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NOTE—Part of July is wrongly paged. It numbers 285 to 300. It should read 485 to 500.

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Original Communications.

HÆMOPTYSIS.*

By J. M. COTTON, M.D.,
LAMBTON MILLS.

WHEN asked by your committee to read a paper at the annual meeting of the association, an interesting case or two of hæmoptysis, then under my care, struck me as a subject that would be of some interest to the associates.

Hæmoptysis is not a disease in itself in the strict sense of the term, but a symptom of some pathological condition existing in or adjacent to the air passages.

There is no case that gives the attending physician greater anxiety than does the subject before us, and none that seizes the patient with greater alarm. The effect of blood being brought up in quantities from the lungs gives the patient and his friends the impression of impending death, or at least that his days are numbered.

* Read before the Ontario Medical Association, Windsor, 1896.

In this paper I do not propose to elicit anything new, but simply wish to give you my own clinical experience in a few cases that have come under my observation. The causes of hæmoptysis, having regard to its pathology, may be thus enumerated :

(1) Hæmorrhage from the pulmonary artery or its radicles.

(a) Rupture of wound of the lung from external violence.

(b) Active hyperæmia of the lungs—inflammatory, vicarious, or induced by violent effort or excitement. The active hyperæmia may be primary as regards the lungs; or may supervene or be attendant upon disease already present in them.

(c) Mechanical hyperæmia of the lungs, secondary to heart disease or embolism of one of the pulmonary branches, or to pressure from tumors, such as enlarged bronchial glands.

(d) Necrotic division of vessels in the course of softening of tubercular or other consolidations in destructive lung diseases—phthisis, tuberculosis, cancer.

(e) Aneurismal dilatation or simple erosion of branches of the pulmonary artery, exposed in the course of excavation of the lung, or ulceration of the bronchial mucous membrane.

(f) Primary atheroma of the pulmonary artery within the lung.

(2) Hæmorrhage from the bronchial capillaries.

Capillary hæmorrhage from the bronchial mucous membrane.

(3) Hæmorrhage from the aorta or one of its great branches.

Aneurism rupturing through the lung or into a bronchus.

The natural history of hæmoptysis is practically that of phthisis. Among the ancients it was believed, however, to be the cause, and not the effect, of phthisis.

The doctrine that blood effused into the lung became pus and produced corroding and ulcerating effects appears in many prominent authors between the Hippocratic writing and the nineteenth century.

Any view we may have respecting the nature of phthisis cannot lessen the significance of hæmoptysis being one of its most important physical signs. It is a sign, too, that often aids us in prolonging life by drawing our attention to a condition that might otherwise remain concealed.

The following history of cases taken from my case book will serve to illustrate some of the different forms of hæmoptysis that one gets in general practice.

In looking over my case book I find the following :

CASE I. In October, 1888, I was called to see Mrs. B., æt. 60, housewife, thin and frail. Came to Canada when quite young, had

been ailing for years, one son. On examination found large cavity in left lung, with profuse expectoration of thick, yellowish color, loaded with bacilli.

In May the following year I was called hurriedly, and found patient suffering from severe and profuse attack of hæmoptysis. The extreme emaciation of patient and large amount of blood lost, and knowing her condition, first impressed me that patient could not live long; she rallied, however, and in six weeks was able to sit up. As she felt so well the nurse was discharged. Hæmorrhage was under control the first three days; the following week, upon some extra exertion, another profuse hæmorrhage commenced, which ended fatally in twenty-four hours. Diagnosis, necrotic division of blood vessel in the course of softening at or near cavity in left lung.

CASE 2. Hy. P., æt. 42, miller, good family history, well developed, always healthy. September, 1891, walked into office saying he had been coughing up blood for the past hour. Upon examination found patient had fibroid phthisis of right lung. Sputum contained bacilli; he continued raising small amounts at different times for three months; had short holiday, during which he improved; he resumed his occupation against advice. The following June was forced to give up work. Disease in lung now rapidly progressed, and he died during the winter of 1893; did not have any subsequent hæmorrhage.

CASE 3. Hy. W., gardener, æt. 40, in Canada ten years, was miller previous to this, family history good, intemperate. In 1893 attended him for sharp hæmorrhage from bowels; lost sight of him for a year; when again called found complete collapse of right lung, chest flattened on that side and no expansion, free from cough and not suffering much inconvenience except on exertion, when he complained of "want of breath." Expectoration slight, and no bacilli found on several examinations. In April last had sharp attack of hæmorrhage; was better in forty-six hours; was not inconvenienced to any great extent, as he was out attending to his duties inside of a week. In this case the hæmorrhage did not leave that excessive weakness as is usual; amount lost, half pint.

CASE 4. Mrs. C., æt. 37, wife, family history fair, five children strong and healthy, suffering from dyspepsia and so-called bilious spells. Was hurriedly called to see her in April, 1894; found possibly a teacupful of blood, bright and clear, had come up without effort after a feeling of smothering in upper part of right lung. Temperature $99\frac{1}{2}^{\circ}$. Quickly responded to treatment, and no further return for two years; in the meantime increased in weight and strength. In April of this year had another slight attack, with

same symptoms as before ; is now apparently well. Sputum examined frequently ; result, *nil*.

