 to 15 minutes. No colour blindness. Once temporary opacity of the retina.

We have here all the cardinal symptoms of quinine poisoning in less degree, so that we must conclude that quinine in large doses cannot be given even to healthy individuals without danger, while to those whose vitality is exhausted by such diseases as septicæmia, typhoid fever, or pneumonia the danger becomes imminent. It would seem that the use of quinine in large doses should be confined to cases of malaria, and used even here with caution, for it is well known that the alkaloid has no special effect on septic disease, as was formerly believed, and for reducing temperature we have many more efficacious means, such as cold sponging and cold baths and the coal tar products (acetanilid, etc.).

The pathology of the ocular changes in quinine amaurosis is now pretty thoroughly known, thanks to the studies of Brunner, de Schweinitz, Barabaschew, Ward Holden, Druault, and others.

Ward Holden has demonstrated that in dogs blinded by quinine the ganglion cell and nerve fibre layers of the retina are degenerated, while the rest of the retina, including the rods and cones, shows little change. He concludes that this degeneration is due to insufficient nourishment because of the constriction of the retinal arteries. "The degeneration of this part of the retina is followed by an ascending atrophy of the optic-nerve fibres, which extends up to the termination of the nerve fibres in the external geniculate body and pulvinar of the thalamus." He found, clinically, that the amblyopia did not occur unless there was constriction of

the retinal arteries. "The retinal vessels supply the six inner layers of the retina, while the other layers are supplied by the choroidal vessels. When the retinal circulation is absolutely stopped, as in complete embolism of the central artery, these inner six layers atrophy, the nerve fibres, ganglion cells and cells of inner nuclear layer all disappear, while outer nuclear layer rods and cones and pigment epithelium remain normal. With reduced but not abolished nutritive supply in quinine poisoning, the more delicate elements, that is, those most responsive to nutritive disturbances, namely, the nerve fibres and ganglion cells, atrophy, while the more resistant cells of inner nuclear layer are not altered."

In 1900 Dr. A. Druault, of Paris, published his treatise on the pathogeny of quinine amaurosis, and his conclusion is that the blindness is not due to the circulatory disturbance, but to the action of the quinine on the cells of the ganglion-cell layer of the retina.

He found that in dogs, as early as ten hours after the administration of quinine, degenerative changes could be found in the cells, and that these changes were followed by atrophic changes in the optic nerve, and, further, that "all parts of the ganglion cell layer were not equally attacked, but that certain areas were respected, and particularly the middle of the central region. This last accounts for the fact that central vision is recovered first in those blinded by quinine, and may be perfect while the periphery of the field remains permanently defective.

It is impossible to explain this from the condition of the circulation which would lead one to expect complete blindness, and in cases of embolism of the central artery of the retina we find that complete blindness does result from the stoppage of the blood supply, and is permanent. Again, Dr. Hamlich reports the case of a boy of four years of age, who became blind after taking 38 grains of quinine, but whose retinal circulation was found to be quite normal. Dr. Gruening records a similar case, In Dr. Buller's case, too, absolute blindness had persisted for several days before any change could be seen in the retinal circulation. Garofolo's case was similar to Dr. Buller's. On the other hand, many cases have been reported where vision had been restored, while extreme retinal ischæmia persisted. Bruns has reported two such cases, in one of which the ischæmia was extreme ten years after the vision had been restored. From these facts we are forced to conclude with Dr. Druault that the primary lesion is in the ganglion cell layer, while the circulatory disturbance plays a subsidiary rôle in the causation of the blindness, by depriving the already damaged cell of its nutritive supply.

In fact, it has occurred to me that the extreme contraction of the retinal vessels may be a reflex, and serve to preserve the delicate nervous elements by cutting off the blood charged with quinine.

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DIAGNOSIS AND TREATMENT OF METRORRHAGIA.

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Of all the organs of the economy the uterus is the one most exposed to hæmorrhages. Elsewhere a hæmorrhage will always be a pathological phenomenon; here it may be only an exaggeration of a physiological and periodic fact in harmony with the genital life of the woman, varying with every individual.

What is of most interest to us is the study of pathological metrorrhagia, and if not always easy to discern in clinical surgery when a hæmorrhage ceases to be a regular menstruous function and becomes a metrorrhagia, at any rate we will here set aside everything which concerns true physiological hæmorrhage of the uterus. In the same way we will neglect hæmorrhage in connexion with the gravid uterus, whether the pregnancy is normal or abnormal, uterine or tubal, and those which coincide with the expulsion of an ovum, either during the term or at the end of its development. This phase of the question rests entirely with obstetrics.

We will retain, on the contrary, the hæmorrhages due to a pathological modification of the uterus, directly resulting from an abortion or confinement. We shall also set aside these hæmorrhages resulting from general diseases in which there is a tendency to hæmorrhage, especially these affecting the circulatory system.

If we consider only surgical metrorrhagia, we must yet, from a clinical point of view, classify them.

The anatomical causes of bleeding from the uterine mucosa are without doubt of great interest, but their study cannot detain us. Any lesion of the mucous membrane, any alteration of the vessels, any state immediate cause of a hæmorrhage. It is not possible to found a immediate cause of an hæmorrhage. It is not possible to found a classification upon these lesions, as any one of them may appear in the course of a disease capable of causing a metrorrhagia. However, a good many surgeons of the present day have a tendency to admit with Richelot, that a fibromatous uterus, and even, perhaps, a cancerous one, is only the last stage of an uninterrupted series, beginning with a medium-sized sclerotic uterus, which Virchow called parenchymatic metritis, followed by the giant uterus, in which fibromatous nodules expand, but we prefer to remain upon a purely clinical ground.

In presence of a patient who loses blood, examination of the generative organs will reveal whether or not there is some evident lesion. A

big fibroma, a cancer, a polyp, protruding into the vagina are immediately discovered, and though there may be a difference as to the exact diagnosis, anyhow they constitute an evident lesion, which attracts all the interest and makes the metrorrhagia secondary, it having become a mere symptom.

Setting aside such cases, we will only retain those connected with a metrorrhagia, of which one cannot immediately discover the cause upon bimanual examination. We can divide them into two great classes—those appearing without any acute or chronic affection of the uterus and those which, on the contrary, are directly connected with an acute or chronic metritis, a miscarriage, or a confinement.

In the first class we find virginal metrorrhagia, metrorrhagia of the menopause, metrorrhagia connected with lesions of the adnexa, and metrorrhagia secondary to an angioma of the uterine mucosa.

In the case of a virgin we can without doubt observe an infectious metritis, caused by uncleanness, masturbation, gonorrhœal vulvitis or vaginitis, but one also observes an essential metrorrhagia, which often appears when menstruation first takes place. This latter, at first laborious, becomes profuse, then too frequent, and the loss of blood may be continuous, with the exception of a few days. Such hæmorrhages lead to general disturbance and to anæmia, with its usual symptoms, but, properly speaking, there is no local trouble. There may be spontaneous improvement, but sometimes the continuous loss of blood may cause death, though this is exceptional. In such a case there is only circulatory trouble in connexion with a bad condition of the general health or a congenital weakness of the muscular tissue of the uterus and of its vessels (*Doleris*). The curability of these hæmorrhages by general treatment shows that such an opinion concerning the pathogenesis must often be correct.

Metrorrhagia of the menopause may be the result of an infectious state of the uterus, or, on the contrary, may appear from a few months to a year after the cessation of the menses, without there having been any inflammatory lesion of the uterus at the time of the last menstruation.

Here the pathogenesis is without doubt open to discussion, but one may, with *Doleris* and *Boilly*, ascribe it to the circulatory disturbance, resulting from suppression of the menses, as it sometimes happens after ovariectomy, otherwise it must be connected with senile alteration of the uterus, hyperplasia of the connective tissue, which precedes the atrophy of the mucous membrane, diminution of the contractility of the uterine muscle, or at last to sclerosis of the vessels. Sometimes in such a case one has to deal with one of these old sclerotic, hypertrophic uteri.

These hæmorrhages soon disappear of themselves, or if not, justify surgical treatment. We should remember how difficult is the diagnosis from epithelioma of the uterus, so frequent about the menopause, which at first discloses itself by anything but hæmorrhage. Often dilatation and digital exploration of the uterus or the microscopic examination of a fragment of the mucous membrane are necessary, but are not always sufficient to decide the diagnosis.

In lesions of the adnexa one can observe metrorrhagia or, better, menorrhagia, characterized by severe and constant pain during their whole course. It occurs in cysts and solid tumours of the ovary, but especially in oophoro-salpingitis. It appears that one may refer them to some reflex neuro-muscular phenomenon, in some way to be compared to the menstrual flooding due to the rupture of the Graafian follicle, because curettage does not stop them when ablation of the diseased adnexa does.

Angiomatous metritis is an uncommon affection, which deserves to be called true hæmorrhagic metritis, for, anatomically, it is of vascular origin. Professor Pozzi was the first to distinguish it and give it a clinical description. Its anatomic characters have been described by Quenu and Pillet. The uterus is voluminous and thick walled, but of normal consistency. There is no hypertrophy of the mucous membrane, and the epithelium is normal, but the vessels are very numerous, dilated, and their walls show the embryonal character. Sometimes their dilatation is such as to give the appearance of cavernous tissue (Quenu).

There is really a vascular new formation, and consequently a kind of angioma of the mucous membrane, and the new formation can be detected even inside the uterine muscle (Pillet).

It is most probable that these alterations result from an old infection of the uterus, which finally located itself upon the vessels, because these patients have been treated, cured, and any lesion of the mucous membrane alone has had an opportunity to disappear. From a clinical standpoint, this affection is characterized by the excessive duration of the hæmorrhage, and by this fact that curettage performed one or several times, and all other forms of treatment for the hæmorrhage has been a failure.

II. I shall next consider metrorrhagia in infectious lesions of the uterus or following expulsion of an ovum.

We have to study here metrorrhagia in acute and chronic metritis and decidual endometritis. We shall not delay with hæmorrhage in acute metritis, for, if common, it is not as a rule copious, and loses interest as compared with the other symptom of acute infection of the uterus. Whatever its origin, one notices more or less serious modifica-

tion of general health, and locally pain, with increase in volume of the uterus, and especially a copious purulent discharge. At the same time as the acute symptoms improve the metrorrhagia diminishes without any special treatment. In chronic metritis metrorrhagia does not always appear; far from it. There is none in the glandular or in the mixed forms, but it is directly related to the pure interstitial forms, the cause being the desquamation of the epithelium and exfoliation and bursting of the capillary vessels in the course of this later form of metritis.

Fungous metritis is only a different variety of the interstitial form. The hypertrophy of mucous membrane which constitutes the fungous growth, and sometimes even proceeds to the formation of polypi, is followed by an intense development of vessels, and the losses of blood are at the same time persistent and abundant. These latter were formerly described as hæmorrhagic metritis, but we prefer to abandon this definition, since hæmorrhage is not the characteristic sign. It is only the most important one, but may be missing. There remains what is usually called decidual endometritis, which must not be confused, a mere acute metritis from infection following confinement or miscarriage. But here we have a fragment, often very small, of the placenta or membrane remaining in the uterus, which is sufficient to cause incessant hæmorrhage. Indeed, Kütsner and many others have shown that inflammation starting from some islet of membrane may spread over the whole mucosa. Hæmorrhages appear at different times after the miscarriage, generally a few days after, and once started never diagnosis is the ultimate connexion between the loss of blood and a diagnosis is the ultimate connection between the loss of blood and a miscarriage. We must remember also that islets of membrane may produce true tumours or deciduoma, which can be only detected by intrauterine exploration. When benign they remain localized and do not recur on removal. Malignant, they extend beyond the uterus, affect the general health, and tend to recur on removal. In both cases hæmorrhage is severe.

Treatment.

The therapeutic indications may be summarized as follows:—1st, hæmorrhages may be serious enough to cause a true condition of anæmia, and endanger the life of the woman. One therefore must have recourse to palliative treatment, destined to arrest, at least temporarily, the loss of blood, and to improve the general health. On the other hand, it is also necessary to treat by various measures, to be discussed, the disease which causes the hæmorrhage.

To start with, we will confine ourselves to the description of the usual

and classical methods of treatment to which of late years but few changes have been made. The patient is put in absolute rest in the dorsal position with the feet elevated. Vaginal or even interine injections of very hot water are administered. If this fail, one may pack the vagina with sterile gauze; the packing must be very tight, and be left in for 48 hours. If necessary, the bladder may be emptied by catheter. Vaginal packing has been sometimes replaced by temporary suture of the neck of the uterus. As packing is always painful, it may be replaced, according to Bouriaut of Geneva, by intrauterine injection of gelatine in two per cent. It is sufficient to inject ten to fifteen cc., and to repeat two to four if necessary. This method gives immediate results in hæmorrhage from uterine atony, and in that due to fibroma or fungous endometritis. I am not aware of the use of intrauterine applications of adrenaline, but judging from the value of this agent elsewhere, it might well be here employed with benefit.

Subcutaneous or intravenous injection of normal saline solution in large quantity help to make good the loss of blood, and to prevent the consequences of the rapid anæmia. We simply mention *en passant* the use of the so-called hæmostatics as ergot, hydrastis, digitalis, as well as local injections of antipyrine, which are only of use in mild grades of hæmorrhage, and not of sufficient value in the more serious forms. Such palliative operations as ligature of the uterine or utero-ovarian arteries may also be dismissed, since, if the patient can stand surgical intervention, we prefer curettage or hysterectomy. We willingly acknowledge, however, that in some very special cases this ligature method has given very good results.

When there is no cause for haste, when the life of the patient is not endangered, one must direct his attention to the cause of the hæmorrhage.

Two methods are at hand—one, conservative, consists in modification of the mucous membrane by cauterization or electrical treatment, the other, more radical and essentially surgical, consists in removing the mucous membrane by curettage. Here again we will not speak of the treatment of fibroma or cancer with hæmorrhage, as this would take us beyond the limits of our paper, but only try to state the precise therapeutic indications, and the different methods employed.

Firstly, several of the metrorrhagiæ we have mentioned disappear under simple treatment or no treatment at all. Such are most of the hæmorrhages of puberty or of the menopause. Rest and injections are usually sufficient, with general tonic treatment, hydrotherapy dry friction and massage. Continuance of these hæmorrhages indicates the use of electricity, curettage, or in old women even hysterectomy.

In acute metritis, small hæmorrhages disappear as soon as the acute stage is past.

Finally, hæmorrhages due to lesions in the ovaries or tubes disappear upon removal of the adnexa, unless there is an accompanying affection of the uterine mucous membrane.

It is chiefly in cases of chronic metritis that the choice lies between cauterization and electrical treatment. The list of uterine caustics is a very long one, of which only the more important will be mentioned. Creosote and glycerine, camphor, naphthol, tincture of iodine, silver nitrate, chloride of zinc in pencils or in one-tenth solution.

All these agents are applied to the interior of the uterus with or without preliminary dilatation. They are all open to the objection that their action may be either too feeble or too severe, and above all that they diffuse over the surface of the mucosa, the consequence of a too severe cauterization being stenosis of the uterus. All these products act by destruction of the mucosa. Electricity, on the contrary, acts either by stimulating the uterine contractility, the uterine muscle being a true vaso-motor apparatus, or by actual caustic destruction. The different electrical currents have been used for the former purpose, but it seems that the galvanic current gives better results than the Faradic, and above all than the magnetic. Static electricity is not to be recommended, because it favours congestion of the pelvic organs. The positive electrode is placed upon or inside the cervix, the negative upon the abdomen or both inside the uterus. (Bipolar method of Apostoli.) For a caustic action the galvano-caustic method is used, in which a chemical action is combined with an electrical one.

One electrode, the positive, being always placed in the uterus and the other upon the abdomen or in the uterus also, the respective indications for these methods seem precise enough. In old chronic metritis with small hæmorrhages but abundant leucorrhœa when the uterus is enlarged, slightly painful, the cervix ulcerated, one can with advantage use caustics, iodine in preference to chloride of zinc, which is considered to be too dangerous, especially in pencils.

On the contrary, uterine atony, with frequent and profuse hæmorrhage, as are observed in the early stage of chronic metritis, will benefit by galvanization or faradization. Surgical methods are curettage and hysterectomy. Curettage has very specific indications in decidual and fungous metritis. It is without doubt the method of choice, always giving the best result. There is no reason here to employ conservative methods incapable of giving the same result.

Vaginal hysterectomy is suitable when curettage has failed, or will always fail, as in angiomatous metritis, deciduoma malignum, and we

can add in any metritis of old women with abundant hæmorrhages, where there is no reason for saving the organ.

In closing, we would call attention to the fact that Quenu, in a case of angiomatous metritis in a young woman, satisfied himself by opening the uterus and dissecting away the mucous membrane, and obtained a perfect result.

THE PLACING OF PERINEAL SUTURES IN POSITION BEFORE THE LACERATION TAKES PLACE.

BY

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This short paper might more properly be called a further note on the immediate repair of laceration of the perineum, with special reference to placing the sutures in position before the laceration takes place, for the writer contributed a paper on this subject, being one of a symposium for the 1904 meeting of the American Gynæcological Society at Boston, which was based on an experience of three cases. Since then I have had one other case, and the result was so satisfactory that I felt impelled to share my good fortune with the members of this Society, leaving with them, however, the right to accept or reject it as they think best. Great progress has been made in lowering the death rate in childbirth, but septic infection still remains the greatest danger to which the lying-in woman is exposed. Practitioners are making fewer examinations, and are taking more care to disinfect their hands, but as perfection in eliminating *sources* of infection is almost impossible to reach, we must give more attention to lessening the *avenues* of infection. Two of the most important of these are laceration of the cervix, which a great many are in favour of repairing at once, as I understand has been done by Dr. Reddy for several years at the Women's Hospital in Montreal; and lacerations of the perineum, which are repaired immediately by many accoucheurs, but owing to poor light, poor assistance and other difficulties are so defectively done that only the skin is brought together, while the wound in the mucous membrane and muscle is left open to absorb from the culture media dammed back by the repair of the skin. More than once in the writer's experience, and many times in that of his friends, he has had to tear open the already united skin in order to obtain drainage.

That tears of the cervix vagina and perineum do form the avenues

for fatal absorption is evident from the condition of the lymphatics running up the side of the uterus, which receive lymph from these sources, and were found to be full of pus in the cases referred to. For the last fifteen years the writer has made a regular practice of putting in a stitch or two in every case in which even half an inch of the fourchet has been torn. The result has been that his patients have been almost entirely free from the slight rise of temperature on the second or third day, which it has been customary to attribute to the milk, but is probably due to a mild septic absorption through these slight lacerations. He is convinced that patients who have had these small lacerations of the perineum repaired have made better convalescences than those on whom it was not done. In the case of very considerable tears of the perineum, especially of those which extend through the sphincter into the bowel, the question of loss of function of the muscles, of the perineum and of the pelvic fascia is still more important. Every member of this Society knows that the separation of the levator ani and transversus perinei muscles disables a woman very considerably.

Even these few minutes of your time would not have been taken up in urging the importance of repairing all tears of the perineum had the writer not heard a member of this Society, with a large obstetric practice, maintain that it was better to leave lacerations of the perineum to heal themselves, and there may be others who share that opinion.

The writer admits that in some cases it is very difficult for the family doctor to repair these lacerations unaided; and that it would be better in such cases to send for an expert or for another practitioner. He should always have in his bag sterilized catgut and silkworm gut, some curved needles and a needle holder. The greatest difficulty consists in securing the divided ends of the levator ani muscles and pelvic fascia, which retract at once when torn, and without being brought together it is of little use to sew up the skin. To overcome this difficulty the writer has devised the following method:—

Just before the child's head comes down upon the perineum the patient is anæsthetized and brought across the bed with the feet held by a twisted sheet or leg holder. The perineum is sterilized with scap and brush and bichloride. Then with the large curved needle firmly held in the right hand, and the thumb of the left hand in the anus to guard the rectum and the left forefinger in the vagina, the needle is entered at the base of the lesser lip on the patient's left, and passed rapidly under the vagina and about two and a half inches above the fourchet, coming out at the corresponding point on the woman's right. A silkworm gut suture is threaded into it with the right hand

and the needle is withdrawn, followed by the stitch, the two ends of which are left hanging loosely with a hæmostat. A second one is passed in the same way an inch lower down, but taking in the muscles of the perineum, whether we think the tear is going to be a bad one or not. If the perineum is exceedingly rigid, and we expect that the tear may go through the sphincter, we can put in a third stitch, which would take in the sphincter and on each side of the middle line. Delivery can now go on naturally or artificially, but as soon as the placenta has been delivered the perineum is inspected under a good light and a stream of sterilized water, all clots being rubbed off with the finger, and the stitches are then tied from above downwards, when we will find that there is absolutely accurate coaptation of the separate parts.

The presence of the silk worm-gut stitches placed as stated, before the head comes through the perineum and hanging loosely attached by their ends to a hæmostat, does not interfere with the termination of labour in any way; not even if forceps are required. If by keeping the pains under control and the head well towards the symphysis there has happily been no laceration, no harm has been done by their having been introduced; you simply take off the forceps and draw them out. While if the perineum has been lacerated more or less, it is not only of great advantage to save time and trouble by having them already in, but still greater to have them exactly in the right place to bring the lacerated surface together just as they were before the delivery.

Be it remembered that the placing of the stitches and tying them takes much less time than I have taken to describe the proceedings, about two minutes for placing them and one minute for tying them.

Remember also that the writer is not advocating this for multiparæ at all, nor even for all primiparæ, but only for those in whom there is a reasonable expectation that there will be a tear. Some doctors have told me that they have never seen a tear of the perineum, and I believe them, but only because they do their obstetric work in a dark room under the bedclothes; and they properly belong to the dark ages. It surely is our duty to have a good light, and to inspect the perineum under a stream of water, before saying that there has been no laceration. After having repaired several hundred perineums secondarily by Emmett's, Tait's and other methods, and about fifty primarily by the old plan after the tear had happened, and four times by the new method, the writer can assure you that there is no comparison in the ease with which the last can be accomplished. And after a long, tedious and anxious labour it is such a comfort, one minute after the placenta has been delivered, to feel that one of the principal causes of puerperal septicæmia has been removed, and that our duty to that

woman who has trusted her life and future health to us has been fully performed.

Now, as to the objections which have been raised, none of them can be considered very serious. One critic quoted an old proverb: "We should never cross a bridge before we come to it." But there is another proverb: "An ounce of prevention is worth a pound of cure." Another critic said that it was adding more danger of infection introducing the needle two or three times. But is it? Every doctor sterilizes his hands, the perineum is sterilized with soap and brush and bichloride and the needle and threads are sterilized. The requisite anti-sepsis is, on the contrary, a great advantage, as otherwise the patient might not be so carefully cleansed. Another objection was that it would necessitate the administration of an anæsthetic; but this procedure is not advocated for multiparæ who have had their perineums lacerated years before, nor for women whose baby is born before the doctor can get to them, and consequently can do without an anæsthetic, but for primiparæ with a tight perineum who have been in labour for twenty-four hours, and are so exhausted that the pains no longer advance the head. In such cases most of us give an anæsthetic, apply the forceps and deliver the woman. It is while she is anæsthetized, and before applying the forceps, that we may take two minutes to apply this harmless procedure, which may save us many hours of trouble later on.

The last criticism was that once or twice in a life-time you will expect the perineum to tear, and yet it does not tear, and the stitches have been placed in position unnecessarily. This is the worst that can truly be said against it, and even then it only takes a second to pull them out and no harm done. But that has not happened to the writer; whenever he expected the perineum to tear it has torn, and a few times oftener, so that his only regret has been that this method was not known twenty years ago, when he had a large obstetric practice, as it would have saved him many laborious primary operations for the repair of the perineum. Only to-day, while writing this, a practitioner, who is recognized to have unusual ability, told him that he spent two hours and a half repairing a perineum immediately, which was torn by the slipping of the axis traction forceps.

The writer can vouch for the extreme ease and rapidity with which the tear can be closed by this method.

The writer feels safe in saying that every physician who has graduated during the last five years realizes the importance of the immediate closing of lacerations of the perineum in order to avoid infection. Some of them also realize the importance of bringing the separated fibre muscles and fascia together. But when it comes to

putting their knowledge into practice, the difficulties are sometimes very great. That these difficulties are real is evidenced by the paper of Dr. Henry C. Coe (gynæcologist to several large New York hospitals, and a well-known author), whose paper immediately followed the writer's at the Boston meeting of the American Gynæcological Society in May, who stated that the majority of primary operations failed to do any good, because the separated muscles and fascia had retracted, and were not included in the stitches. This could not happen if my simple procedure were employed.

ACUTE INTESTINAL OBSTRUCTION OCCURRING AFTER LABOUR CAUSED BY HÆMORRHAGIC CYST.

BY

T. P. SHAW, M.D.

Fortunately, intestinal obstruction is a rare complication of the puerperal state. Text-books on obstetrics do not mention it as a probable complication. Hall Davis reports a case of tubal pregnancy causing acute obstruction.

Cases of acute obstruction occurring after labour, due to various causes, are known; but we have failed to find any report of a case similar to the following:—Mrs. C., aged 23—Primipara:—Up to the time of becoming pregnant she had been healthy. During the earlier months of pregnancy she suffered to a very slight extent with the usual nausea and vomiting. About the seventh month, while on her way to Kingston, on board the boat, she was seized with a sharp pain in the abdomen, which subsided in about 24 hours without any treatment. Confinement commenced at 9 a.m. on the morning of the 15th September and terminated at noon, after a short, uneventful labour.

The puerperium proceeded normally until 10 p.m. on the fourth day. At that time, while patient was at stool, she was seized with a violent pain in the left side, at first midway between the lower border of the ribs and the left iliac crest; later it became located in the left iliac fossa. At the time of my first visit, which was about an hour after the onset of the pain, the patient was suffering intensely, and it took some time to relieve her with a quarter of a grain of morphia, administered hypodermically.

Upon examination it was found that there was great tenderness over the lower zone of the abdomen, more pronounced on the left side. A soft mass was felt in the median line about two inches below the level of the umbilicus, which at the time was thought to be the uterus. I might say here that the nurse told me that she had felt the uterus in the morning near the brim of the pelvis, and at the time of the opera-

tion her statement proved to be correct. It was very difficult to make a satisfactory examination by palpation on account of the pain and tenderness. At this time the pulse was 75 and the temperature 98.5°. The nurse was given instruction to repeat the morphine, if necessary, during the night. On the fifth day, at my morning visit, the nurse reported that she had had to repeat the morphine twice during the night, and the patient had vomited twice. Great pain was experienced on the slightest movement of the body. Abdomen was tympanitic; no flatus had been passed since the pain began the night before; pulse 90, temperature 101°. Instructions were given to pass a rectal tube and give an enema. At 4 p.m. of the same day the patient's condition was about the same. The enema given in the morning had been retained.

It became evident one had to deal with a case of acute intestinal obstruction, the cause of which, at the time, could not be determined. Dr. Springle saw the case with me about 10 p.m., and recommended the introduction of the rectal tube again in the hope that the obstruction was due to fecal impaction. Next morning (6th day) the condition of things had not improved. The pulse had by this time reached 120 and the temperature 102°. Absolutely nothing had been passed by the rectum, and when the rectal tube was withdrawn it was covered with bloody mucus.

It was decided to open the abdomen, and the patient was removed to the hospital.

The patient was admitted to the hospital with all the symptoms of exhaustion, with a pulse rate of 130, temperature 102° and respirations 22. She was prepared for operation at once. Ether was used for anaesthesia.

A thorough examination of the abdomen was made, eliciting no further facts than those already mentioned. The tumour was in the median line; there was no dullness in the right flank, but dullness was present in the left. The tumour was exceedingly tense, elastic, and easy to be mistaken for the uterus immediately after parturition. Considering the history of the case, and that her present condition demanded immediate interference, an exploratory incision was made through the left rectus muscle of the abdomen.

On incision, a dark blue tumour presented, very tense and as large as an ordinary adult head. The uterus was found compressed, very pale, and forced into the right side of the pelvic cavity. The tumour itself was found to be a huge blood cyst, unilocular, and of the left ovary; it was twisted on an extremely oedematous pedicle, which was composed of huge varicose veins and pulsating arteries. The pedicle itself was rather thicker than one's wrist. The tumour was delivered

through the incision, the pedicle untwisted, and a chain of ligatures of the heaviest of silk was applied. On account of the cedematous condition of the pedicle, it was thought advisable to apply catgut ligatures to each of the large vessels to supplement those of silk.

A large rectal tube was then passed through the rectum, and internally manipulated so as to reach the splenic flexure of the colon, in order to establish the fact that the intestine here was obstructed. I might mention that the weight of the tumour, its position in the pelvis, had pressed upon and obstructed the rectum. After the tumour was removed, this was confirmed by the flattened condition of the bowel from the promontory of the sacrum to three inches below. Its condition at the same time was inflammatory, and here probably was the point from which the bleeding occurred during the attempt to pass the tube before operation.

During the operation the patient collapsed, and manipulations had to be suspended to resuscitate her. She revived, however, and the wound was closed in the usual manner. A high rectal tube was introduced into the rectum, and a large quantity of salt solution injected by Dr. England, who was present at the time. Saline injections were also used beneath both breasts, and the patient was removed to bed.

Although exceedingly weak for many days, the patient continued to improve, though a femoral thrombosis occurred in the left leg, which somewhat impeded her recovery. Subsequently she was able to nurse her baby, and has since made an uneventful recovery.

CASE OF EXTENSIVE GUNSHOT INJURY AND UNUSUAL METHOD OF CLOSING A LARGE GRANULATING SURFACE.

BY

ARTHUR KENDALL, M.D., Cloverdale, B.C.

Patient, a tall, healthy athletic man eighteen years of age, while out shooting one Sunday in August, 1904, was standing on a fence, and in some way dropped his gun, which was a single-barreled 10-bore loaded with No. 3 shot, with the result that it was discharged at a very short distance away. The shot struck his right thigh on its anterior and inner aspect two inches above the knee, and tore out a huge piece of skin, sub-cutaneous tissue and adductor muscles over an area fourteen inches long and about three and a half inches in width, the shot ending its course by lodging in the testicles, scrotum, penis and lower part of the abdomen. In spite of the fact that two inches of the femoral artery was left pulsating in the wound, in addition to a great loss of muscular tissue and hæmorrhage, the young man walked home almost half a mile.

I saw the patient two hours after the occurrence of the accident. There was then some evidence of shock and considerable pain. In view of the fact that I had no assistance, and was working in an exceedingly dirty room literally black with flies, I did nothing more than clean out the wound as well as possible, and inserted a few stitches to prevent gaping of the wounds. I then sent the patient to the Royal Columbian Hospital in New Westminster.

On the following day, with the assistance of Dr. Drew, I operated on the patient, who was then suffering great pain. His pulse was rapid and feeble, temp. 101. The wounds had assumed a greenish black hue, and emitted a foul odour. So extensive was the laceration and gangrene that I found it necessary to remove both testicles, four inches of the cords, and do a complete amputation of the scrotum. I removed all the stitches from the leg, cut away as much of the gangrenous material as possible, and applied wet boric acid compresses. Owing to the condition of the patient, I did not deem it wise to explore the track of the shot which entered the abdomen, hoping from the upward course that the shot had merely lodged in the muscles.

The patient reacted to stimulation well, and the recovery was surprisingly speedy. At the end of four weeks the wounds caused by the operation on testicles and scrotum were healed. The wound on the leg, now covered with healthy granulating tissue, extended from three inches above the knee to the inner part of Poupart's ligament, and being from two to three and a half inches in width. So great was the loss of tissue that we had been unable to draw the edges of the wound any closer together.

At the end of the four weeks, everything being favourable, I decided to skin-graft, but, acting on the suggestion of Dr. Drew, I decided to do a different operation, which, I must confess, was somewhat experimental in character. I started by making an incision in the healthy skin down to the muscles and completely around the wound, the lines being roughly triangular in shape, fifteen inches long and four and a half inches wide at the broadest part. I then dissected up in one piece the whole granulating surface with the underlying scar tissue to the healthy muscle and removed the whole *en masse*. The next step was to dissect back the healthy skin from the underlying structures for a distance of from two to three inches, thus allowing the opposing edges of skin to be drawn together with very little tension. After making six small incisions for drainage, I sewed the wound up, using fifty-one silk worm gut sutures. After introducing gauze wicks through counter incisions, I put on a dry dressing.

One week later Dr. Drew reported that he had removed all the

stitches, and the wound healed by first intention, with the exception of one place, where a couple of sutures sloughed out and left a small granulating surface.

Two weeks after the operation the patient resumed his work of driving a team in a lumber camp.

At the present time, two months after the operation, the patient walks without any limp, there is no tenderness anywhere over the site of the wound, the skin has united loosely with the underlying structures, and there is absolutely no evidence of cicatricial contraction.

THE PRIVILEGES OF MEDICINE,

BY

JOHN MCCRAE, M.B., L.R.C.P., Lond.

Montreal.

Gentlemen:—I am here to-day to represent, in a sense, our Faculty, although that dignity has not long since fallen to me, in bidding you welcome; those of you who are in the upper years, welcome back to your labours and your successes, and those of you who have entered for the first time, to the roofs that will be to you in time your Alma Mater. I need not say that you are welcome, for you are a most important part of our college—you are, so to speak, the *raison d'être* of us all.