CASE 5. Miss N., æt. 29 ; paternal family history, tendency to phthisis ; mother suffering from so called chronic bronchitis, with profuse expectoration and loaded with bacilli ; brothers and sisters all healthy ; patient had hæmorrhage first time when fifteen years old, good recovery. Scar on left side of neck following scarlet fever. Suffered from anæmia, which responded readily to treatment ; heart and other organs apparently sound. On January 12th of 1895 had a chill upon retiring ; pain in left side, followed the morning of the 13th by rather a profuse hæmorrhage ; this hæmorrhage responded to treatment, so that about an ounce daily came with expectoration, which continued about a week ; this gradually lessened until expectoration resembled that of pneumonia, only a brighter color. Temperature ran from normal to $99\frac{1}{2}^{\circ}$, pulse from 60 to 80. Respiration at 20, as shown by chart. The patient described a peculiar feeling in left base of lung, and felt as if blood came from that point ; blood came without a cough, or at least a slight expiratory effort to clean the throat was all that was necessary. A physical examination showed dullness on percussion at left base, increased vocal resonance and crepitant rale, which gradually cleared up as sputum became normal. Vesicular breathing was weak over the greater part of the lung. Patient did not emaciate as one would expect, but felt extremely weak, and on the slightest exertion dyspnœa was marked, which was owing to cardiac weakness. On the fifty-second day of disease patient sat up for a short time, when a slight hæmorrhage showed itself. This soon subsided, and did not advise sitting up again until eighty-seventh day of disease, as she gradually grew stronger. Examined lung on the one-hundredth day of disease ; could not make out anything except the weak vesicular breathing ; expansion four inches. Temperature normal. Pulse 70 to 80. Respiration 18. Is now up and about the house, and daily out for drives.

Continued to improve gradually until about the middle of June, when she had another sharp attack, which responded readily to treatment. The expectoration was clear again in less than a week ; physical signs as before, excepting dullness on percussion, which does not cover so large a space. Weak vesicular breathing very marked ; appetite was never affected, sleeps well. Temperature irregularly $\frac{3}{4}$ degree above normal pulse ; regular at 60. Steadily improved, and was able to visit away from home during latter part of August ; remained away until February following. She had gained consider-

able in weight and had sufficient strength to go about, and felt almost as well as ever until January 8th, the present year. Hæmorrhage commenced again, but not in large quantities, bright red, say $\frac{1}{2}$ oz. a day; this continued until the 25th of January, when a profuse hæmorrhage came on. Some of the material brought up resembled organized tissue similar in appearance to the lung substance. After this the hæmorrhage suddenly ceased; this was on the 25th of January, and since that time there has been a total absence of blood in the expectoration. The day of profuse hæmorrhage the temperature, as shown by chart, was: Temperature, $99\frac{1}{2}^{\circ}$; pulse, 128; respiration, 26. Temperature gradually fell to normal before February. Patient was not under my care during the last illness, and cannot give any physical signs previous to or immediately after final bleeding. She was brought home a distance of some sixty miles and stood the journey well. Chart shows temperature $98\frac{1}{2}^{\circ}$; respiration, 8; and pulse, 90, on arrival home.

Physical examination of chest upon arrival home.

A small consolidation in lower left base, just below inferior angle of scapula, blowing respiratory murmur about the size of a penny, increased vocal resonance, and surrounding this a very feeble vesicular murmur. Temperature, normal; respiration, 18; pulse, 70 to 80; good appetite and spirits, sleeping well, and absence of night sweats; slight cough after long sleep, with little expectoration; microscopical examination of this shows that it comes from the upper air passages. Examinations at regular intervals during this long illness, made by different pathologists, show an absence of bacilli. Physical signs at the present time show the consolidation as having cleared up, and nothing can be demonstrated other than the feeble vesicular breathing. Patient is up daily, can take a considerable amount of exercise, and is daily improving in strength, and weighs as much as ever.

This case is interesting:

(1) From the number of severe attacks and the great amount of blood lost.

(2) From the manner in which the lung clears up subsequent to each attack.

(3) The absence of the physical and other signs of phthisis.

(4) The manner in which the last severe hæmorrhage terminated.

I feel unable to place the diagnosis of this case under one of the above pathological subdivisions, but were I to venture an opinion it

would lean to the bursting of an aneurismal dilatation of one of the smaller branches of the pulmonary artery.

In three of the above cases we have been unable to demonstrate the presence of tubercular bacilli. We are never justified, however, in deciding that tuberculosis is absent because we do not find bacilli in the sputum ; on the other hand, their presence is the only sure diagnostic significance.

Pulmonary hæmorrhage occurs in all stages of phthisis.

The reason we do not have more frequent hæmorrhage in phthisis is because the contents of the vessels usually undergo thrombosis. Severe hæmorrhages often have their origin in the perforation of little aneurisms on the smaller subdivisions of the branches of the pulmonary artery which penetrate into the interior of the cavities. Profuse hæmorrhage, of course, weakens the patient very much, and generally depress his spirits ; while it is sometimes the direct cause of death, the patient generally survives it. I do not believe a moderate hæmorrhage materially hastens the progress of phthisis if there is not too much lung tissue involved ; while, on the other hand, a slight attack is considered beneficial in the early stages of this disease. This I believe is due to :

(1) Relief of the congestive area.

(2) The patient is more likely to take greater care by having his attention drawn to this symptom.

TREATMENT OF HÆMOPTYSIS.

We must direct our attention to lowering the pressure in the pulmonary circulation. During the milder forms rest in the recumbent position will usually suffice ; at the same time assure your patient that the slight loss of blood will be more of a security than a danger.

In the more severe forms, rest in bed, fresh air, freedom from anxiety on the part of attendants and friends, broken ice dissolved in the mouth, and a full hypodermic of morph., gr. $\frac{1}{4}$ to $\frac{1}{2}$, with gr. $\frac{1}{100}$ atropia. This will, I believe, suffice for treatment in the greater number of cases of phthisical hæmoptysis. If bleeding still continues, use a half dram of turpentine in emulsion or on sugar, repeated in half an hour. After hæmoptysis ceases, the treatment is that of an ordinary case of phthisis. I have much faith in the treatment of lung trouble by inhalation of kreasoti, iodine, eucalyptus, pinus sylvestus, with spirits of chloroform added as a sedative for cough, if present.

The simplest and most convenient inhaler I have found to be

the Globe nebulizer. It is always ready for use, and does not get out of repair.