Since you have made choice of your profession, there will be no want of those who will urge upon you your responsibilities. Every lecture and every text-book will direct you to things that you must know, whether you choose to or not, and every day of your college life will lay upon you its duties. I have thought it well to speak, though briefly, of that other side which lies before you—not so ready to your hand, perhaps, as they will be later, but still most tangible and most satisfying—the privileges of the craft.

To-day you are initiated into a Four-way Lodge—with a door to every point of the compass—to a brotherhood that is more truly a fraternity of the heart than any other profession; to-day the traditions of that lodge became yours, and the rolls of honour that hang in those halls are the names of your brothers-at-arms. It is something to have been one of them. No nationality have they, for they are of every race and creed—from Æsculapius down to the alphabetically-lowest of yourselves; they have been trained in diverse schools of thought and practice, and the earliest and the latest of them have not much, it may seem, in common but this—that they have united at all times in the battle against disease and death.

Since I have adopted the simile of warfare, it may be remarked that the earlier recruits had put into their hands pikes and short swords, whereas you of to-day have to learn the use of most complicated, long-range rifles; and I may be pardoned if I carry the simile a step farther, and mention that we, with our long-range weapons, are not so well acquainted with the look of our enemies face to face as were our forefathers, who had to get close to them to kill. I mean that these days of theory are apt, at times, to take us too far away from our chief objective—the patient. I leave that! But one advantage of those times is the rapid interchange of ideas that daily occurs throughout the world. We are cursed with periodicals beyond number, but we are also blessed thereby; we are in daily contact with all the laboratories of the world, where world-moving discoveries are from time to time made, some over-seas, some at our doors, even in our midst, but all—all in the lodge. The wonderful advances that the last few months have seen in the discovery of the causative agents of many tropical diseases, results contributed to, in a high degree by the splendid labours of the army and navy surgeons who have been concerned in yellow fever investigation, backed by the generosity of the United States Government—results contributed to by many painstaking labourers among the plague-ridden Indies—by men who take their lives in their hands in the depths of Africa—all these advances are ours—ours in a very real and very proper sense. But all this is mere talk, if I do not bring to you what I want to make clear—viz., that each of us has a two-fold place—firstly, we are members of this or that college, this or that community; and, secondly, and most important, we are members of that greater republic of Medicine at large.

All of us on this continent are born to a good, keen enthusiasm in something—politics, creed, business, or something else. It is not hard for us to be enthusiastic over our college—it is harder for us to be liberal enough to others—and a well-educated physician or surgeon must have it thrust upon him, if he does not naturally absorb the fact, that his enthusiasm must stretch out beyond his own coasts. We are not in this matter the greatest sinners; but two wrongs never made a right. If your profession gives you enough time and money to travel, do so. Blessed is he who has wandered far enough afield to know that the practice of good and worthy medical craft is confined to no one land; it has seemed to me that the world taken together makes a fairly satisfactory total; each land has its hobby, its one or two departments in which it excels, and the added result of all is a fairly complete science. It has seemed to me that, in hospital equipments and technic and technical surgery, America has more to teach than she has to learn; London is replete with anatomy, and London students, what-

ever they do not know, appear to me to know their cases; Germany is an acknowledged leader in pathology and, in some ways, France in therapeutics. But the every-day ills are being treated, and well treated, in a thousand places from Moscow to San Francisco, and from Aberdeen to Valparaiso. If you will not take any one's word for it, go and see for yourself, and, having seen that there is no one Hub of the Medical Universe, in a spirit of broad admission of the virtues of others—and, if it may be, of recognition of our own weak points—let us sit down and be thankful. We will have proved our right to inscribe our names in the roll of the greater republic.

It may seem to you that, speaking to students, I am inverting things—putting the cart before the horse—when I speak of those advantages that are to befall you when you have got through the pitfalls and mires that seem to encompass you during your college course; it may seem to you that your entry into the lodge must yet lead you over a high stone wall whose top is plentifully bestrewn with broken bottles, so that one may not rest half way to take breath. Four years or the fraction of four years that you have yet to spend is a long time to take out of a man's life, if it were really taken out; but it is not. Man is, by nature, built to look forward; just as we always see, physically, what lies before us, so, mentally, we are ever looking to the future; hopefully, too, of that good time that we think is coming, though perhaps our strongest reason for so thinking is that it has not yet come. And this is quite as it should be; we are all looking to some sort of "starting point" at which we get our innings—while you are an undergraduate you look to the time when you will begin practice; when you have been a little while in practice, you look to the time when your practice will be as large as you wish; when that time comes, we shall look, perhaps, to a time when it will be smaller, if more select, and we shall have more time for other things—and one day we wake up, and, lo! we are old. Happy you and I if we wake up while we are still young. One of my friends, who has a kind of epigrammatic mind, once said: "There is a time in a man's life when he is about thirty, in a woman's life while she is yet younger in years—when he suddenly sees the horizon all around him." Let me explain a little what he meant. In our youth we see our early years, and all the road that we have come by—it stretches back to our birth, and we see it all—but ahead there is no limit; we think precisely as if we were immortal. One day, in later years, for the first time we realize that the road that was infinite, before us, has an ending; we see not only the beginnings behind us, but the end before us, and in that instant we realize that this is life; to-day as much as any day that ever will be; some of us see it earlier and some later, but I suppose we all come to it, and the

sooner the better. Have you caught the drift of all this preamble? It is just this, that your college days are, in their way, days just as full of the good things of life as any days will be, when you are more famous; I am not speaking merely of the transitory pleasures that make college days what they are, but also of the higher pleasures—those of a mind that is broadening, and learning, and getting more than a superficial knowledge of things, be they only anatomy and materia medica and such others. It may sound like preaching that I, not much older than yourselves, should dare to stand here and speak in such a lofty strain; if you can forgive that, and will think of the matter, you will see that these things are true. There is not one of you, even the youngest and the least experienced in life, who has not got to the time of life when he sees that some of the things he does are, and others are not, “worth the candle,” in vulgar phrase. Look over the past week in your own mind? Some things were worth the doing and some were not. It is good advice (I cannot live up to it very thoroughly, I promise you)—to try every day to get done some of those things that are worth while—it may be only full detail of study—and gradually you will realize that these days—in this month of November, 1904—are part of life, and that in them you have done some things that you are glad to look back upon.

If I have insisted upon the recognition of the duties as well as the privileges of to-day, I hope I have not given the impression that ideals for the future are to be despised; far to the contrary—they are to be cherished. And no man is the worse for happy forebodings, forethoughts of days of wealth or luxury. Remember, though, that the days have gone by when Naaman the Syrian came to Elisha to be healed of his leprosy, and brought with him ten talents of silver, six thousand pieces of gold, and ten changes of raiment; the Naaman of to-day brings only his leprosy, and we are constrained to say, like Karshish, the Arab physician, “Scalp disease confounds me crossing so with leprosy.” He leaves us the problem and takes away the changes of raiment, if he has them. But castles in Spain cost little to build and are very commodious to dwell in. I think we get nothing but good out of our ideals, though very many of them turn out vastly different from what we thought. We picture to ourselves lives of honour and place and wealth and fame; and, with good luck, most of us save from the wreck, at least honour, if not much more; and by the time we realize that our more soaring ambitions are not to be fulfilled, we are habituated to do without them. It was a comfortable saying of the palmistry expert, who said to one of his clients, “You will be poor until you are 45—and after that you will be used to it.” This, however, is pure pessimism; not only expecting but getting ready for the worst—

and it may be a great deal better than this. It is certain that the profession owes every one who works hard, and is articulate with his tongue and his pen, some degree of local fame; articulate not in order that one should blow ones own trumpet, but because the chances are that, in an ordinary practice of 20 years, many an extraordinary case comes; and to tell your brothers of it is not only your privilege but also your duty.

When you have finished your set labours of college days, you step out on a broader field, where at any turn you may be confronted by the severest problem in the world. This responsibility is in itself a privilege; henceforward no problem that presents itself to you is an old one—this particular equation is not in the book. In the simplest case of measles there are two unknown quantities, first the measles, second the patient. What, in the name of *Æsculapius*, is the known quantity of the equation? At most the known quantity is a little empiric knowledge of how measles generally run. I ask you from a mathematical standpoint, does that problem seem to you easy of solution, where you have three quantities, one partly known, two unknown? Is there not some ground for humility here? And if one begins with humility, there is Nature, eager at every hand to teach us things, so that the equation the next time we see it looks familiar! Men regard it as a privilege to work an untouched gold mine; the privilege is yours, if you can but see it in that light. The vein is inexhaustible; I never heard of any one who became so familiar with medicine that he dared hold it in contempt. Law is the work of men; creed (I did not say religion) is human in its texture; both are finite, finally knowable; as long as children are born in the world new variations of the problem of disease must arise. I can see no end to the problem, nor can I conceive of anyone becoming more than reasonably perfect in knowledge of it. Have I made it seem a hopeless task that we are all set upon? I hope not; it is not a task that we shall ever see the end of; it is not a fight that we can quite win. As *Cyrano de Bergerac* says, "It is useless, you say! I know it; but one does not fight only in the hope of winning; no, no! it is far finer to fight when there is no hope!" And so it finally becomes your privilege to lay down your weapons and die in that stricken field.

You will see that I am speaking in a strictly sentimental sense. I do so because it is the best sense. It may seem to you unpractical—not yielding a return in coin of the union—but it is in the highest sense practical. I am setting quite aside the monetary aspect of the profession, necessary as it is; whoever seeks our profession with only the monetary end in view does it a grievous wrong, and will, in all likelihood, have it paid back to him in disappointment. I have said

then that the very vastness of the science is a privilege; and to employ your life in such a way; that every day expands your mind, adds to your knowledge, makes you a completer man than you were the day before, is infinitely a greater thing than even the increases of legitimate trade. Have you noticed that all these things I have spoken of are profits which a man can cast up only in his mental ledger? It is true. About the successful physician there is not a great flourish of trumpets. The world may give its rewards in success, wealth, fame, social position, but the judgment of your success or failure is not to rest with the world; you decide that when you elect medicine. Your own mind, your own conscience is going to be your surest critic, and the love and respect of the poor of his community may be all the wordly honour that is given to the very noblest of our profession.

Have I made it at all evident, then, how high are the ideals that pervade our Four-way Lodge? On every member is laid an obligation to do and to leave undone, which is crystallized in the ethical rules of the profession, and to every member who walks truly by these is given the dignity of full knighthood in as great a kingdom as was King Arthur's. As long as you sit at this Round Table there must be no compromise with any of the ephemeral races that left their heads under one name to-day and another to-morrow. I am so narrow in my views that I cannot see that we have anything in common with the various sects and "cults" of healing that are so numerous in these days, and one of the privileges of our profession is that we need not dip our hand into the dish without such as these. Leave them alone. If it be that one of these sects be right and we wrong, then in time it will prevail and assert its place, despite all our opposition; if it is not right and true, it will need no push from us to send it finally crashing around its rotten foundations.

Finally, in the practice of our profession, you will have constant opportunities of doing good, some of which will be repaid to you in money, some in gratitude, and some apparently in neither. This is my largest, my most important paragraph; and, whatever you may think, there is no mawkish sentimentality about it. I take it that, when a man closes his books finally, this is the only balance that seems much to him. His property may be the most important to his heirs, his worldly dignity may seem the greatest to those upon whom it falls, but he sees things with other eyes. One of the most suggestive pictures in the world to me was painted by the late George Frederick Watts. It shows the draped body of a dead man, from whose brow has fallen a laurel wreath, and by whose side lie a mandolin, a book, a gauntlet—all signs of recent bodily and mental vigour. From the darkness that half enwraps the figure stands out the inscription, and this is the

kernel of the whole thing: "What I spent I had; what I saved I lost; what I gave I have." It will be in your power every day to store up for yourself treasure that will come back to you in the consciousness of duty well done, of kind acts performed; things that, having given away freely, you yet possess.

Someone has well remarked that your poor patients have one claim upon you that your rich ones have not—their poverty. If you acknowledge their claims upon you, it will, I believe, be your privilege to reap harvests of gratitude; and there is no keener pleasure I know of than to do some kindness that cannot be repaid in any other way. I have refrained from putting this upon a so-called religious basis, though it is perhaps the very essence of religion; but it has often seemed to me that, when at the Judgment Day those surprised faces look up and say, "Lord, when saw we Thee anhungered and fed Thee? or thirsty and gave Thee drink? a stranger and took Thee in, or naked and clothed Thee?" and there meets them that warrant-Royal of all charity, "Inasmuch as ye did it unto one of the least of these," among those faces will be many a general practitioner, many a man unknown to the scroll of fame, but whose name, nevertheless, hangs on the wall of our lodge! Is membership in this lodge no privilege?

The annual burlesque supplement of the *Münchener medizinische Wochenschrift* is always a source of joy to the discerning, and this year's number is just as amusing as its predecessors have been. The oftentimes pedantic ponderousness of the Teutonic scientific communication lends itself admirably to caricature, and that there are not wanting in the Fatherland unregenerate spirits quick to put the thumb of derision to the nose of scorn is attested by the contents of this *Scherznummer*. A pompous dissertation on general anæsthesia elucidates the author's discovery that the active narcotizing principle of ethyl chloride resides in its refrigerating powers, and after numerous costly experiments it was found that champagne formed the most satisfactory vehicle for administration. By spraying the bottles with ethyl chloride the active principle of cold was imparted to the contents and it was found that complete anæsthesia could be pleasantly produced by taking the anæsthetic by the mouth, though the after-effects, consisting in a tendency to somnolence and cephalalgia, were somewhat disagreeable. An admirably executed x-ray picture, consisting of an absolutely uniform rectangle of printer's ink, serves as a text for an enthusiastic description of a new type of fracture of a metacarpal bone, and the fonetik orthografists receive recognition in an essay on "Kiuretaszh of the serviks," in which such writers as Hauard Kelli and Pastöhr are quoted.

The most important contribution in point of length is a novelette

setting forth the fall from grace and subsequent expiation of Eosinophila, a beautiful but wayward leucocyte, remarkable for the charming delicacy of her nuclear network and the grace of her pseudopodia, who falls in love with a bold, bad epithelial cell in the cornea and thus acquires dangerously socialistic tendencies. An excursion to the pyramids (in the cortical zone) serves only to inflame her rebellious spirit, but she finally dies a glorious death in a pitched battle against the cohorts of the gonococcus, and having been expelled from the urethra in a drop of pus, her dead body may be seen beautifully stained red and blue in a mausoleum of balsam on a microscopic slide. Quotations from Faust throw a medical sidelight on many passages usually considered innocent of any esoteric meaning, and a newly-discovered fragment of the Odyssey describes in faultless hexameters the reward of Dakryokrates, a worthy Attic ophthalmologist. After he had cured the eye of Polyphemus, wounded by the sage Ulysses, Poseidon, in gratitude, commanded the west wind to bear his high-prowed ship to the land of the Ophthalmodonts, a paradise for oculists, where all the inhabitants have thirty-two eyes and only two teeth. In consequence they eat but little, and owing to the sharpness of their vision all but dentists acquire huge wealth. The king of the land had cataract in every eye, his lovely daughter was a sufferer from strabismus to an equal degree, and the subjects were correspondingly afflicted, so that the happy Dakryokrates had his work cut out for him.

Other original articles, society reports, book reviews, and advertisements in abundance hold the mirror up to medical nature, and in good-humored satire point out some of the foibles of our calling.—*Medical Record*.

Montreal Medical Journal.

A Monthly Record of the Progress of Medical and Surgical Science.

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No. 1.

THE PREVENTION OF TUBERCULOSIS.

The very full attendance at the annual meeting of the Montreal League for the Prevention of Tuberculosis on December 18th, testified to the continued interest that is being taken in this association and its work. While the heads of the different committees had nothing startling to offer, the reports submitted were distinctly indicative of steady advance in the work of, in the first place, familiarizing the community with the dangers of tuberculosis and the means of preventing its spread, and, in the second place, of taking steps to treat those already suffering from this disease. Regarding the latter, it cannot be said that the League has so far made any very active campaign. There has clearly been a doubt on the part of the leaders of the League as to what is the soundest course to pursue, and progress has, so far, been tentative.