There is also the same object attained by using inter-tracheal injections of kreasoti suspended in castor oil. I have used as much as forty drops at one sitting without any untoward effects. This should be repeated on alternate days. I have repeatedly seen patients improve by this method without any medicinal treatment whatever. As many of these cases suffer from a dilated stomach, it is well to give some attention to the assimilative functions. This treatment could be enlarged upon considerably, but I have avoided detail in order to shorten the paper.

In this paper I have not taken up any of the rare or less common forms of hæmoptysis as produced by malignant growth within the bronchi, aneurism of aorta or one of its branches.

We have a form of hæmoptysis connected with cardiac diseases, however, which might be mentioned. The following case is a good illustration :

CASE 6. R. P——, æt. 28. Bookkeeper. Family history good. Severe attack of inflammatory rheumatism three years before he came under my notice. In 1888 was called hurriedly to see patient, and found him in a sitting position, gasping for breath, and raising blood very freely, probably half a pint in all. He had just taken part in a game of football. Physical examination of lung did not reveal any abnormal condition, but heart showed extensive mitral disease (obstructive). Was able to resume work in two days, and had only one slight attack since. Is now in as good health as could be expected with this condition of heart.

This form of hæmoptysis is purely mechanical, and is due to obstruction and reversal of the circulation. The infective element being absent, such cases are seldom followed by phthisis.

Treatment. Rest in recumbent position, and strychnia hypodermically, to aid overtaxed heart.

THE OPERATION FOR CLEFT PALATE.—A FEW PRACTICAL POINTS.

BY G. R. McDONAGH, M.D., L.R.C.P. LOND.,

Associate Professor Laryngology in the University of Toronto; Surgeon to the Throat Department of the Toronto General Hospital, the Sick Children's Hospital, and St. Michael's Hospital.

THE few points to which I wish to direct your attention in connection with the operation for cleft palate have impressed themselves on me as important after an experience in this operation in thirty-four cases. In all these cases I have followed the same general plan of operation, but I found that wherever the details were not properly carried out more or less want of success was sure to follow, and it is on this account they have seemed to me so worthy of attention.

The extent of a cleft of the palate may vary from a bifid uvula to a division of the whole of the soft and hard palate, and even to separation of the intermaxillary bone on one or both sides from the maxilla. Complete clefts of the soft palate usually include a slight notch in the hard palate as well. Clefts of the hard palate are usually to one or other side of the middle line, the septum being then attached to the complete side, but the palate may be incomplete on both sides, in which case the septum remains free and unattached in the median line.

As to suitability of cases for operation, I think I may say almost all cases of cleft palate in children may be operated on with success, and certainly should be operated upon. In adults we find a fair proportion unsuitable for operation. These are cases with but little tissue on each side of the cleft, and with a low arch. In these cases, even if we succeed in closing over the cleft, there results only a tense band bridging over the space, which does not suffice to close off the nose cavity from the lower pharynx, and therefore the articulation is but little if at all improved. In these cases a well-made obturator, which can be procured from a dentist, generally affords better results. As to the age of operating, the most suitable time is at the age of two and a half to three years, or as soon after as the

health of the child is good. If successfully operated on at this age the child ought to learn to speak correctly; but the longer the operation is delayed after this age the less satisfactory will be the result as regards articulation.

In very extensive clefts, where the whole of the hard and soft palate and the alveolus are divided, it is usually advisable to attempt to close only a part of the cleft at the first operation and the remainder at a subsequent occasion, and the easiest part should be done first, whether it be the separated and displaced intermaxillary bone, or the cleft of the hard palate, or that of the pendulous palate.

PREPARATION FOR OPERATION.

On account of the special objection to vomiting and retching during the operation, the patient should be prepared for a day or two before, in order to get the digestive apparatus in the best order, and I think the morning is the best time, for the same reason, the stomach being less likely then to contain any food. Chloroform is probably the best anæsthetic, and it particularly advantageous to administer it with a special apparatus, such as Sach's inhaler, which consists of a chloroform bottle with bellows attachment and tubes, so that the anæsthetic can be administered continuously without obstructing the operator.

A suitable gag is very important, and Smith's gag is preferable to Whitehead's, especially in those cases in children where the cleft extends well forward toward the alveolus. The ordinary operation, with lateral incisions and sliding flaps is the one I have adopted in all my cases. I doubt very much if the division of the bone gives much, if any, additional advantage. Clefts of the velum which stop short of the hard palate are usually easy to close, and need no special reference. When, however, the cleft involves the bone, be it little or much, the difficulty is greatly increased. The first step in the operation is to pare the edges. This should be done freely from the tip of the uvula to the anterior angle of the cleft on each side, taking care to pass completely around the angle. A very sharp long-handled knife is better for the purpose than scissors, and, if possible, the paring should be removed in one complete strip. The next step is to make the lateral incisions and separate the flaps. The lateral incision should be made midway between the edge of the cleft and the teeth, and should go down to the bone in the hard palate and through the soft palate. The middle point of each lateral incision should be opposite the point where greatest tension will be, and their length just sufficient to overcome this tension.

At this stage, and also later, when raising the flaps there is liable to be rather sharp hæmorrhage, but I think it can always be readily controlled by pressure for a few moments either with a small sponge on a sponge holder or with the finger.

The separation of the mucous membrane from the bone must be done thoroughly and with care. The mucous membrane and muco-periosteum must be absolutely freed with proper elevators from the bone, particularly at the posterior border of the bone and around the angle of the notch, and must be separated completely at its attachment from the muco-periosteum of the floor of the nasal cavity. The flaps must be made perfectly loose and free and all tension removed, otherwise union will not be complete. This is the most important part of the operation. It is convenient to have for this purpose a variety of elevators bent about a half inch or less from the end at different angles, in order that the mucous membrane may be more readily raised and with less injury to it.

The sutures are next introduced. As to the kind of suture, I prefer annealed silver wire. Silk, however, answers very well, but I have not had as good success with it. I have not used any other kind of sutures. In adults silver wire is easily passed with the tubular needle, but in the small mouths of children this excellent needle is difficult to manipulate. The easiest plan I know of, whether for silk or silver wire, is to use a slightly curved needle attached to a long-handle and the eye at the point, which, armed with the suture, should be passed from below upward through the flap, say on the left side, and the suture caught with a fine hook or forceps and one end pulled through, and the needle disengaged. Then on the other (the right) side a loop of silk should be passed in the same way, and with this loop the free end of the first passed suture can be drawn from above downwards, which completes it. I prefer to pass the most anterior suture first and continue backward to the tip of the uvula. The sutures may be tied or twisted (if silver) as they are introduced or left till all are passed. In tying the sutures it is very important to see that the raw edges are well everted. After all are tied, if the slightest tension is found to exist the lateral incision should be extended preferably with a blunt-pointed knife, so that absolutely no resistance is left. As to the after treatment, the patient should not be fed by the mouth until vomiting has ceased, and then only with soft nourishing food. The mouth and nose cavities should be well sprayed with a cleansing solution before and after food, say every three hours. The patient should be kept in bed and not allowed to talk. The sutures may be removed in from ten days to two or three weeks.

Selected Articles.

REMARKS ON THE DIAGNOSIS AND TREATMENT OF EXTRAUTERINE FŒTATION, WITH NOTES OF A COMPLICATED CASE.*

BY JOHN D. MALCOLM, M.B., C.M., F.R.C.S. EDIN.,

Surgeon to the Samaritan Free Hospital.

THE development of an ovum outside the cavity of the uterus occurs so rarely that many experienced practitioners have never seen an example ; but, notwithstanding this, the condition is worthy of our most serious consideration, because the accident may present itself for treatment at any moment, and because, when this complication does occur in its most acute phase, it gives rise to results of the most appalling and distressing description, alike to the friends of the patient and to the medical attendant. The importance of the subject is enhanced when we remember that the patient may appear to be, and may really be, in perfect health when she conceives, and even up to the moment when serious symptoms show themselves. She is, of course, in the child-bearing period of life, and she is often a young mother. My last, and perhaps the best, reason for selecting this subject as a matter for discussion is the fact that in a proportion of cases a most deplorable disaster may be turned into a surgical triumph if a rapid diagnosis be followed by prompt treatment.

In considering the subject of extrauterine gestation from a clinical point of view, it is desirable to bear in mind two main facts, namely, that a woman in this pathological state is pregnant, and that the foetus is not in the womb. The signs and symptoms observed are attributable to one or other of these conditions, but those due to the pregnancy and those due to the ectopic growth of the foetus develop more or less independently of each other. The signs of pregnancy may all be present except those found by a physica

*Read before the East Surrey District of the Southeastern Branch.

examination of the uterus. Amenorrhœa may be complete for nine months, quickening may be felt, milk may appear in the breasts, an abdominal tumor may be present in which the fœtal heart and fœtal movements are readily detected, and at the end of nine months a spurious labor may take place. In fact, the signs of pregnancy may be so complete and so uncomplicated by other symptoms that no thought of the existence of an abnormal condition is aroused until the gestation has continued beyond the usual period. On the other hand, the ectopic gestation may rupture and give rise to most alarming and even fatal complications when the signs of pregnancy are so little marked that the patient may not have the slightest suspicion that she has conceived. Every medical man knows that it may be difficult to form a definite opinion on the question of the existence of pregnancy in the earlier months of gestation. It has even been said that there is no absolutely certain sign of pregnancy except the beating of the fœtal heart. In a case of extrauterine gestation the signs are, as a rule, still less definite than in the normal condition. Menstruation frequently occurs at irregular intervals, and a discharge may continue for three or four weeks at a time, perhaps only one period being missed or delayed.

The uterine mucous membrane develops to a certain extent as if the ovum were in its proper place; but, as the fœtal structures do not become implanted on the maternal structures prepared to receive them, part of the mucous membrane is shed very much as it is at term, or in the case of the death of a fœtus *in utero*. A complete cast of the interior of the womb may be expelled, or the decidua, when cast off, may be broken into more or less shapeless pieces. When a deciduous membrane is thrown off after an interval of amenorrhœa or irregular menstruation, the patient and her friends are very apt to believe that a miscarriage has taken place, and it may be stated by them as a fact that the patient has miscarried. Thus the symptoms of pregnancy may be complete and perfect, or they may be of the vaguest description.

Although signs due to the ectopic gestation of the ovum may not attract attention until it is found that the pregnancy does not terminate in the usual way by the birth of a child, yet, as a rule, serious complications arise before the end of the third month.

There is little doubt that in the condition under consideration the ovum commences its development in the Fallopian tube in the great majority of cases, if not in all, a view which was urged by Mr. Lawson Tait for many years before it was generally accepted. As my paper must be short, I shall speak as if the tube were the

only place in which an ectopic gestation may begin, and I shall not refer to the peculiarities which may be found when the fœtus is situated in that portion of the tube which passes through the uterine wall.

It has been surmised that an ectopic gestation never occurs except in a diseased tube in which, as a consequence of some inflammatory process, the ciliated epithelial cells have been replaced by non-ciliated cells, by which change the passage of spermatozoa up the tube is permitted, and thus the ovum becomes fertilized before it reaches the uterus. It has also been said that the ovum is frequently impregnated in the tube, and that the absence of cilia is the cause of its developing there. These seem to me merely theoretical assumptions.

The evidence offered is that in cases of ectopic gestation it frequently happens that the patient has never been pregnant, or has been sterile for a long period before the extrauterine gestation occurs. Clarence Webster has advocated the view that a tubal pregnancy is more likely to occur in a healthy tube, and in the case which I shall relate there was certainly no reason for believing that any previous disease of the tube had existed. The patient, who had considered herself, and was considered, perfectly healthy, developed a tubal pregnancy immediately after marriage.