To a very large extent we appreciate this cautious procedure. How is the most good to be done for sufferers from tuberculosis in a large city community? To establish sanatoria is costly, and, when established, these sanatoria cannot pretend to accommodate one-tenth of the cases which should be within them. We do not in the least mean to suggest that sanatoria are not of the greatest benefit to those entering within them; we have abundant proof that the very opposite is the case. The question, though, is not whether sanatoria are useful, but, given a limited amount of money afforded by the charitable and by the city, how can this money be expended for the greatest good of the greatest number. There is growing, undoubtedly, the conviction that this greatest good is to be obtained by the education and home treatment of patients in the city itself, by means of well-conducted dispensaries. Such dispensaries—first established, we believe, by Calmette of Lille—have become widely spread in France; there are no less than twelve such in the different districts of Paris. Within the last few weeks, after considerable difficulty in obtaining proper quarters, such a dispensary has been established by the League in Montreal, at 691 Dorchester Street, and here patients can attend at eleven o'clock, Mondays, Wednesdays and Fridays. Cases will be examined, treated and advised, and, where essential, help in the form of good food, etc., will be afforded, so far as the funds of the League permit. It is earnestly hoped that the hospital staffs and the practitioners of the city will help on the work by advising suitable cases to present themselves at this dispensary. In this way an active beginning has been made and we cordially wish the work all success. This, however, does not preclude us from hoping that within a short time there will be, in addition, established near the city a well equipped sanatorium to which cases can be sent which, for one or other reason, cannot be given home treatment.

Not the least interesting feature of the meeting was the speech by Dr. Williams, of Sherbrooke, in which he pointed out that, following the example of the Montréal League, an association had been established for Sherbrooke and the district of St. Francis. This association has been most active; it has copied Montreal by giving addresses by medical men in or in connection with the various churches; it has given lectures in the schools and in this and other ways the Catholic priesthood have most cordially co-operated, it has received the most active help from the Civic Board of Health and has established a system of visiting all declared and doubtful cases. The Eastern Townships are to be congratulated upon the spirit and energy thrown into this work.

THE DISPOSAL OF THE DEAD.

The Crematorium, limited, as we understand it, is a company which purchased and took over the crematorium from the Mount Royal Cemetery Company, and it has issued a pamphlet with the design of making popular the method of disposing of the dead by burning. The practice of earth burial is one of some antiquity and is bound up with those sentiments of religion which prevail in the western world. A sentiment which is so deeply seated will not be much influenced by anything so poor as reason or common sense, especially if the reasons are so poor as some of those which are put forward in this pamphlet. One example will serve: "At a meeting in St. Louis, in 1866, to consider cremation, Dr. J. M. Keller said: 'We believe the horrid practice of earth burial does more to propagate the germs of disease and death and to spread desolation and pestilence, than all man's ingenuity and ignorance in every other custom and habit.'" What Dr. J. M. Keller said in St. Louis forty years ago may not be of universal validity to-day, indeed we venture to deny that the statement has been true at any time. If this pamphlet be confined to the profession alone no great harm will be done, for we are accustomed to the grotesque absurdities which are contained in the publications of tradesmen who are touting for business. If it come into the hands of the public at large—and there is always that danger when a thing is committed to type—it will serve to retard rather than advance the practice of cremation. In the statutory declarations, of which there are five, no question is left unasked. Not every person who applies for the cremation of a body is a criminal, yet the regulations are framed as if that were the case. There is an undeniable charm in the splendid simplicity of the arrangements for disposing of the dead by burning behind Mount Royal. That is why we think it an error of judgment and of taste to obtrude even upon the profession the things associated with mortality which might better be left out of sight.

Last winter there was a short, sharp, and somewhat extensive epidemic of diarrhoea in Montreal. A few of the cases were then so severe as to have a fatal issue. During the last few weeks we hear from several sources that a like epidemic is again in our midst. Had this condition occurred in summer it would, perhaps, occasion little remark; occurring while we have severe winter weather, it is distinctly worthy of attention, and we would suggest that those encountering cases of the condition make careful notes regarding the mode of onset, the duration, any uncommon symptoms, the character of the stools, etc. Last year it was currently reported as being a condition of abdominal grippe,

and this year, so we are informed, some at least of the cases have begun as influenza and then passed on to the diarrhoeic condition. But this would not seem to be always the case, and it may be pointed out that little is known regarding the nature of so-called "abdominal grippe." In one fatal case, occurring during the epidemic last winter and coming to autopsy in the Royal Victoria Hospital there was found, not an enteritis, but an acute colitis, and from the organs in this case Dr. Klotz isolated a bacillus of the liquefaciens type which, inoculated into rabbits, produced a similar acute colitis. It may be debated whether this was truly an example of the epidemic disease or whether it was merely a sporadic case. We mention the fact to call attention to and to advise a fuller study of the condition.

The Alexandra Hospital for contagious diseases is again coming into prominence. After a period of inactivity extending over a year, the Committee has again appealed to the public with good result. At a meeting held early last month the subscriptions were increased to over sixty thousand dollars chiefly by the donation of twenty-five thousand dollars, which was made by Mr. James Ross. The work of building will not be undertaken till next spring and it will be a fully a year after that before the hospital will be habitable. In the meantime every effort will be made to have the hospital opened free from debt. The members of the profession can do much to help in the good cause by calling attention continually to the great need which exists in Montreal for adequate protection against contagious diseases.

Dr. H. Wolferstan Thomas, another late Governors' Fellow in Pathology, has been sent out by the Liverpool School of Tropical Medicine as head of an expedition to the Amazon, to study Yellow Fever. Dr. J. L. Todd, another McGill graduate, has been for several months in the Congo State, under the same body, studying Sleeping Sickness and other tropical diseases. He is now at Lake Tanyanika. Dr. Thomas, during the last year at Liverpool, had been in charge of the inoculation experiments in connection with the extensive studies upon Trypanosomiasis which are being undertaken there.

For the first time in the history of the Medico-Chirurgical Society the resident staff of the Hotel Dieu have sought its membership. Drs. Hamelin, Lebel, Lachance, Cousineau, Desmarais, Meunier, Marcil and Moreau will receive a hearty welcome from their *confrères* in the other hospitals and from the older members of the profession as well. The proceedings of the Society have been enriched during the past two

years by contributions from the French-speaking members, and the clinical material from the Hotel Dieu would prove a source of new interest.

The sum of \$6,500 has been secured for the Children's Memorial Hospital as the result of the bazaar which was held by the pupils of the Protestant schools, and a cheque for the amount was handed to the President Sir Melbourne Tait by Dean Evans, at a meeting which was held in the High School on December 10th. In addition to aiding the work of this charity, the bazaar was useful in encouraging in the young the habit of giving, a necessary habit in Montreal where so much charitable work is left to the initiative of the individual.

Dr. James Stewart has resumed his work after his long illness. His course was watched with anxious solicitude by his friends, that is by every member of the profession in Montreal, and by many elsewhere. His return of activity is a matter for congratulation to the profession, by whom he has been universally trusted, and to the public whom he has served so well.

Information has been received that Dr. Paul G. Woolley, late Governors' Fellow in Pathology of McGill University, who has been working in the Government Laboratories in the Philippines for the last two years, has been appointed Chief of the Serum Laboratory at Manila.

THE LATE DR. D. C. MACCALLUM.

In the December number of the MONTREAL MEDICAL JOURNAL, a somewhat hasty and cursory notice of the late Dr. MacCallum was given, with names and dates of the principal offices filled by the deceased gentleman during his long and busy career. To many of the Doctor's friends, however, and more particularly to those of his colleagues who had the pleasure of working with him, there seems to be room for a fuller notice of the man himself, as well as of the work he had done, not only as a practitioner, but as a teacher and a writer who, with tongue and pen, as in his beautiful and blameless life, had done his full share in maintaining the reputation and the good name of his college and his country.

Dr. MacCallum lived exactly four-score years and one day. There has been some confusion as to the date of his birth; but it is to the writer's knowledge, both from the Doctor's own statement and from official records, that he was born on November 12th, 1824. He had



THE LATE DUNCAN CAMPBELL MACCALLUM.

thus completed his 80th year on the 12th of last November, and his long and useful life ended peacefully on the following day.

Speaking first of his teaching or college career, he belonged to what might be called the middle or intermediate stage of the life of the Medical Faculty of McGill University. Beginning in 1854 as Demonstrator of Anatomy when the Faculty was twenty-five years old, he continued on through Medical Jurisprudence, Clinical Surgery and Clinical Medicine, ending with Midwifery and Diseases of Women and Children, and Director of the Montreal Maternity from 1886 to 1893, at which latter date he resigned his active connection with the Faculty and was appointed "Professor Emeritus," after he had been in harness twenty-nine years. The Faculty itself was then fifty-four years old.

During the same middle stage of the Faculty's life, he had for his fellow-workers such men as Campbell and Fenwick in surgery and clinical surgery; Bruncau and Scott in anatomy; Hall in midwifery; Howard and Ross in medicine and clinical medicine; Wright in materia medica; Craik and Girdwood in chemistry; Drake and Osler in physiology, with others that are still in the harness and therefore for the present must be nameless.

Among the names on the above list, that of Dr. MacCallum always had an honoured place, and deservedly so; for his work was always well and faithfully done, and with more than ordinary ability he always gave of the best that was in him.

In person, he was rather under than over the average size, with a frame well knit, perfectly proportioned, and endowed with strength and power of endurance to an uncommon degree. His features were regular, his complexion clear, and his expression indicative of his character; genial, modest, trustworthy and high-minded. In temper, tolerant, save when some "tale of injury called forth the indignant spirit of the north;" for the Northern Scottish blood of his kinsman "The MacCallum More" flowed freely in his veins, with all its compelling force.

As a teacher and lecturer, though somewhat slow of speech, he was nevertheless clear, methodical and forcible, the matter ever better than the manner, and hence his written lectures and addresses were more highly prized than those that were delivered extempore. Though all his spoken lectures and his demonstrations were excellent, it was more particularly as a writer of pure and perfect English that he came to be best known and appreciated. His little volume of Addresses, published in 1901, is a literary gem; and even apart from the excellence of its subject matter can scarcely fail, as it becomes better known, to take its place among Medical English Classics. It is free from all

verbosity and affectation of learning, and is full of evidences of rich thought, sound judgment, intellectual clearness and philosophic insight, expressed in language not unworthy of Addison, in its polished simplicity and purity of diction.

Apart from the Addresses and Lectures already alluded to, Dr. MacCallum was not a voluminous writer. He produced from time to time papers on Medical, Surgical and Obstetrical subjects in the local journals, some of which were copied into the British periodicals, notably the Journal of the London Obstetrical Society, and in all of them could readily be discerned his own admirable style.

Dr. MacCallum's merit as a writer was, no doubt, fostered by his experience as a co-editor of the *Montreal Medical Chronicle* with his friend Professor Wm. Wright. This journal was begun in 1853, and ended in 1859, and during its existence was recognized as a creditable representative of the medical journalism of that day.

Dr. MacCallum was an ideal practitioner, somewhat of the old school. Always faultlessly dressed, courteous in manner, sympathetic in feeling, and skilful in treatment, he was the idol of his patients, as well as their trusted friend.

Among his numerous *clientèle* were to be found many of the oldest French-Canadian families, and these were by no means the least appreciative of his patients. It was from one of these families that he had the good fortune to secure a wife, for Mrs. MacCallum was a daughter of the late Judge Guy of Montreal. Five children were the fruits of this happy marriage, four daughters and one son; and if it were permitted to us to speak of his domestic life, we should tell of a devoted husband and father, never so happy as in his family circle, surrounded by his wife and children. Three of his daughters are already married. One still lives with her mother, and the son promises to emulate the virtues and the successes of his father in the same noble profession.

Reviews and Notices of Books.

DISEASES OF THE NOSE, THROAT AND EAR, and their Accessory Cavities.

By SETH SCOTT BISHOP, M.D., D.C.L., LL.D. Third Edition. Illustrated with 94 Colored Lithographs and 230 Additional Illustrations. 564 Pages, Royal Octavo. Price, Extra Cloth, \$4.00, net; Sheep or Half-russia, \$5.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry St., Philadelphia.

The necessity of issuing a third edition of the present work in so short a time, must be gratifying to the author. In its present form, a partial rearrangement of the matter has taken place, and with consider-

able advantage. A new chapter upon diseases of the pharynx has been added, which includes anomalies, and new growths; malformations, and deformities; stenosis; dilatation; papilloma; cystoma; fibroma; lipoma; angioma; sarcoma; carcinoma.

The chapters devoted to diseases of the nose and throat are for the greater part well written, and up to the views of the present day; but it is surprising that the subject of malignant diseases of the larynx should receive such scant consideration, especially as regards surgical treatment, and in the face of the excellent results obtained by various English and Continental surgeons. That portion of the work devoted to diseases of the ear has been very ably dealt with, with the exception of diseases of the labyrinth, where it is noted that suppuration of this organ, which has within the past two years received marked attention, is dismissed in a very few words. The book generally is one which is to be commended for the use of students, and the general practitioner. The illustrations are numerous, the majority of which are well executed, but as much cannot be said of the coloured plates.

ENLARGEMENT OF THE PROSTATE; ITS TREATMENT AND RADICAL CURE,
by C. MANSELL MOULIN, M.D., Oxon., F.R.C.S., Senior Surgeon
and Lecturer on Surgery at the London Hospital, Member of the
Council of the Royal College of Surgeons; Examiner in Surgery
in the University of Cambridge; late Radcliffe Travelling Fellow;
Fellow of Pembroke College and Examiner in Surgery in the Uni-
versity of Oxford, and Hunterian Professor at the Royal College
of Surgeons. Third Edition. Published by H. K. Lewis, 136
Gower Street, W. C., London, 1904.

This well written and excellent monograph is really an exhaustive and critical study of a very important subject. All questions relating to the prostate from its embryological development and minute anatomy to the ætiology of its enlargement and the latest methods of radical treatment have been considered by one who, from a vast experience, is able to speak with authority. The author maintains that enlargement of the prostate is capable of being cured in the great majority of cases, without undue risk, if the patient's bladder and kidneys have not suffered irreparable injury from the consequences that follow the habitual or careless use of the catheter.

The chapters on diagnosis, methods of examination and general treatment are specially interesting. Much stress is laid upon the importance of prophylaxis as a means of deferring such complications as retention and cystitis, these, it is said, can generally be traced back directly to an attack of prostatic congestion due to indiscretion or carelessness. The dangers and consequences of routine catheterization are repeatedly

emphasized; to pass a catheter for the first time either to relieve retention or to draw off residual urine in a case of enlarged prostate is properly considered an important surgical proceeding demanding the preparation of the patient and as far as possible an aseptic technique. Circulatory disturbances at the neck of the bladder and congestion of the prostatic plexus are held accountable for many of the symptoms present in cases of enlarged prostates. The great benefit which so many patients have received from catheterization (Bottini) is largely explained by its effect in relieving this congestion. In suitable cases orchidectomy and vasectomy are advocated, and it is thought improve the circulation by influencing the nervous connexion which exists between the testes and the prostate. To obtain a satisfactory result in prostatectomy the obstructing part must be completely removed. The suprapubic method (McGill) is the operation advised, with or without added perineal drainage, as the case may seem to demand. If the urine is septic and the patient in extremis the operation may with advantage be carried out in two stages; first, a preliminary suprapubic cystotomy, and second, enucleation of the obstructing gland after the patient's general and local condition has improved. The volume contains a wealth of clinical experience and will be an invaluable guide to both physicians and surgeons in their management of these troublesome cases.

LIGHT ENERGY; ITS PHYSICS, PHYSIOLOGICAL ACTION, AND THERAPEUTIC APPLICATIONS, by MARGARET A. CLEAVES, M.D., Professor of Light Energy in the New York School of Physical Therapeutics; late Instructor in Electro-Therapeutics in the New York Post Graduate Medical School. 811 pp., with 55 illustrations in the text and a coloured Frontispiece (spectra). Rehman Company, New York and London, September 15, 1904. First Edition.

One arises from a perusal of this work with the impression that the talented authoress, despite the very evident gleaning and careful scrutiny of almost all the available literature, and her own eleven years' work, has missed the intangible "something" which was needed to take her work out of the class of "compendia," and to place it in the front rank of text-books. The work is divided into twenty-one chapters, the first and second dealing with the physics of light energy and radiant heat, and the third to seventh with the action of light energy on the organisms, from the elementary to the human; perhaps chapter four had been better headed "The action of light energy on the vegetable kingdom," instead of "vegetable organisms," and thus avoided an obvious misunderstanding in nomenclature—the subsequent chapters deal with sun baths and solaria, electric light baths, concentrated light

(solar, arc and incandescent), blue light, red light, ultra-violet rays (concentrated non-visible chemical frequencies), and as a corollary to the study of the invisible frequencies of the spectrum, four chapters are devoted to a study of vacuum tube discharges, the much discussed "N" rays of Blondlot, X, α and γ rays of radio-active substances (*i.e.*, radium, polonium, etc.) and the interesting phenomena of fluorescence and fluorescent stimulation. A chapter on the pernicious effects of solar radiations (insolation) and the pathological effects of electric light, fittingly closes a conscientiously compiled and thoroughly up-to-date treatise on this most fascinating and generally little understood subject; a book which may be regarded as completing, with "High Frequency Currents," by Chisholm Williams, and "Radio-Therapy," by Freund, a trilogy on the physics and therapeutics of radiant energy. No physician who pretends to keep abreast of the rapid advances in therapeutics, of the last three or four years especially, can afford not to have those books on his shelf within easy reach. The book is well gotten up, but one regrets the high gloss of the finished paper, and the fine lines of the font of type used—both are hard on the eyes.