The walls of the Fallopian tube containing the developing ovum show little or no tendency to hypertrophy. If the fœtus lives, the tube invariably ruptures, and this usually occurs before the end of the third month of gestation. The mode of rupture determines whether the patient's life is to be put into immediate danger, or whether she is to go on to a further stage of the disease. There seems to be no irritation due to the presence of the fœtus up to the time of the rupture. Therefore the Fallopian tube does not become adherent to the adjacent structures, and if the rupture takes place at any point where the tube is covered by peritoneum there is nothing to prevent the torn tissues from pouring their blood freely into the peritoneal cavity. Hence the rupture, in addition to a sudden severe pain in the pelvis, induces a state of more or less profound collapse. The patient may faint or remain unconscious for a considerable time. Sweating is profuse, the pulse is small and rapid, the temperature is low, and death from hæmorrhage may occur within an hour or two. Sometimes, however, the tear in the Fallopian tube is so small that the bleeding is spontaneously arrested and recovery takes place. The disturbance may indeed be so slight that the patient does not mention it, or remarks on it merely as a matter of

curiosity. She is only in safety, however, for a time. Another, and perhaps a third, hæmorrhage may occur, and death may be induced rapidly in any of these attacks. This hæmorrhage from rupture of the Fallopian tube into the peritoneal cavity constitutes the chief and most urgent danger of an ectopic gestation. I will, therefore, recapitulate the conditions which lead one to suspect that this accident has occurred. The patient may have had pelvic trouble, or may have been perfectly healthy. She may have borne children or she may not. Some of the early signs of pregnancy, but perhaps only some irregularities of menstruation, have usually been noted within three months of the attack for which advice is sought. At the stage of gestation at which the tube ruptures there is no marked change in the breasts. Very often a decidua has been expelled from the uterus. The urgent symptoms consist of an acute pain referred to the pelvis and the evidences of a sudden internal hæmorrhage which may be slight in amount or so severe as to kill the patient in a very short time. The attack may be induced by some exertion, but this is not a necessary point in the history.

On examining the pelvis of a patient in whom a tubal pregnancy has ruptured into the sac of the peritoneum, some thickening, or a distinct enlargement of one of the Fallopian tubes, will be found; but the blood effused, being free in the peritoneal cavity, is not appreciable to palpation, and it is rarely present in sufficient quantity to give rise to fluctuation on percussion of the abdomen. The uterus is freely movable, and is usually slightly enlarged.

When these conditions are present, and the collapse is so marked that the patient's life is in danger, there is very little doubt that an extrauterine gestation has ruptured into the peritoneal cavity, and the only proper treatment is a prompt arrest of the hæmorrhage by opening the abdomen and ligaturing the broad ligament. I am not an advocate of the view that abdominal surgery is an easy branch of practice. I may, perhaps, be permitted to say I consider it more important in this field than in most that the surgeon should gain experience by assisting others, and by seeing work done by others, before he undertakes to operate himself. Not that a simple ovariectomy, for instance, is necessarily an operation requiring a special education, but the diagnosis of abdominal conditions, even sometimes of a simple ovarian tumor, is often uncertain, whilst the more difficult operations are very dangerous, and may quite unexpectedly tax the resources of the operator to the uttermost. Nevertheless, an ectopic gestation which has ruptured into the peritoneal cavity, so far as the necessity for immediate operation is concerned, is on a

par with cases of profuse hæmorrhage in other parts of the body. The medical attendant must act promptly, however small his experience may be, just as he must perform tracheotomy when he cannot otherwise relieve a case of obstruction of the larynx; and must cut down on an acutely strangulated hernia.

Fortunately, at the stage of the disease under consideration, the operation is often an easy one, so far as the manipulations are concerned. In its simplest form it consists of making an opening into the abdomen through the *linea alba*, transfixing the broad ligament about its middle, well below the ovary, by means of a needle armed with a double aseptic silk ligature, and tying these ligatures, one on the outer and one on the inner side of the ovary and Fallopian tube. Care must be taken that the two pieces of silk twist round each other at least once before they are tied, so that when tied they shall form one figure of 8 ligatures, and the tube and ovary shall be completely shut off from the rest of the circulation without any danger of the broad ligament being split, an accident which may give rise to serious hæmorrhage. The parts excluded from the circulation must be cut away about a quarter of an inch beyond the ligatures, and for greater security another piece of aseptic silk should be placed and firmly tied in the groove formed by the ligatures already adjusted.

The blood effused into the peritoneal cavity should be removed, and it is usually recommended that this should be done by washing with boiled water or with a six per cent. aseptic solution of chloride of sodium at a temperature of from 100° to 104° F. The washing is most conveniently accomplished by means of a long tube conveying the water from an elevated vessel by a siphon action, the end of the tube being placed in turn in the various deep recesses of the abdominal cavity and the water being allowed to flow freely from the wound until it returns quite clear. But a suitable tube and a properly prepared lotion may not be at hand, and it is then well to remember that the peritoneum is capable of absorbing aseptic blood clot in very large quantities. I consider it safer to leave much clot in the belly cavity than to remove it with a lotion of doubtful asepticity. On one occasion I left a very large quantity of blood clot rather than wash out the peritoneal cavity, and the patient made a complete recovery. Unless it is very clean the pelvis should be drained by means of a Keith's tube, whether washing out has been resorted to or not. The wound should be sewn up in the usual way. The chances of success in operating depend mainly on prompt action, care in preventing septic contamination, and the

avoidance of unnecessary interference with the intestines, which may lead to an ileus or a pseudo-ileus during convalescence.

The question must arise as to how to distinguish the conditions indicating rupture of an ectopic gestation into the peritoneal cavity, and requiring immediate operation from those of the severe fainting attacks which sometimes occur in pregnant women. This may be difficult, but I do not think an error should occur. In slighter cases of hæmorrhage there is always time for consideration, and in cases of doubt a second opinion may be called in. But when a woman is dying of internal hæmorrhage there is no doubt as to the urgency of her condition, and, if the history and physical signs tally with those of an ectopic gestation ruptured into the peritoneal cavity, the abdomen should at once be opened. The question of waiting for the state of collapse to pass off can only arise if the patient's condition is clearly improving. When she is going from bad to worse, nothing will do any good but the immediate arrest of the hæmorrhage. This, of course, is to be followed by strychnine injections, the administration of brandy by injection or by the rectum, the application of warmth to the skin, and transfusion of saline solution if the state of the patient indicates such treatment.

The symptoms of an extrauterine gestation which has ruptured into the peritoneal cavity may, however, run a course which is much less alarming than that I have indicated. It not rarely happens that the effused blood forms a clot which becomes partially organized into a kind of living blood tumor, the outer layers of which are tough enough to prevent further effusion. In many such cases the blood seems to escape from the fimbriated extremity of the Fallopian tube at such an early period of gestation that no sign of an ovum is found. A tumor is formed which is fairly easily removed, its adhesions being readily separated. Such an effusion may of course be absorbed, but there seems to be a tendency to persistence in these clots.

In the following case some of the dangers and difficulties which may arise from an effusion of this kind are illustrated :

On March 21, 1896, I was asked to see a patient, twenty-three years of age, who had been married on December 24, 1895, at which time she considered herself in every way healthy. Her menstruation had been quite regular, not profuse and not painful, the last period before marriage having begun on December 11 and ceased on the 15th. In January she did not menstruate, but on January 25 she began to have a very slight show, which appeared every day for four weeks. On February 21 she fainted when out

shopping, and on the 22nd she was supposed to miscarry. Substances "like bits of flesh" came away with some blood from the vagina, but these were not seen by any medical man. The patient lost blood for ten days, and then, whilst taking her breakfast in bed, she was suddenly seized by severe pain in the lower abdomen, became very sick, and fainted, it being an hour or more before she recovered. The pain persisted, and she continued to feel faint and sick at frequent intervals. A few days after the first onset of pain and faintness the skin became yellow, but it gradually resumed its natural color. The bowels were constipated, and there was considerable tympanites, but both conditions were greatly relieved by enemata.

When I saw the patient on March 21, eighteen days after the most severe attack of pain and faintness, there was slight fullness of the abdomen, which was everywhere resonant. There was a tender swelling rising out of the pelvis, and extending two-thirds of the distance between the pubes and the umbilicus on the right side, and not quite so high on the left. The sound passed two and one-half inches into the uterus, which lay in front of a very tender mass filling the pelvis. The uterus was slightly movable from side to side, and I judged that the swelling was in Douglas' pouch, and not in the broad ligament. If it had been in the broad ligament the uterus would have been more fixed, and either pushed over to one side if the disease had been unilateral, or surrounded by the abnormal tissue if both broad ligaments had been affected. The breasts did not show any of the signs of pregnancy except that the areolæ were slightly darker than is usual in a virgin. This might, however, have been due to the fact that the patient's complexion was naturally dusky.

I expressed the opinion that the patient had an extrauterine fœtation which had ruptured, and she was admitted to the Samaritan Free Hospital on March 23. On that day one of my colleagues saw the case with me in consultation, and his view was that the symptoms were insufficient to justify my diagnosis. In the evening of the same day at a debate on extrauterine fœtations at the Medical Society I shortly stated the foregoing facts and opinions, because they seemed to illustrate the practical difficulty of making an exact diagnosis in cases of this kind.

The patient continued in much pain, especially when the bowels moved, which only occurred after laxative medicine or an enema had been given. Her temperature ranged between 98° and 100.6° F., and her pulse varied from 88 to 100 per minute.

In further consultation with my colleagues the majority agreed

with me, so on March 27 I opened the abdomen in the middle line below the umbilicus, and found that it was not possible to pass the finger into any part of the pelvis because of adhesions of the intestine to the pelvic peritoneum. The lowest part of the most prominent coil of adherent gut had the ashen gray appearance of the cyst wall of an ovarian tumor when its pedicle has been recently strangulated by twisting, and there was a well-defined line marking off the discolored from the healthy portion of the gut, so that I at first thought I might be looking at a cyst adherent to the bowel. A careful examination showed that the discolored tissue was intestine, and on separating its attachments, which were very strong, from the bladder wall, I opened a cavity, from which there flowed a considerable quantity of thin serous fluid of a rather light color, but neither truly purulent nor offensive. With very great difficulty I separated other strong adhesions of the intestines, the walls of which proved tougher than their appearance led me to expect. A rounded clot behind the right broad ligament was exposed and easily removed; but the ovary and Fallopian tube were matted together and held so firmly down that it was difficult to make a pedicle. There were some tough adhesions towards the outer part of the broad ligament which I could not break through. After tying and dividing them, I found that I had cut off the tip of the vermiform appendix. I at once cleaned the divided mucous membrane, and, after placing a pair of forceps on the proximal end, I removed the tip. I was then able to separate the broad ligament freely on its outer edge and to pull up, tie off, and remove the right ovary and Fallopian tube. On returning to the appendix, I found that the forceps which had been placed on its mucous membrane had by their weight drawn the mucous coat out of the other coats. This made it extremely easy to remove the appendix by the plan recommended by Mr. A. E. Barker, namely, by tying the mucous coat close to the bowel, pushing the ligatured portions inwards and closing the wound in the other coats separately.* There was still much inflammatory adhesion of the bowel deep in the pelvis, but, considering the obviously damaged vitality of the gut, I did not think it wise to do more towards separating the adhesions than was required to free the left ovary and Fallopian tube, which were otherwise healthy. I put a short glass drainage tube in Douglas' pouch, the deep end being placed to the left side, where it seemed to press least on the intestines.