R. W.

APPENDICITIS AND OTHER DISEASES ABOUT THE APPENDIX, by BAYARD HOLMES, B.S., M.D. D. Appleton & Company, New York, 1904, pp. 350.

This appears to be No. 2 of a series of Volumes on Surgical Emergencies. Appendicitis is a very much overwritten disease, and articles and monographs on this subject are becoming much less frequent on this continent. In Europe they have only recently appreciated the importance and frequency of this affection, and are rediscovering and reiterating all that has been said on this side of the Atlantic for the last ten or fifteen years.

This book is an interesting one, because it details the author's own experience and some extraordinary and many fatal cases. The subject is approached from the historical side first, and then obscure forms are noted. The symptomatology is then given, and the course of the disease and its complications with the differential diagnosis. The latter list is a very long one, and the old-bogie impaction of the fæces in the cæcum is again trotted out, though the author gives no personal experience on the subject, evidently never having seen a case. He says impaction of fæces in the cæcum is a very common disease in old women, an assertion which needs more proof than the mere dictum of the clinician.

The operative treatment is described at length and in stages. Most of Dr. Holmes' cases operated on in the interval remained in bed only a few days, and were out of the hospital in less than a week.

Local anæsthesia is recommended in patients suffering from nephritis, chronic alcoholism, obesity, old age, etc.

There are additional chapters on peritonitis, intussusception, perforated typhoid ulcer and carcinoma of the intestinal tract.

The book is of much interest, but too long for one subject, and to get at the wheat one has to wade through a good deal of chaff. Although only in a paper cover, it is well illustrated, and has many very good coloured plates. Some of the illustrations, however, are difficult to make out, and their usefulness is very doubtful.

Examination of the Urine: A Manual for Students and Practitioners.

By G. A. de Santos Saxe, M.D., Assistant Pathologist to the Columbus Hospital, New York. Philadelphia, New York, London.

W. B. Saunders & Company, Canadian Agents, J. A. Carveth & Co., Toronto. Price \$1.50.

This book appeals to one in many ways even before a proper appreciation of the contents is acquired. It is of convenient size—duodecimo, bound in flexible leather, and the print is large and distinct. While there is nothing original in the methods described, a very correct appreciation of the value of the various tests is shown, and the technique is clearly explained. The illustrations are mostly old and while many of them are excellent it would seem to the reviewer to have enhanced the value of the work if several of the old liners had been redrawn. The quantitative estimation of glucose by means of the polariscope is referred to, and a cut of the best known instrument inserted, but the reader is left to discover for himself how to use it. Perhaps the author's expressed belief, that it is so costly as to be beyond the range of the practitioner exonerates him from blame for the omission, but, if so, why waste a whole page with an illustration? A very lucid account is given of cryoscopy and we think a just estimation of its present value in diagnosis. "At most the method may be employed now as a corroborative test when other means of determining the functional value of the kidneys are also used for control purposes." Altogether the book is a good one, and compares favourably with most of the standard text-books, whose great drawback to the student is that they contain too much.

PRACTICAL THERAPEUTICS. Hobart Amroy Hare. Lea Bros. & Co., 1904. Tenth Edition.

The opening chapter on General Therapeutical Considerations is written in a matter of fact style and the subjects are treated from a common-sense stand-point. It is practically free from dogmatic assertions, recognizing empiricism, only when the evidence is incontrover-

tible. From its general breadth of grasp the chapter will be valuable to the student, furnishing him as it does with a comprehensive view of the scope of the subject.

From the small amount of space devoted to the consideration of drugs it is evident that there is no padding in this part of the work; and although something has undoubtedly been sacrificed to brevity, this is largely neutralized by the discussion of the employment of drugs in the chapter which is headed Diseases. Were it not that the book is designed to fulfil an educational function, it is questionable whether the omission of quite a number of the drugs would at all impair its value.

The chapter on Remedial Measures other than Drugs is practical and well up to-date; and the data given in feeding the sick are useful.

The practice of recommending certain proprietary articles, to the exclusion of others which may be equally good, which obtains to some extent in the work is open to objection, and is liable to be severely criticized in certain quarters. As an example of the book-makers art the work is a decided success, print and cuts both being very clear. It forms a handsome volume which will be an addition to any library.

A TEXT-BOOK OF CLINICAL DIAGNOSIS, by Laboratory Methods, for the use of Students, Practitioners and Laboratory Workers. By L. Napoleon Boston, A.M., M.D., Associate in Medicine and Director of the Clinical Laboratories of the Medico-Chirurgical College, Philadelphia. Octavo volume of 547 pages, with 320 illustrations, many of them in colors. Philadelphia, New York, London. W. B. Saunders & Co., 1904. Cloth, \$4.00 net. Sheep or Half Morocco, \$5.00 net. Canadian Agents, J. A. Carveth & Co., Ltd., 434 Yonge St., Toronto.

Dr. Boston has succeeded in compiling a most useful work on Clinical Diagnosis, useful alike to the student and practitioner. Two features of the work especially commend themselves. (1) The directions are given minutely for each procedure, without taking too much knowledge for granted, on the part of the student. (2) The contents and modes of preparation of the various reagents used, are given in detail. Some of the author's own methods of performing a few of the commoner tests seem good, but perhaps when a student has mastered one way, he would do well to adhere to it, unless the newer has a decided advantage. The volume is well illustrated. The plates are good and give a correct and not exaggerated idea of the conditions represented. The work is thorough and deals with the newer as well as the older tests and should prove of great value to anyone interested in the clinical laboratory methods.

MEDICAL ELECTRICITY, a Handbook for Students and Practitioners, by H. LEWIS JONES, M.A., M.D. Fourth edition. London, H. K. Lewis, 136 Gower Street, 1904.

Medical electricity, by which is meant electricity employed for medical purposes, has assumed so much importance that a new book upon the subject is always welcome. The present book by Dr. Lewis Jones opens with a pleasant introduction in which not even John Wesley—who describes himself as a lover of mankind and of common sense—is forgotten. The volume contains a description of the various pieces of apparatus employed in the production and conveyance of electricity, and adequate mention is made of the forms of energy so recently discovered by Röntgen, Becquerel, Curie and Rutherford. The book is a physicians' book. Cases are freely cited, and the application of electricity for therapeutic purposes is fully dealt with. No practitioner of medicine can afford to remain in ignorance of the value of electricity and its allied forms of energy in the treatment of diseased conditions. This book of Dr. Lewis Jones will prove to be a safe guide.

HAND-BOOK OF THE ANATOMY AND DISEASES OF THE EYE AND EAR.

By D. B. ST. JOHN ROOSA, M.D., LL.D., Professor of Diseases of the Eye and Ear in the New York Post-graduate Medical School, and A. EDWARD DAVIS, A.M., M.D., Professor of Diseases of the Eye in the New York Post-graduate Medical School. 300 Pages, Square, 12 mo., \$1.00, net. F. A. Davis Company, 1914-16 Cherry Street, Philadelphia, Pa.

This little volume contains in the briefest possible form, the outlines of anatomy and methods of examination, operations on, and diseases of both eye and ear, and is a work of art in the matter of condensation; indeed one might search in vain among the many handy volumes in the special literature of the present day, for one containing so much in so small a compass. Nevertheless, the work is one which may safely be recommended to any student of medicine, working for a pass examination. It is full enough for this purpose, and is written in an easy genial style that will commend itself to any reader as a guide in practice.

SAUNDERS' MEDICAL HAND-ATLASES: General Pathologic History, by Hermann Dürck, Munich, edited by LUDVIG HEKTOEN, M.D., with 176 coloured illustrations on 80 plates and 36 figures in black and colours. Price, \$5. Canadian agents, J. A. Carveth & Co., Toronto.

The merit of this series is in the concise text and striking illustration. The books are a reproduction in English of the Lehmann Medicinische Handatlasen and contain the original plates. The plates are done by

Reichold, of Munich, with wonderful care and skill. The present volume deals with general pathological histology and is entirely worthy of its place in the series. It is a work of art.

SAUNDERS' QUESTION COMPENDS: Essentials of Nervous Diseases and Insanity, by JOHN C. SHAW, M.D. Fourth edition revised by Smith Ely Jelliffe, M.D.

It is not essential for a student to know much about Nervous Diseases, but what is essential is contained in this little book of two hundred pages for a dollar. Dr. Jelliffe is editor of the *Medical News*, and has done his work with a practised hand.

A TEXT-BOOK OF HISTOLOGY, by FREDERICK R. BAILEY, A.M., M.D. Columbia University. William Wood and Company, New York.

The illustrations are of rare beauty. They are at once accurate and pictorial. Many of them are from fresh drawings. The publishers have produced them worthily upon suitable paper in suitable binding. The various processes employed in histology are adequately described. The book is a safe guide and a good companion.

Medical News.

MONTREAL LEAGUE FOR THE PREVENTION OF TUBERCULOSIS: ANNUAL REPORT.

The work of the League for the Prevention of Tuberculosis spreads now over a period of eighteen months, and in presenting this report, we do so hoping that it may increase your interest in the subject, and draw your attention to the efforts of the League.

An office was first opened at 11 Bleury Street, but on July 1st, 1904, it was moved to the present location, 691 Dorchester Street. On June 1st, 1903, the first reports of cases of consumption were received, and since that time these have been coming in more or less regularly, although the number reported has been in no way proportionate to the cases of consumption existing in the city. The object of having these cases reported was that education and instruction might be given to those suffering that they might by proper care take the most sanitary means of benefiting themselves and of preventing any danger to those with whom they came in contact. In pursuance of this work the patients have received verbal instructions relative to the proper care of themselves, have been given sanitary cuspidors to aid them in following the instructions, and also interesting and instructive literature, that they might become somewhat acquainted with the subject of tuberculosis and of the movement that is being made to overcome it.

In nearly all cases these have all been gratefully received, and the manner in which the great majority have endeavoured to follow the instructions has been most encouraging, and cannot fail to produce good results. The benefits, however, will only be manifest after years of work.

Whenever patients have required assistance we have endeavoured both to interest others in their behalf, and also to supply what our limited means afforded. In a great many cases this has been necessary, as the long illness of many a bread-winner has reduced the family to destitution. Poverty doubly increases consumption, for when proper sustenance becomes curtailed, the resistance to infection becomes weaker; so among the poorer families, tuberculosis, in one member endangers the others by direct contact, and by lessening the resistance to disease on account of forced privation.

The greatest difficulty encountered in the work is from the absence of places of refuge for the sick. There being no free sanatorium available for the early and hopeful cases, these are forced to remain in their homes, thus losing very often their only chance of recovery, and becoming at the same time another dangerous source of spreading the disease. Since they have no place to go to, it has been our endeavour to help them in their homes, and to do as much as possible to prevent them from becoming a danger to others. The same lack of accommodation is found for those so far advanced as to be incurable, and our heaviest item of expense has been to find homes for these.

In carrying on the work of supervision of the cases, the chief aim is to stamp out the disease, and the handling of the cases has been with the idea of obtaining the greatest benefit to the community at large, to the families of those afflicted, and to the patients themselves. When the patients belong to other countries or cities, or when they are separated from their relatives, an effort is made to transport them to their homes.

The advanced cases, when destitute and neglected, are sent to the Home for Incurables. When the cases are incipient and curable, an effort is made to send them to some country place for recovery, but lack of finances has sadly crippled us in this most important phase of the work.

Our inspector, for whose services we are indebted to the city, devotes his time principally to visiting the cases at their homes, and to disinfecting. The visits are for the purpose of supplying cuspidors and literature, giving verbal instruction, and collecting any information that may be necessary. We thus keep in touch with the cases. The disinfection of houses is done not only when cases that have been reported to us have died or been removed, but the record of deaths from

tuberculosis is obtained from the Health Department of the city, and as far as possible these houses are also disinfected.

A striking fact investigated from the statistics of death obtained from the city shows the pressing need of precaution on the part of the sick, and of a strict disinfection of affected houses. During 1903 there were 248 deaths of children under five years of age from meningitis in Montreal. Fully 90 per cent. of these were tubercular in origin. Inquiry at their homes almost always reveals the fact that an adult suffering from consumption has been living in the house. In many cases the death in the adult occurred before the birth of the child who was so early stricken with disease. If the proper precautions were taken, so that the germs of disease would be destroyed, the great infant mortality would be greatly lessened.

BRONCHITIS.

During the eighteen months there have been 300 cases reported. These were divided as follows:—males, 151; females, 149.

Age.—The youngest patient was five years, and the oldest seventy. Of 284 patients whose ages were given, 176 were between the ages of sixteen and thirty-five years, thus leaving only 108 scattered over the other five decades of life. The age of the average patient was thirty years and a half. Of the 300 cases, we have already received word of the death of 136. Some patients have been sent away, and all traces of others have been lost, so that the actual number of deaths would be much greater than this.

On investigating the details of 500 cases of deaths from consumption in Montreal, we found that the average duration of sickness was given as nine months. From statistics of 80 deaths of our own reported cases, the average duration of illness was over fifteen months. The longer period of life of the League patients was probably due in a great part to the character of the patients themselves, as well as to the care they were taught to exercise. There are two causes for this rapid fatal ending: First, because the disease is insidious, and patients do not seek medical advice until the last stages are reached, and, second, because of the destructive force of the disease among the needy.

Of the 136 deaths, 85 were between the ages of sixteen and thirty-six, the average age being 31.5 years, and this bears out the results shown by the city statistics of deaths, for during 1903 there were 642 deaths from consumption in Montreal, and the average age of these was just thirty years.

During the eighteen months, 20 cases have been transported to their native places; 43 have been sent to the Home for Incurables, and a number have been sent to the country for various periods. Twenty

have been reported cured, or so greatly improved as to need no further attention.

Part of this work has been done at the expense of the League and part through outside resources. In all, fifty patients have received financial assistance direct from the League, including coal, food, railway fare, board, rent, etc., and others have received assistance in kind. We have now about a hundred patients on our active list.

The inspector has made 1,667 visits to the different cases; he has distributed about 9,000 cuspidors, and a large quantity of pamphlets; he has disinfected 500 houses (this since February 15th), and distributed 3,000 wall-cards among 326 public and private institutions and factories, where they are conspicuously posted for the instruction of inmates.

ARMSTRONG vs. BRUCE.

This was an action brought by Charles Armstrong, of Brampton, against Dr. H. A. Bruce, for burns received from a hot water bag during an operation. The case was tried before Mr. Justice Meredith.

The facts of the case, as reported in the *Canada Lancel*, are briefly as follows:—Dr. Bruce was called to Brampton by Dr. Lawson, on November 23, 1903, to see Mr. Armstrong who was suffering from acute Intestinal Obstruction.

A room in Armstrong's house had been prepared that morning for the operation by a trained nurse, a graduate from Galt Hospital, engaged by Dr. Lawson, acting for Armstrong. Dr. Bruce took with him a Kelly pad, which can be filled with hot water instead of air and said to the nurse "this is an improvement on the old Kelly pad, as it can be filled with hot water as well as with air and serves to keep the patient warm during the operation, obviating the necessity for hot water bottles. Fill it just as you would an ordinary hot water bottle." The nurse took it and had it filled with boiling water and placed it under the patient. While this was going on, Dr. Bruce was washing and disinfecting his hands and placing his instruments, sutures, etc. The operation was proceeded with and the obstruction was found due to a knuckle of bowel being strangulated in the internal abdominal ring and adherent there. This was separated with some difficulty and withdrawn, when a small portion of bowel—about the size of a five-cent piece—was found to be gangrenous. This was turned in and sewn over with Lembert sutures, so that it might be thrown off into the gut.

The patient made a good recovery from the operation, but the next day he was found to have received superficial burns across the back and thighs. These were painful but not severe and were healed at the end of seven weeks when he was able to be up and about the house. Altogether he was confined to the house about ten weeks.

When Dr. Bruce's account was sent later, Armstrong declined to pay it, stating that he had been burned and put to extra expense with nursing, and therefore requesting that the account be reduced. Dr. Bruce replied that he was not in any way responsible for the burns and therefore could not on their account reduce the bill. As no payment was made at the end of six months, after several requests, Dr. Bruce sued him for \$100, amount of his account, and a week later Armstrong sued Dr. Bruce for \$5,000 on the ground that the operation was unnecessary, and that the burning resulted from carelessness of the defendant.

The following is the text of the judgment: The plaintiff sustained a very painful injury and one which has caused him some loss. These facts do not necessarily entitle him to relief.

In order to have damages in this action he must satisfy the Court that the defendant has been guilty of some actionable negligence. The defendant is a skilled gentleman, a gentleman of the medical profession, and what would in an ordinary individual be but mere negligence would in his case, no doubt, be gross negligence. Had he done that which the nurse testifies he did, it would in my judgment, have been gross negligence. Whether I would be obliged to say that the injury which the plaintiff sustained was the natural effect of that negligence is another question and one which I need not determine. What I have now to find is whether the plaintiff has affirmatively shown that there was negligence on the part of the defendant occasioning the injury of which he complains.

I am unable to find upon the evidence that the nurse's statement is accurate. She is, I think, quite mistaken as to the direction proceeding from the defendant in regard to the filling of the pad. I am satisfied that she has confused that which he said in regard to sterilizing his instruments, with that which he said in regard to filling the pad. I have no manner of doubt that if the doctor had said to any experienced nurse that she was to fill that pad with boiling water it would at once have struck her as an extraordinary thing, and one calling for some explanation. Nothing of that sort took place. It was a thing that could not have been done by Dr. Bruce, unless through a slip of the tongue. He never meant that she should do that which she did. So that the probabilities are altogether against the story of the nurse. And the direct testimony very greatly preponderates in favor of the defendant. We have Dr. Bruce's own statement, which is worthy of at least as much credence as that of the nurse. No doubt every one is naturally prejudiced in his own favor in a case of this kind, and Dr. Bruce's action in saving himself against a charge of negligence is to be to some extent affected by his interest. On the other hand, the

nurse is saving herself from a charge of negligence, and probably an action for the recovery of damages. They stand upon an equal footing as far as that is concerned. Then there is the testimony of the other two medical gentleman, who say that the nurse is mistaken. Upon the whole I find that the direction to fill the pad with boiling water was not given but the direction was given to fill it as if it were a hot water bottle, and if that be so, the plaintiff's case seems to me to fall to the ground. I cannot find any negligence in Dr. Bruce having under the circumstances assumed that the nurse would perform her duties properly. I cannot think that upon this branch of the case anything like a case is made out for the plaintiff. It is not contended that liability arose by reason of any relationship of master and servant having existed between the defendant and the nurse.

Dr. Bruce's claim was allowed and Armstrong's case was dismissed.

CORPORATION OF MCGILL UNIVERSITY.

At a meeting of the Corporation of McGill University held on the 14th December, the honorary degree of Doctor of Laws was granted to His Excellency Earl Grey, Governor-General of Canada, to be conferred at a special convocation at the earliest convenience of His Excellency.

It was decided that in future diplomas issued by McGill should be signed only by the chancellor or chairman of the board of governors, the principal or vice-principal, the dean of the faculty in which the student graduates, and the registrar of the university.

Hitherto diplomas were signed by the principal, vice-principal, dean of the faculty and all the professors in the faculty from which the student graduated. The reasons put forward for the change are as follows:—In some of the faculties the present diploma is now too small to admit of all the members signing in the space provided.

It is almost impossible to have all the signatures required owing to the absence of professors at the time of signing.

The difficulty of obtaining the required signatures is more pronounced in the case of students who graduate at other than the regular time, such for instance as double-course students in the faculties of arts and medicine. The difficulty is also seen in getting so many diplomas signed by such a large number in the short time that elapses between the meeting of corporation at which the degrees are granted and the date of convocation.

The present conditions are different from those which existed some years ago, in consequence of the increase in the number of graduates and also in the size of the faculties.

The present diploma is inartistic, too large to be conveniently framed, handled or transmitted by mail, and generally unsuitable.

NOTRE DAME HOSPITAL.

The annual meeting of the Notre Dame Hospital was held on the 14th December, 1904. The number of patients admitted to the hospital during the year ending June 30, 1904, was 2,226, of whom 1,313 were men and 913 women; 2,109 were Roman Catholics and 117 Protestants; 1,851 Canadians and 375 from foreign nations. Of these, 2,226 patients, 1,919 were discharged cured or improved, 166 left the hospital unimproved or recognized incurables, and 156 died at the hospital. The average stay of each patient in the hospital was 18 days.

In the outdoor services, 20,458 consultations were given; in the pharmacy, 26,000 prescriptions were filled up. The ambulances were called 1,437 times.

Each patient costs the hospital \$1.09 a day. The total expense reached \$43,824.63; the total receipts \$41,742.05, leaving a deficit of \$2,100.58.

The contagious diseases section of the new hospital is well underway and will be ready for occupation in the spring. The main new hospital will face Lafontaine Park and work is already begun for the erection of the power house. The ground has been bought by Mr. Rodolphe Forget at the price of \$31,000 and given to the hospital. Mr. Forget is the president of the subscription committee, and a board of patronage has recently been organized, under the presidency of Mgr. Bruchesi.

The new hospital will have 200 beds, and will be modern in every respect. The plans have been prepared by Marchand and Haskell, of Montreal and New York, and the building fund is to be started im-

THE WESTERN (GENERAL) HOSPITAL.

Report for month ending 30th November, 1904:—Outdoor department: There were 543 consultations during the month, 232 medical, 63 surgical, 77 gynæcological, 53 eye and ear, 58 nose and throat, 22 skin, 38 genito-urinary. Indoor department. There were 44 patients admitted during the month, and 40 discharged; 7 medical, 29 surgical, 8 gynæcological, 3 died.

ROYAL VICTORIA HOSPITAL.

Monthly report for November:—Patients admitted during month, 245; discharged, 229; died, 11; medical, 82; surgical, 104; ophthalmological, 20; gynæcological, 24; laryngological, 15. Outdoor: medical, 764; surgical, 407; ophthalmological, 467; gynæcological, 76; laryngological, 374; total, 2,088. Ambulance calls, 63.

MONTREAL GENERAL HOSPITAL.

In the Montreal General Hospital during the month of November

255 patients were admitted. 232 were discharged and deaths numbered 14. The ambulance responded to 147 calls. In the out-door there were 3,343 consultations.

The following correspondence appears in the *Canadian Journal of Medicine and Surgery*:—

Havergal College, 354 Jarvis Street.
Toronto, October 24th, 1904.

Dr. MacCallum, 13 Bloor Street W., Toronto.

Dear Sir:—Mr. — has asked that his daughter, —, may be under your treatment twice a week for some time. We can, I think, arrange this, subject to the usual condition that a discount of ten per cent. is deducted by the College off fees charged to the pupils.

Faithfully yours,

EDITH A. NAINBY.

Toronto, October 31st, 1904.

Dear Madame:—I have delayed answering your note *re* Miss —, and what you term the usual condition.

I have never attended patients under any such condition. Will you be so good as to give me the names of some professional men who have attended the pupils of Havergal Hall under this condition, so that I may talk the matter over with them.

Yours truly,

Miss Edith A. Nainby,

JAMES MACCALLUM.

Havergal Hall, Jarvis Street, City.

Havergal College, 350 Jarvis Street.

Toronto, November 1st, 1904.

Dr. MacCallum, 13 Bloor Street W., Toronto.

Dear Sir:—Your letter of the 31st ult. has been entered at the office. As Miss — is the only pupil who will attend you from the College, your name will not be entered on the Staff of Specialists in connection with the College, and, therefore, the question of discount does not apply to your case.

Faithfully yours,

S. S. HENDERSON,

Bursar.

Toronto, November 4th, 1904.

S. S. Henderson, Esq., Bursar of Havergal Hall.

Dear Sir:—Your note of November 1st received. Let me point out that it is a question not of discount to the pupil, but of commission demanded by Havergal College from physicians because the patient happens to be a pupil in that school.

No other school in Toronto—and I have had patients from them all—has made such a proposal. Of course, you inform the parents of your pupils that in case of illness the pupil will be sent to Dr. A—, because he gives Havergal College a commission, and that you do not recommend Dr. B—, because he does not give a commission.

No reputable physician will so far forget himself as to receive or give a commission, or employ runners or touts, even in the guise of the authorities of Havergal College.

I would have preferred to talk the matter over quietly with the physicians who have given commissions to the College, but your failure to give me their names forces me to make this matter public, and it now becomes my unpleasant duty to bring to the attention of the profession and of the College of Physicians and Surgeons of Ontario the fact that such unprofessional and reprehensible practices exist in connection with Havergal College and its staff of specialists.

Truly yours,

JAMES MACCALLUM.

The Shefford County Medical Association held a meeting at Granby on the 20th November with Dr. Cowley, President, in the chair. Dr. Cowley delivered an address in the course of which he urged on the young practitioners the necessity on their part of hard work, close observation and unceasing perseverance if they wished to become useful members of the profession. He also dwelt upon the importance of the members, individually as well as an association, taking a hand in the fight against consumption, and mentioned the marked prevalence of the disease in the County of Shefford. The association passed a strong resolution in favour of the government establishing in Canada an institute for the manufacture of antitoxin serum, so as to reduce the cost of these important remedies. The association further expressed its opinion that parliament should enact legislation to insure the publication on the label of each bottle of patent medicine the name and exact quantity of each ingredient it contains.

At the meeting of the Board of Governors on December 3rd, the contracts were let for the erection of an addition to the Toronto Western Hospital, 35 feet by 50 feet, and three storeys in height. This addition will give accommodation for thirty-six patients and will be ready in about three months.

A medical association has been formed at Port Arthur under the title of The Thunder Bay Medical Association. The following are the officers:—President, Dr. G. W. Brown; Vice-President, Dr. W. W. Birdsall; Secretary, Dr. H. E. Paul; Treasurer, Dr. J. M. McGrady.

The new general hospital at Smiths Falls is just completed and is now open to receive patients.

Dr. Henry Pigeon, of Peterboro, died suddenly on December 7th, in the 65th year of his age.

Dr. Thomas H. Cooper, of Melbourne, died from tuberculosis on November 1st, 1904, at the age of 44 years.

Dr. William MacGillivray, Toronto University, 1900, died in Pipestone, Minn., on the 28th of November, 1904. The cause of death was blood poisoning.

Retrospect of Current Literature.

SURGERY.

UNDER THE CHARGE OF GEORGE E. ARMSTRONG.

CHARLES H. MAYO, A.M., M.D. "Thyroidectomy for Exophthalmic Goitre Based Upon Forty Operative Cases." *Medical Record*, November 5, 1904.

Removal by extirpation is preferred to operation upon the cervical sympathetic the latter having a considerable mortality and the same disagreeable symptoms which often follow extirpation. In ten cases the X-rays were used and, though not claimed as cured, they have certainly been markedly benefited in general nervousness, tumor of the muscles, tachycardia, and lastly exophthalmos. It would seem that we have here a valuable therapeutic agent for the preparatory treatment of those cases of exophthalmic goitre whose general condition is so serious as to preclude operation for the time being. The anæsthetics have been cocaine, chloroform, and ether, preceded twenty minutes by one sixth grain of morphine hypodermically. Cocaine was chosen for some of the worst types of nervous cases, especially with a rapidly fluctuating pulse, or an irregular one. No difference was seen in the character or degree of shock or thyroidism in local or general anæsthesia, but ether is preferred. The Kocher collar incision is used and a complete exposure of the gland made. One half of the gland and possibly the isthmus is removed as in these cases there is usually very little capsule and enucleation is out of the question. What can be left of the posterior capsule is saved, especially on the right side as an extra safeguard against injury to the recurrent laryngeal nerve. Thyroidism of some degree was common, but it is regarded as being due, not to handling of the tumour and so forcing secretion into the veins, for if so, it would be equivalent to hypodermic injection into a vein with immediate effect, when in reality

it comes after some hours, but is due to absorption of the wound serum with some thyroid secretion in suspension. For this reason exophthalmic wounds are drained as freely as septic processes. As loss of blood increases absorption every precaution against hæmorrhage should be taken, and every effort to replace what may be unavoidably lost by saline solution. The same holds true for any operation on exophthalmic cases. For the relief of thyroidism and tachycardia, suprarenal extract has a marked effect, but seems to be somewhat difficult of permanent control. Atropine and morphine are often of great service. Regarding the cases coming for operation, if the pulse is from 130-160, or if it suddenly fluctuates in tension and rapidity, if there is anæmia, with swelling of the feet, the patients are placed upon the belladonna treatment for some days. The more severe types are given X-rays exposure in addition, which is continued from two to six weeks.

The total number of operations on the gland was 128 with 8 deaths, 40 were performed on exophthalmic cases with 6 deaths. The writer is to be congratulated on his series and the results obtained.

CHARLES A. L. REED, A.M., M.D. "The Surgical Cure of Certain Cases of So-Called Chronic Dyspepsia." *New York and Philadelphia Medical Journal*, November 26, 1904.

The following conclusions are given by the writer. The majority of cases of so-called chronic dyspepsia, gastralgia, nervous gastralgia, neuralgia of the stomach, cardialgia, and hyperchlorhydria, are, in fact, cases of ulcer, or the organic consequences of ulcer of the stomach or duodenum or both. Cases amenable to medical treatment should be cured in from five to six weeks, after which time they should be placed in the surgical category, while hæmorrhagic cases should be operated upon without the delay prescribed by medical writers. Surgical ulcer of the stomach, if neglected, may develop adhesions, perforations, hæmorrhages, or cancer, or, in the absence of these, may provoke sepsis and anæmia, which, if the underlying conditions are not corrected by operation, may, and frequently do, prove fatal. It is important, therefore, that the cases should be promptly brought to operation which, without reference to details, should establish rest and maintain drainage for the diseased organ. The comfortable after course of these cases, the low primary mortality and the permanent curative results following the operation comprise its complete justification. The operative procedure depends upon the condition found, but the majority of cases are cured by either pyloroplasty or gastroenterostomy, though it may be necessary in rare cases to excise the ulcer or, in still more extreme cases, the entire ulcer bearing area.

Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

The fourth regular meeting of the Society was held Friday evening November 18th, Dr. F. R. England, Vice-President, in the Chair.

DR. ARMSTRONG: Presented a young man aged 23, who had a large tumour growing from the anterior portion of the head. The patient came to the Montreal General Hospital in July, 1898, with the following complaints: While at work in a cotton mill at Lowell, Mass., three months ago, he struck his head violently against some machinery and shortly afterwards noticed a lump. There were no signs of black or blue ecchymoses and beyond violent headache for four days there was no other suffering. The father died of consumption, mother's death unknown; two brothers and sisters alive. The mass was at that time hard and bony and some enlarged veins were present. I regarded the growth then as a sarcoma beginning in the diploe frontal bone secondary to the injury. He remained in hospital for some time and then was discharged. He was readmitted in September and kept under observation until February, 1899. The growth had increased in size, but was perfectly hard, without any degree of softness, and was partly on the left frontal bone and partly on the right. The veins were larger; there were no signs of pressure in any part. He was again discharged and only readmitted a few days ago. The growth has been gradually increasing and we have now springing from the right frontal, the left frontal and left parietal bones a hard bony growth the size of a cocoon. Apparently the outer table has been pushed out and expanded as one can easily trace it out and feel where it ends. The outer table seems to have been partly absorbed apparently by pressure for the top is a soft fluctuating mass. I take it that the inner table is intact or nearly so. He has no headache, no paralysis, but he is nearly blind, the left eye being the worst; his hearing is said to be normal. The ophthalmologist reports that the blindness is due to pressure and that there is atrophy of both discs, apparently not a congested condition but one due to pressure, and this is practically the only evidence of pressure that we have. The veins on the growth are very conspicuous; on the top are also two little hard areas, which are islands of bony substance, one quite distinct and the other becoming softer but still distinct.

There may be some doubts about the nature of the condition. The view has been taken that it was an angioma. The temporals pulsate rather violently but over the tumour there is no pulsation, thrill or bruit.

A sarcoma starting within the skull might come forward by absorption of the overlying bone, but in that case one would expect pulsation, and sarcomas beginning in the dura and passing up through do not

expand the bones in this way but pass up through an eroded softened orifice, the borders of which are on a level with the surrounding bone. This I think began in the diploë and pushed the outer bones forward without seriously depressing the inner table. An exploring needle was introduced once on each side of the middle line and touched something hard, apparently the inner table, but nothing could be withdrawn through it. It is too soft for an exostosis or an osteoma. I think, still it is sarcoma, the top is soft, as such beginning in the diploë generally are, it is semi-fluctuating, the outer table is pushed up and the edges are irregular, as may be felt on palpation and seen by the skiagram. The argument against it being a sarcoma is the duration, $6\frac{1}{2}$ years, and he is still in fairly good health. There are no metastases discoverable, though a few glands are palpable about the neck and one under the left ear. The condition is an unusual one.

DR. SMITH: I would like to ask if Dr. Armstrong has any intention of operating, and in that case what condition he would expect to encounter.