The patient was put to bed in fairly good condition, and the

**British Medical Journal*, 1895, Vol. i., p. 863.

severe internal pain from which she had suffered was immediately and completely relieved by the operation. The highest temperature following the operation was 101.2° F. in the vagina on the fourth day ; the highest pulse was 128 the first night. There was no trouble in any way during convalescence, but the condition of the discharge from the drainage tube caused me great anxiety. The amount of discharge was always slight. After the first day, however, its odor was distinctly faecal. As usual, a sponge wrung out of a solution of carbolic acid, and enclosed in a rubber sheet, was placed over the end of the glass drainage tube, the flange of which was passed through an opening in the rubber sheet. It was remarkable that the discharge collected in this sponge was free from odor, whilst that sucked out of the glass tube by means of a syringe and small rubber tube was extremely offensive ; and yet, before the dressing was finished, this also was free from odor. It seemed to me that the bowel was not ruptured, and that the odor was due to the passage of gases, or bacteria, through the damaged wall of the gut. I felt certain that the removal of the vermiform appendix was not the cause of the offensive odor of the discharge, because there was a layer of fairly healthy tissue over the ligatured mucous membrane, and no leakage could have taken place from the bowel at this part without causing very serious constitutional disturbance. It had, moreover, been evident at the operation that part of the bowel was almost sloughing, and so in a condition to favor the escape of its gaseous contents. Obviously, it was not desirable to keep a hard glass drainage tube in contact with this gut ; but, on the other hand, I judged it imprudent to put in a much smaller tube, and it was possible that if I took the glass tube out with a view to putting in a rubber one of the same size I might not be able to get the new tube into the proper channel, and might do much damage by the change. I therefore left the glass tube in until, after the lapse of nine days, there was hardly any discharge, and this not always offensive. I then inserted the largest rubber tube that would go through the glass tube, and drew out the latter over the former. For a few dressings after this the discharge was as offensive as it ever had been, but, as before, the odor only continued for a minute or two after the discharge was removed from the tube by suction. The tube was gradually shortened, and the discharge ceased to be offensive after April 14. The tube was finally removed on April 25. The lower two inches of it and all the interior were quite black from the action of decomposing material on the red rubber. The patient went home on May 9 ; menstruation returned in June, and has been

regular ever since. I saw the patient this morning. She considers herself quite well, and looks very well. She has no trouble from the bowels, no pain and no tenderness in the abdomen. The uterus is much more free in the pelvis than I should have thought possible.

Mr. Targett kindly examined the specimen removed. There was no foetus found amongst the clot or in the fluid. The Fallopian tube was ruptured about an inch from its fimbriated extremity, the abnormal openings being less than an inch apart. The wall of the sac with which they communicated showed degenerated chorionic villi imbedded in laminated blood clot.

The course of a case of extrauterine gestation may turn in still another direction when rupture of the Fallopian tube takes place. This tube marks the upper part of the broad ligament, and is surrounded by the peritoneum forming that ligament in exactly the same way as the peritoneum of the mesentery surrounds the bowel.

The greater part of the circumference of the tube is therefore free in the peritoneal cavity. But the site of the rupture is supposed to depend on the position of the placenta, which eats into and weakens that part of the wall of the tube to which it is attached. Hence, it may happen that the rupture takes place into the cellular tissue between the folds of the broad ligament. The liability to rupture in this direction is doubtless increased by the enlargement of the tube which takes place before it bursts, and which must separate the layers of the broad ligament to some extent. When rupture occurs into the cellular tissue the symptoms induced are less serious than when the peritoneal cavity is opened. The symptoms due to the pregnancy are of course of the same indefinite character referred to above, but the amount of hæmorrhage is limited to the capacity for rapid distension of the cellular tissue and the accident is rarely immediately fatal. On making a bimanual examination the conditions found are quite different in the two cases. When the blood is in the broad ligament a well-marked tumour is found which pushes the uterus forwards and to the healthy side, and fixes it in that position, the greater part of the pelvis being filled by a hard mass, which may be felt also above the pubes. In the management of this condition there is usually time for consideration as to the best line of treatment to adopt, and it is said that many patients recover without operation, the effused blood and the foetus with its membranes being absorbed. When a cure takes place without operation, however, there is always room for doubt as to the diagnosis, and it seems to me that whenever an extrauterine foetation is

clearly diagnosed it should be removed, whether it has ruptured into the peritoneal cavity or into the cellular tissue. Even if it were proved that many cases recover without operation, it is certain that a woman's life is not safe with a dead fœtus in the connective tissue of her broad ligament. Although, on the one hand, complete absorption of the fœtus, its membranes, the placenta, and the effused blood may take place; on the other hand, suppuration may be induced, and the abscess formed may burst into the vagina, bladder, rectum, or small intestine. The risks of such a termination are obviously very great, and if the patient survive it can only be after a prolonged period of exhausting febrile disturbance.

The dangers are also great if, as sometimes happens, the fœtus continues to develop after the rupture of the tube. This may occur, when there has been distinct evidence of a rupture, but the tube seems sometimes to give way so gradually and gently that no symptoms are induced. It is in such cases that the pregnancy may go on to term without giving any cause for consulting a physician on the part of the patient. Of course the longer the fœtus lives the more definite are the evidences of pregnancy.

When the development of the fœtus goes on between the layers of the broad ligament, it would seem that its relations to neighboring structures may vary exactly as those of an ovarian or broad ligament cyst vary. On the one hand, the sac containing the fœtus may have a distinct pedicle formed by the broad ligament, and in some such cases it has been said—perhaps rightly—that the fœtus is not between the layers of the broad ligament, but that it has developed in the ovary itself from the beginning. On the other hand, the developing fœtus may separate the layers of the broad ligament, and raise the whole peritoneum of one side of the pelvis and much of this membrane on the other side completely away from its proper connections, so that it is reflected from the posterior abdominal wall on to the sac containing the fœtus well above the pelvic brim, and from the anterior wall at a level half way between the navel and pubes.