DR. ENGLAND: If the blindness is due to pressure I would like to ask where that pressure is exerted in the skull and whether the sense of smell is gone. I think Dr. Armstrong would have done something before this if he had intended doing any thing at all surgically. I would like to ask if the question of ligating the common carotid has been thought of; it might produce a little evidence as to the question of its being an angioma, and if sarcoma might limit the growth, being of interest as cutting off the blood supply in that way.

DR. ARMSTRONG: I do not know that there is much to be gained by operative treatment. Of course the arteries could be ligated, that is very simple, but whether it would result in material benefit is questionable, the vascular supply is so widespread. Ligature of both common carotids is an operation not devoid of danger, and then we must not forget the vertebrals. The sense of smell is entirely gone.

DR. RIDLEY MACKENZIE AND DR. B. D. GILLIES: A Case of Carcinoma of the Cardiac End of the Stomach.

This case is interesting in that it was possible to make a positive diagnosis before operation and for the fine pathological specimen obtained after death. The clinical history can be told in a few words. The patient was a man aged 66. He was markedly cachectic and emaciated, having lost 25 pounds in the past year. There was a history of the free use of alcohol. About a year ago he began to suffer from severe pain in the epigastrium and between the shoulders, coming on immediately after eating; solid food causing him more pain than liquid food. His diet for the past year had been farinaceous. He described as having the sensation of there being no inlet to his stomach and the

pain was felt in the median line $2\frac{1}{2}$ inches above the umbilicus. He had anorexia and would vomit a little in the mornings. The vomit contained no bile or blood. The actions of the bowels were normal. There was no enlargement of the superficial glands. Under the skin on the abdomen were two small nodules. On deep palpation beneath the left costal arch a firm rounded tumour mass was felt, painful on pressure, and it could be differentiated from the spleen by percussion.

A test meal was given and on passing the stomach tube an obstruction was met with at 20 inches from the teeth. Vomiting brought up the meal which was found undigested and with stomach ferments and acids absent. Amongst the food shreds of tissue were found which on examination were found to be cancerous tissue. In addition the patient had endocarditis and interstitial nephritis.

The patient was transferred to the surgical side, and gastrostomy was done but general peritonitis followed. The specimen was taken from a much emaciated individual and proved to be a large colloid carcinoma springing from the lesser curvature and cardiac end of the stomach. Sections show plainly the nature of the growth. In this case the diagnosis was made from the stomach contents. The tumour mass extended up into the lower end of the œsophagus, explaining readily the clinical complaints of the patient. This extension of carcinoma through the œsophagus is quite common in contra-distinction to that through the pyloric end of the stomach which is extremely rare. In connexion with the remark made at a previous meeting with regard to the examination of subcutaneous masses in these cases, we palpated here over the abdomen and found such a mass but this disappeared just before death and at the autopsy was not to be found.

Doctor Gillies also exhibited a microscopical section of the stomach washings from a patient now in hospital from which the diagnosis was very easily made, proving that careful examination of stomach washings are of value in diagnosing such conditions.

DR. LAFLEUR: The second case which Dr. Gillies has referred to is under my observation and the fragments that we obtained by the stomach washings were really quite large, as much as a large pea, and it was quite evident from histological examination that they were fragments of a neoplasm. This case presents very similar conditions to those in Dr. MacKenzie's. We are very apt now to get fragments of neoplasms in the stomach by the new stomach tube which contains a great many more holes and has a somewhat thin edge. The patient has an almost empty stomach and retches a great deal, and it is quite evident that this rubbing against the wall will rub off a piece of neoplasm. In this case there was a little blood. In cancer of the liver one sometimes manages to strike a cancerous nodule and so get a

boring of the liver which shows quite clearly the nature of the malignant tissue.

DR. ENGLAND: I would like to ask whether the patient had been able to take a fair amount of nourishment. As this patient died so soon it is a question here whether gastrostomy could not have been done earlier.

DR. ARMSTRONG: With regard to this point I would say that the patient came into the hospital very late, that he declined to have anything done as long as he could swallow at all and it was only when he could not swallow even milk that he decided upon operation so that there was absolutely no resistive or reparative power left.

DR. ABBOTT: With regard to the frequency of shreds of the mucosa being in the stomach washings I may say that while in Berlin some two years ago I saw quite a number of sections of stomach washings and in nearly all could be found sufficient evidence to make a diagnosis.

DR. MACKENZIE: The man was operated upon as quickly as he would allow and had been able to take but a very slight amount of nourishment for a long time.

DR. W. J. TELFER: A Case of Abscess of the Pancreas.

J. A., single, aged 35, farmer and dealer in farm produce. *Previous history* good with the exception of occasional attacks of acute indigestion. In August last had an attack of boils on the face. Total abstainer; no venereal disease. *Family history* excellent; father died aged, mother still living; brothers and sisters alive and well. *Last illness*: Was taken sick on September 16th last; symptoms of acute indigestion with constipation; relieved by enema. Next day symptoms recurred, severe pain in right loin with chill. From September 18th to 25th typhoid temperature persisted with severe chill and sweating on the night of the 24th. On 25th was admitted to the Western Hospital.

Course of Disease: Temperature was septic from the first with chills and sweats daily; no vomiting, bowels constipated. Was able to bear free palpation over the whole abdomen; some headache, relieved by ice-cap. On 11th day in hospital (19th day of disease) complained of a tender area below and to the right of the ensiform cartilage, and slight crepitation was discovered at the same time over the base of the right lung. At this time patient was unable to lie on left side on account of pain in front. This pain disappeared by the 22nd day of the disease but the patient then developed slight distension of the epigastrium and also slight jaundice, both of which gradually increased up till October 26th, the icterus changing rather to a cachectic dark brown with the conjunctivæ quite deeply stained. During this period percus-

sion was tympanitic over the whole abdomen, especially the epigastrium. Some flatus was passed per rectum. The patient was able to take nourishment and water freely. On October 21st had some hiccough. The bowels were emptied by enema every second morning up to the time of rectal medication. The stools were characterized "milk" stools, usually semi-formed.

Termination: Death from exhaustion on the 24th day of the disease. For the last three or four days the patient had been delirious and unable to swallow at times. The day before death showed signs of collapse and appeared to suffer acute pain though the temperature during these last days was mostly subnormal.

Treatment: The patient was kept on a milk diet; he was sponged, and we attempted to abort the chills by dry heat; quinine was given during the first week in the hospital but appeared to have no effect. On the 15th day in hospital collargol was commenced per rectum, three grains twice daily. This undoubtedly controlled the condition sufficiently to prevent the severe chills as after commencing this treatment the rigours ceased. After October 27th the patient was given freely saline solution by transfusion and per rectum which seemed to improve the pulse and the mental condition. The temperature then was mostly subnormal; the hiccough was relieved by champagne. Strychnia and morphia were given hypodermically as indicated for the pulse and sleeplessness. The Widal and diazo tests were done frequently and were always negative. The blood showed a marked leucocytosis; on October 10th Dr. Gordon reported 20,800, and on October 18th Dr. Nicholls did a serum test for tuberculosis and reported negatively. The urine was normal at first but later showed bile pigment and an occasional epithelial cast. During the last few days there were slight albumin reactions to the contact test, no sugar, the specific gravity was normal throughout.

On October 27th, in consultation, it was decided to explore the abdomen but the patient collapsed before anaesthesia was complete and was with difficulty restored. The operation was abandoned. A partial autopsy was secured, which was done by Dr. W. J. Derome, whose report is as follows:

DR. W. J. DEROME: I was only able to obtain a partial autopsy in this case. An incision was made to the right of the median line extending from the ribs to below the umbilicus. On opening the abdomen sero-purulent fluid oozed from the incision which was strongly tinted with bile. The liver appeared enlarged, of a mottled greyish-color and rather soft. The gall bladder was largely distended, the size of a large orange; palpation, however, did not reveal the presence of calculi. A little to the left of the suspensory ligament of the liver,

on examination, the surface was found to be rather soft, giving the sensation of fungoid and in the centre was a depression and an orifice, allowing the entrance of the index finger. I explored this opening and brought forth a creamy pus. I found that this sac went to the pancreas. At the head of the pancreas there was a notch which felt as if it had been scooped out of the body of the gland. The spleen was enlarged, the appendix region normal. We were not allowed to remove any organ, so a full examination could not be made.

DR. LAFLEUR: This was a case which presented unusual difficulties in diagnosis; in fact none was made beyond the fact that the patient was evidently suffering from sepsis, but where that was we could not make out. At different times we thought of some condition about the liver or in the liver itself, in connexion with the gall bladder or bile channels, with the stomach, and even the possibility of it being an appendicular abscess. The only real indication we got at all was that there was something abnormal at the base of the right lung, that is, a few crepitations, but even this cleared up. We also thought of ulcerative endocarditis, but there was nothing definite. The absence of any localizing signs made the case obscure from beginning to end. The urine was examined and no sugar found. I would like to ask Dr. Derome if he opened the stomach, it might have been a gastric ulcer which had ulcerated and involved the pancreas secondarily.

DR. DEROME: The stomach was opened, but the ulceration which I mentioned seemed to open about an inch below the ensiform cartilage. The stomach seemed to be normal as well as the bowels, except a few peritoneal adhesions between the bowels and the stomach.

DR. ARCHIBALD: The question of sugar in the urine in pancreatic disease has always been of interest to me. I used to understand that with a pancreatic lesion one was rather liable to get sugar in the urine, but it has been proven that such is not the case and that, as stated in a monograph upon the surgery of the pancreas which appeared a few years ago, sugar in the urine does not appear in pancreatic disease until practically all the pancreas is destroyed; that it is like the thyroid and other ductless glands, it needs but a very small portion of the organ to preserve function. I was therefore not surprised to hear that in this case no sugar had appeared. I would like to ask if Dr. Telfer examined the stools. With regard to collargol I may say that I have used it several times myself in the form of the ointment, but I have seen no advantage in cases of septicaemia.

DR. FRY: Dr. Opie, of Baltimore, and others have recently written extensively on this question of gall bladder disease and particularly—in the case of gall stones. And this leads me to ask if Dr. Derome palpated the ducts. He mentioned that the gall bladder was greatly

distended and there seems to be no other explanation than that there was obstruction of the ducts and this might suggest that the condition of the pancreas was secondary to liver or gall bladder disease.

DR. DEROME: Nothing was noticed in connexion with the gall ducts though it was quite possible that the inflamed area over the pancreas might have caused obstruction to the ducts with subsequent distension of the gall bladder.

DR. ENGLAND: Mr. Mayo Robson in his last paper published in the MONTREAL MEDICAL JOURNAL takes up the relationship between disease of the biliary passages and pancreatic disease and he shows very forcibly by his photographs of sections where the pancreatic duct is sometimes found to be anomalous and in this way that any obstruction to the common duct may cause the infected bile to be forced back into the pancreatic duct or ducts, as the case may be, and in that way have an original focus of infection. In such obscure cases, this should be thought of as the gall bladder is so frequently infected. I would like to ask Dr. Telfer if he is satisfied in his own mind that these attacks of indigestion were not of the nature of biliary colic.

DR. TELFER: I frequently saw the stools that were voided following an enema, prior to medication by the rectum, and they appeared to be the ordinary milk stools with a little bile, light yellow and semi-formed. After we commenced rectal medication there was not very much to be seen. It seems to me that some of the bed pans I saw occasionally might have been a little fatty, but at the time this was not in my mind and I did not remark it especially. With regard to the possibility of gastric ulcer there was no vomiting at all and nourishment was taken readily, there was no tenderness or quite severe palpitation over the stomach. With regard to the attacks of indigestion I saw him after some of these and I could not say but that they might not have been colicky; he never was jaundiced and was always relieved by an injection, something that would empty the bowel freely, and from the history, his irregularity in taking meals seemed to explain the attacks readily, that is, going for long without food, then eating heartily at night.

DR. BLACKADER reported a case of glandular fever in his practice and as these cases usually occurred in epidemics he asked the members to notify him should any come under their care.

DR. MONOD read a paper on hæmorrhage from the uterus which appears on page 18 of this number.

DR. LOCKHART: There is scarcely room for criticism in this admirable paper, and yet I am sorry the reader did not include the form of uterine hæmorrhage due to general disease. There is quite a large proportion of uterine hæmorrhages which are due to disease of

the kidneys, cardiac disease, diseases of the liver, etc., and here operative measures will certainly not yield any beneficial result though medicinal treatment may. In these papers upon uterine hæmorrhages you very rarely see the subject treated at all except from a purely local standpoint and I think herein is the mistake. As regards the treatment of the condition that of course depends very largely upon the cause. Many of the cases of miscarriage and the hæmorrhage of puberty will be benefited more by tonics, change of air and change of general surroundings than by any other method, and in these last local treatment should be discouraged. There should be no school or gymnastics; a sea voyage is one of the best measures.

As regards the use of adrenalin I have used it a few times with marked benefit. In several cases where there is atony of the uterus sometimes the actual curette will not even temporarily check the hæmorrhage and in such cases I pack the uterine cavity with plain sterilized gauze saturated in a solution of adrenalin. Most of us have tried the perchloride of iron. In many cases that will work where others fail. As regards the uterine injections of hot water, Milne Murray advocates very small intrauterine douches for the immediate control of hæmorrhage in preference to large ones which, while they contract at first, bring on relaxation later. With regard to superheated steam the reports show that it is well worth a trial in certain cases.

DR. SMITH: A great many of the cases which come to us have this as the principal symptom, and very often it is the only symptom of a general condition. As Dr. Lockhart has remarked most of these hæmorrhages from young girls are due to poor nutrition and they rapidly respond to general treatment, iron, strychnin, phosphoric acid and sunlight and fresh air with a good plain diet. With regard to the surgical treatment we still have a lot to learn. In many of my cases where I have removed nearly all of the ovaries and both tubes hæmorrhage has still persisted. It is interesting, too, to note that a small cancer nodule may escape the ordinary curettings. I had a case where the severe hæmorrhages came on some two years after the menopause; curettings did not improve matters and on removing the uterus an angry looking ulcer was found which was proved definitely to be cancer by the pathologists. Curetting, however, is of great value among the surgical proceedings and has given great satisfaction if done very thoroughly and followed by the application of an iodide and carbolic acid and well packed. One should find no difficulty in stopping these hæmorrhages either by constitutional or local treatment. Subinvolution is a great cause of hæmorrhage. For this purpose the galvanic current is of great value. I tried adrenalin only once, injecting it into

the uterus, but the patient suffered severely and I did not try it again. The great advantage of alum should be borne in mind. In the patients I mentioned with removal of a large portion of the ovaries, and still hæmorrhage, a tampon of alum proved efficacious.

DR. CHIPMAN: I am rather glad Dr. Monod based his classification upon a pathological basis rather than an etiological one. We know that the mucosa is built up of epithelium, parietal and glandular and that if that mucosa is irritated in any way it gives rise to certain results; sometimes it is the connective tissue, then again the blood vessels, and the interstitial tissue which is affected, and I think that is the right and scientific classification. In the same way in the muscular wall under certain irritative conditions we get the different component parts of that wall differently affected. The reader has spoken of, to me, a new pathological entity, and that is angiomatous metritis, and I would like to ask Dr. Monod whether or not in the cases he has spoken of the blood vessels were definitely formed blood vessels, for I have not seen a case of true angiomatous metritis, but I have seen cases of chronic metritis where there was a certain amount of œdema, with enlarged lymphatics and where on section the organ looked intensely hæmorrhagic, but the vessels were not blood vessels but rather lymphatic channels. I should also like to ask if in this any glandular or epithelial elements were found. A recent writer brings forward a new condition which may lead to menorrhagia and metrorrhagia, which he calls an adenomyoma. He simply says there is a great thickening of the muscular wall and that throughout these muscular elements there are numerous glandular elements; it is not circumscribed in any way. He cites a case of a woman who nearly bled to death on several occasions and after removal of the uterus and careful examination of the condition he named it an adeno-myoma. Bland Sutton has formulated into a definite pathological concept something we have known for several years, the condition which he calls fibrosis uteri. The pathology of this condition is extremely interesting. We all know the big, mobile hard uterus, with uniform enlargement of the walls, patulous cavity. The proportion between fibrous and muscle tissue is lost, rather an excess of fibrous tissue, and the woman who has usually had a large family begins to lose blood and the more you curette the more blood she loses, in fact curetting is the worst thing. We have therefore to-night three pathological entities which are new, the angiomatous metritis, the adeno-myoma and fibrosis uteri. All treatment is purely tentative and empirical until the pathological condition is understood. I could strongly urge that careful pathological study of all these cases be made. The local treatment has been gone into very thoroughly, and I quite agree with everything that has

been said. I only feel that too radical treatment is often followed by accident. I know something of live steam,—one case developed atresia of the cervical canal with a following blockage and damming back of the blood, which led of necessity to a vaginal hysterectomy. One must not carry the local treatment too far. This paper of Dr. Monod's has given us once again the opportunity to say that in the matter of the menopause, hæmorrhages occurring at or after that time, demand a thorough examination of that uterus. All of us who have to do with operative work knew how ghastly the picture is of cancer of the uterus. Now hæmorrhage though it is not the first symptom of cancer of the uterus is often the first symptom. I have a case in the hospital which has been bleeding for two years with cancer of the body of the uterus.

DR. MOXOD: With regard to the cure of the condition, as Dr. Smith has so confidently stated, I hardly think he has come across a case of an angiomatic uterus. There is no hypertrophy of the mucous membrane and the epithelium is normal, but the vessels are all dilated; there is really a vascular new formation and secondarily a kind of angioma of the mucous membrane and this can be detected even outside the uterus.

DR. SMITH read a paper on the placing of perineal sutures in position before laceration takes place. This paper appears on page 24 of this number.

DR. MORROW: One objection is that there may be some difficulty in obtaining the patient's consent to this procedure.

DR. CHIPMAN: I think in difficult cases there is no objection to its being done. Dr. Smith has told us that there is no retraction of the muscles in cases where the suture has been placed in beforehand. If you do not happen to get your sutures in the right place the result will not be good, the muscle might retract past the suture. We all know that if we do not take a proper hold with our suture we are apt to get developed a rectocele, that is, the mucosa slips past out sutures.

DR. ENGLAND: It occurs to me that while the sutures might be introduced in this way for a simple laceration of the superficial parts, in the case of lacerations which are bad, and really need surgical treatment the laceration is not always centred in the middle line but runs up towards the side. These I think require a different treatment. I think it is not always possible to foretell the direction in which the tear will appear. And again I think the strain which is sufficient to separate the parts may be likely to tear out the sutures.

DR. SMITH: In my paper I mention that the first stitch is to be $2\frac{1}{2}$ inches in the vagina, for the very purpose of taking in any of the tears in this direction, but in tears higher up than $2\frac{1}{2}$ inches this is not of benefit and requires one higher up still. It is so hard to get the parts

together again without such a preventive means that I thought this method would be at least an aid to us. The stitches are not fastened and therefore the tissues spread just the same as if they were not there.

The fifth regular meeting of the Society was held Friday evening, December 2nd, Dr. Macdonald, President, in the Chair.

DR. GILLIES exhibited a pathological specimen of congenital absence of one kidney. The patient was under the care of Dr. Molson, but died in a comatose condition after repeated convulsions. No history was obtained, except that the man was a sailor, who had been discharged on account of intemperate habits, which he had persisted in up to the time of admission to hospital. There was a slight trace of albumin found in the urine, but nothing else of a definite character just before death. The autopsy showed a right kidney 14 cm. from above downwards, 8 across and 5 from before backwards, indicating that compensatory hypertrophy had taken place. There was complete absence of the left renal artery and veins and complete absence of ureter, the suprarenal however was present. In the records of the autopsies at the Montreal General Hospital, out of 2,469 only 5 specimens show congenital absence of one kidney. In 1897 one was obtained with absence of the left, with persistence of the left ureter. There is a note in Ziemsen which states that there is always absence of the ureter when the kidney is absent; persistence of the ureter would mean that at some time in early life there was displacement of the kidney, so that the two fused. The case just mentioned was a man who died of chronic interstitial nephritis. In 1901 the Medico-Legal Department obtained a specimen of absence of the left kidney and ureter from a man who had hanged himself. In 1902 there was a case of nephritis with absence of the ureter, suprarenal and kidney, also of the left side. Since then I have had two cases of absence of one kidney, one a male with myocarditis showing absence of the right kidney, right renal artery and ureter, the other somewhat similar with persistence of the suprarenal. These anomalies are more frequently found in males than females; some give a percentage of 65 males and 35 females.

Another specimen is that of a horse-shoe kidney obtained from an infant. All the structures were normal, with the exception that the two kidneys were joined by kidney tissue in the lower part.

DR. SHEPHERD: I was much interested in this case, and I would like to report a case of single kidney which occurred in the dissecting room at the College a week or two ago. This is the first one out of 5,000 subjects which have passed through my hands that I have met with, and I think this percentage at the Montreal General Hospital is very

large; it is generally calculated that one in twenty-four to twenty-five hundred occurs. Of course, we would expect to find the suprarenal capsule even with absence of the kidney. There are some cases reported by Bruce Clarke in his book, and Polk, of New York, reported a case of removal of the only kidney in a woman. She had complained of a lump in the groin, which, after removal, was found to be a misplaced kidney. The patient lived eleven days afterwards. It is quite probable that such cases have occurred.

DR. BULLER showed a living case of epithelioma of the eyelid, which had extended after a good many years deeply into the tissue and destroyed the eye. An interesting fact in this case is that the man came to him some six years ago with a small nodule at the inner extremity of the left lower eyelid, and he says that he was advised excision, which he refused, and now at this date it has gone on to destruction of the eyeball and an enormously thickened indurated lid, so tense that the eye could not be seen at all. The pain was very severe, and as the case appeared to me inoperable, the X-ray treatment was tried, which has had the remarkable effect of softening all the tissues and relieving the pain a great deal. The lid can now be raised so as to see what remains of the eye above.

Dr. Buller also exhibited a case evidently of Melanotic Sarcoma of the anterior part of the choroid tract. The patient received an injury some fourteen years ago from a piece of coal striking his eye (he being a railway man). For a few days the eye troubled him, and beyond a slight suspicion that the sight was not as good as before, nothing else was noticed until during the last three months. The pupil, before atropin was put into it, was oval transversely, dilating upwards, but rather fixed as regards straight line below; it responded to light and dilated moderately with atropin. The upper part appeared clear and almost normal, but in the lower it was easy to see two rounded globular masses coming up from behind the iris, showing that the tumour had grown pretty rapidly. Its pigmented appearance would indicate a melanotic condition, while the rapid growth suggested the sarcomatous variety.

DR. HAMILTON: I would like to know just what the definition is of melanoma, as used broadly by Dr. Buller, and to ask if there is any evidence of recurrence or metastases elsewhere in this case.

DR. BULLER: I have not looked for any such evidence, but I intend to have a minute examination made of his liver, because many oculists maintain that these cases are really secondary to disease of the liver, though personally I would take the other view, as I have seen so many of these cases come on after an injury, and would classify the trouble as of a local character, and that the liver trouble afterwards is a com-

paratively secondary condition. However, the question is a moot one, and ought to bear investigation. The term melanoma is used broadly in connexion with these pigmented conditions of the eye. The simple term melanoma is used to describe a growth of a pigmented character, which is of benign origin, and does not seem to extend, and has no malignant characters. I saw a case of this kind many years ago, and the same condition persists to-day, probably congenital.

DR. SHEPHERD exhibited two specimens of large stones removed by the suprapubic method, and advocated this method over crushing, which, he claimed, required a practised hand. The two cases were of interest in that they exhibited no symptoms at all until within a short time of operation, which would direct the physician or surgeon to the fact that they had stone, notwithstanding that these stones were very large, and must have been present for a long time. The first case was a man of 84, who was a patient of seven or eight years ago, and at that time there was no evidence of such a condition present. In 1901, while in Scotland, he had an acute attack of what was diagnosed as cystitis; some months later he had another attack, supposed to be due to an enlarged prostate. In 1902, on landing at Halifax, he was treated for the same thing. I saw him here this autumn, when he had very acute pain, frequent micturition, every ten or fifteen minutes, and on passing a sound I immediately came upon this enormous stone, which I could push back. The pain ceased, but he came back a few days afterwards, when I removed it, and it will be seen that it is hardly possible for this large stone to have formed since 1901. The other case was that of a younger man, aged 45, and the stone weighs about an ounce. This man had also been going around without any symptoms of stone until within three months before I saw him. A few years ago he suffered from stricture, and when the present attack occurred, it was thought to be of that nature. I examined him, and immediately came upon this stone. In this case I sewed the bladder up, and there was a very slight leak for about seven days, which led to a small slough, which completely healed before three weeks, and he is perfectly well now. In both these cases I operated with the sound in the bladder, this, I think, being a much more rapid way of getting into the bladder. In both of the cases there was a good deal of ulceration in the bladder, which accounts for the great pain, which was especially marked in the older man.

DR. ARMSTRONG: I must take exception to the broad statement that this is the better way to remove stones as a rule; it is generally done in old men with enlarged prostates such as this case, but in the majority of cases crushing is so thoroughly safe and so satisfactory that I think it is the better way, and it certainly has better statistics. I think the

difficulties in crushing are rather over-rated. With a fairly good bladder and proper instruments, there should be little trouble. I was very much interested two years ago in Leyden, in going through the old museum containing Boerhaave's specimens, to find a very large phosphatic stone, which is supposed to be the first stone ever removed by the suprapubic method. It was removed by an individual from his own person, and it is said that the man got well. The knife is also preserved with which he removed the stone.

DR. SHEPHERD: I do not mean to say that every stone should be removed suprapubically, but I think crushing does require much practice, which in this country one does not get. I remember myself going the rounds with a surgeon in Paris, where in one morning he crushed five stones in the ward and removed a broken catheter. In this last the way he demonstrated the position of the foreign body and the ease with which he extracted it was simply marvellous.

DR. MORROW exhibited an obstetric bag. He drew attention to the feeling expressed in recent text-books that the traditional black bag was not sufficient for the requirements of modern technique. The bag which he exhibited consisted of two divisions, of which the upper contained all that was usually required in normal labour, while the lower contained in a large sterilizer the various instruments and appliances for operative cases. He admitted that portability had been sacrificed for completeness, but considered the latter the more important.

DR. MARTIN and DR. HARDISTY: The first case we wish to report is one of the concurrence of a renal calculus with early renal tuberculosis. Our first dealing with this patient was the examination of a specimen of urine which had been sent us, and showed marked acidity and a specific gravity of 1024, 5 grms. albumin to the litre, a fair amount of pus and some epithelial cells, evidently from the pelvis of the kidney. The diagnosis suggested was between renal calculus and tuberculosis of the kidney (though no bacilli were found). The patient came to us later, giving the following history:—Since June he had suffered from pain and burning at end of penis, occasional frequency of micturition, and from time to time he had hematuria. Another specimen of the urine showed a similar condition to that described above. During August and September there had been a good deal of frequency. Shortly after he came to the hospital with this stone, which he had passed a few days previously. He had never lost any flesh or had any indication whatever of tuberculosis elsewhere, his general condition seeming to be very good, apart from the urine. Examination was again made for tubercle bacilli by Dr. Hardisty, and after a number of slides were stained the bacteria were found. He was then given some tuberculin, and there was a very marked reaction,

so that evidently this patient had both a simple calculus and renal tuberculosis. The condition is clinically, of course, of interest because the passing of the stone alone might be considered sufficient for a diagnosis, and the tuberculosis might go on till it was too late to think of anything to relieve the condition.

The next case is that of a man, aged 73, who died suddenly in the hospital, his reason for entry being a cancer of the stomach. He gave a history of a rather acutely developed dyspepsia a year ago, which had persisted ever since. There was progressive emaciation, pain after eating and much distress, but no vomiting up to time of admission to hospital. This, however, is of course not uncommon in cancer of the stomach. Examination showed a mass situated in the neighbourhood of the pylorus or gall bladder; further a marked emphysema and bronchitis arterial sclerosis; examination of heart showed some enlargement; sounds distant but a systolic murmur could be heard at the apex, not transmitted very far in any direction. A slight trace of albumin was found in the urine. After three or four days, when apparently quite comfortable, he sat up in bed to ask for something, and dropped over dead. The autopsy showed a condition of carcinoma of the stomach, as was suspected, and with that a very marked arterial sclerosis, myocarditis, with dilatation of the heart and a *ball thrombus situated over the aortic valves, probably an ante-mortem thrombus, irregular in outline, not very spherical, but situated in such a way that it had obstructed the coronary artery for a sufficient length of time to cause the fatal result.* Whether or not that was the cause of death, it is hard to say. The coronary arteries themselves seemed patent at the orifices.

A ball thrombus is not usually situated in that region; they are usually found in the auricle, or at the apex of the ventricle. Those in the auricle which cause death are usually oval in shape, and they make their way sufficiently far into the auricular orifice to cause fatal results. It is difficult to say how a thrombus could have formed here, and why it should not have been broken up. What constitutes a ball thrombus is the combination of free mobility of a clot in the orifice, and one so imprisoned that it could not get into the next orifice met with in the course of the circulation.

DR. HAMILTON: I saw this case at autopsy, and it occurred to me that it was impossible to explain why a clot of such size did not follow the course of the artery borne on by the aortic blood stream, and thinking over the matter, it would appear that possibly at the time of death, or immediately before that, this clot was displaced from its site of origin, and after that it may have occluded the coronary artery.

DR. ARCHIBALD: The first case is certainly a very interesting one,

more especially from the clinical side. Concerning the pathological question, there are certain points which are not only interesting, but which are of considerable practical importance. First of all, the finding of tubercle bacilli in the urine. That is a rather difficult thing, excepting in cases where they are passed in large numbers. I have frequently examined a dozen slides of pus from the urine, put through the various processes, without finding a single bacillus, and coming upon them in the last slide; at other times it was the 24th and 30th slide which gave positive results. The bacilli, in the first place, are hard to find; secondly, when found, one must examine carefully, as the resemblance of the smegma bacilli to tubercle bacilli must be taken into account. From 1894 to 1896 various *arbeits* appeared in Germany, bringing up again this question, and indicating that frequently these bacilli were taken for the tubercle bacilli. I remember a case of a woman with a stone, where, after a number of examinations, we found what was apparently tubercle bacilli, but it proved to be a case of calculus nephrosis and not tuberculous pyonephrosis, and the bacilli were smegma bacilli. In the male it is not frequent to find the smegma bacilli, as the conditions of securing the specimen are much more sure than in the female. With regard to staining, the ordinary stains are not sufficient. Gabbet's method is entirely inefficient for urinary examinations. We have to reckon that the decolorization by means of acid will not affect the smegma bacillus any more than the tubercle bacillus. It is stated a limit of eight hours should be placed upon the effect of alcohol in decolorizing tubercle in urine; that is, that under eight hours the smegma bacillus may also remain. This is perhaps exaggerated. The important points are the examining of a great many slides of a sedimented centrifugalized urine and the using of a very careful technique in examining.

DR. SMITH: In the Annals of Gynæcology there is a paper on 13,000 operations with 12 deaths from embolism. One of these was embolism of the coronary artery, and the author details the different operations for the different diseases in which this occurs.

DR. MILLS: We know that experimental ligation of both coronary arteries almost invariably puts the heart into fibrillar action or causes it to cease to beat, and in a few seconds usually. In the case of obstruction the chances are that there would not be recovery of the heart when the interference was of some duration. I do not understand, however, that these coronaries were definitely obstructed, nevertheless one can imagine that thrombus being pushed during systole against the opening of the artery, and thus the heart for a time being deprived of its proper nutritive supply, and that this effect being cumulative, might in the weakened subject eventually produce death. The cause of death in this case nevertheless seems somewhat obscure.

DR. MARTIN: With regard to the renal tuberculosis, a point worth considering is the importance of trying the tuberculin reaction when one is not certain of finding the bacilli in the urine. The smegma bacillus is now, as a rule, easily detected by the proper use of alcohol. So far as the clot is concerned, I think Dr. Hamilton's suggestion is a very reasonable one, because the clot looked as if it were broken off, but there was nothing in the auricles to show the source of it, and the eroded portion referred to was on the inside of the valve, that is, on the aortic surface of the valve, and here one does not usually have vegetations. There was no evidence of an endocarditis on the ventricular surface of these valves, and I do not think therefore that this would likely be the source of this clot. With regard to the coronary arteries and the amount of obstruction necessary to cause death, one would think that this would depend a great deal on the disease in the muscle; if it is healthy, a large obstruction would not be so badly felt, as would even a small obstruction with a diseased muscle.

DR. R. P. CAMPBELL: Reported a Case of Anthrax.

The sixth regular meeting for session 1904-05 was held in the Society's Rooms on Friday evening, December 16th.

Candidate for resident membership:—Dr. G. D. Robins.

Candidates for temporary membership:—Resident Staff of Hotel Dieu:—Drs. Hamelin, Lebel, Lachance, Cousineau, Desmarais, Meunier, Marcil and Moreau.

Programme:—Discussion on Actinomycosis:—Jas. Bell, M.D.; C. B. Keenan, M.D.; Chas. McEachran, D.V.S.; W. W. Chipman, M.D.; J. G. Adami, M.D.; and W. F. Hamilton, M.D.

A full report of this discussion will appear in the February number.