At any time inflammatory changes may be induced in the sac of an ectopic gestation. Its walls may become so attenuated that their blood supply is dangerously diminished, and then, as in the case of an ovarian tumor, either a rupture takes place, or, more generally, adhesions form to neighboring structures.

If the fœtus dies it may be absorbed. Very rarely its fluid parts are absorbed, and the solid parts are preserved in the tissues, retaining a more or less normal appearance for an indefinite period. As a

rule it causes suppuration, and finds an exit for itself through some of the adjacent hollow viscera or into the vagina, causing, of course, great danger before a cure can finally take place.

The vagina and rectum offer comparatively safe lines of egress. On the other hand, I have seen two cases in which the sac of a full-grown foetus had become adherent to everything it touched and a rupture had taken place into the small intestine. It is hardly possible for a patient to have a more hopeless complication. If the chances of the development of inflammatory changes are considered, and also the fact that, whilst the placenta and the sac containing the foetus are small, the probability that the surgeon will be able successfully to remove them is greater than at a later period, it seems to me that in the later stages, as in the earlier stage, of an extrauterine foetation, whenever it is diagnosed an operation for its removal should be undertaken as soon as possible, and no attempt should be made to wait till the child is viable. The dangers to the mother are too great to warrant any such delay. If the child is already viable when an extrauterine pregnancy is discovered, of course every effort should be made to save both mother and child.

The operation necessary must vary with the relations of the sac containing the foetus. If there be a well-marked pedicle, the operation may be as easy as a simple ovariectomy. But if the foetus develops under the peritoneum, and if this membrane is reflected on to the top of the abnormal gestation some inches above the pubes, it is better, if possible, not to open the peritoneal cavity at all, but to extract the child by an incision between the reflection of the peritoneum and the pubes. The foetal membranes must be removed, and a drainage tube should be placed in the wound. In other cases, when the peritoneal cavity must be opened it is often possible to stitch the edges of the incision into the gestation to those of the abdominal wound, and thus to provide efficient and safe drainage.

There is room for a difference of opinion as to whether the placenta should be removed at once or left to separate and come away later. On the one hand, there is the risk of hæmorrhage; on the other, the risk of septicæmia. The surgeon must be guided by the circumstances of the particular case as to which plan he should adopt, and he should chiefly note whether it is likely to be possible to prevent hæmorrhage from the parts to which the placenta is adherent by ligatures or by the application of pressure. If so, the placenta should be removed. If the prospects of being able to arrest hæmorrhage appear small, it may be safer to leave the pla-

centa to separate and come away later. When the peritoneal sac is not opened, or if the incision in the sac containing the pregnancy can be fixed to the incision in the abdominal wall, the cavity from which the foetus has been removed may be packed with iodoform gauze, and a large opening may thus be preserved for the exit of the placenta.

It is impossible in a short space to attempt more than an indication of the mode of dealing with these cases ; and, indeed, my own experience would lead me to the belief that there are few pathological conditions which produce such varied effects as an extrauterine gestation. Except in cases of emergency, therefore, I think this is one of the abdominal conditions which most requires experience before the surgeon attempts to deal with it.

Recently the early stages of an extrauterine gestation have been classed amongst those conditions suitable for treatment by abdominal section through the vagina. So far as my experience goes, the operations required in cases of ectopic gestation may differ so greatly in detail and may be so complicated that the fullest possible exposure of the parts to sight is essential for the safe performances of the necessary manipulations. The vaginal method of approaching operations on the broad ligaments seems to me only available in cases in which it is extremely doubtful whether there is any justification for operation at all. The method is specially unsuitable for a condition like an extrauterine gestation—for such a case, for instance, as the one I have related to you in some detail.

I have not mentioned attempts to kill the foetus by puncture of its sac or by means of electricity, because I consider such methods far more dangerous than an exploratory operation.—*British Medical Journal*.

THE TREATMENT OF LUPUS VULGARIS.

By DR. H. G. BROOKE,
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A CAREFUL observation of the insidious manner in which lupus vulgaris spreads beneath the outer surface of the skin, by means of outrunners and nodules too minute and too deep to allow of merely clinical detection, explains the at times insuperable difficulty of coping with the disease, and the consequent ever-increasing list of drugs and processes which are recommended by one and another as efficient means of doing so. An article by Dr. Jose Schütz ("Zur Behandlung des Lupus Vulgaris," *Arch. f. Dermatologie und Syphilis*, Bd. xvii., Heft 1) has in it a refreshing ring of enthusiasm, but tempered with a salutary strain of caution, and in places of pessimism, evidently born of long experience.

The ordinary lupus patient is an unhappy creature, who spends his youth, and perhaps more, in one long struggle with his malady. All sorts of methods are tried, and only too often, after apparently complete removal, the signs of the old trouble creep on again. That this should be so in a disease which is certainly local in character, or at least in its active manifestations, and which can be destroyed satisfactorily by many means, is mainly due to the difficulty of recognizing the earliest lesions, or by their inaccessibility. Schütz instances a type of case which is by no means rare. A child, which to all appearance is neither weakly nor tubercular, is brought with a dacrocystitis. A long course of the sound apparently cures this, but after a few years a chronic nasal catarrh supervenes, which is very resistant to treatment. A year or two later a few small pustules appear on the seemingly healthy skin of the nose and cheeks. If they are recognized as lupus foci, and not mistaken for mere acne pustules, an internal examination of the nose is made. Nothing more than the signs of ordinary catarrh are seen, for not even the most experienced observer can detect commencing tuberculosis in the nasal mucous membrane. A sound is used, and when pressed but lightly on the septum it suddenly passes through it into the

opposite nostril. The secretion which can be expressed from the lachrymal sac is examined carefully, and finally some tubercle bacilli are discovered.

These are the cases with the least hopeful outlook, for however carefully the complicated network of affected tissues, lachrymal sac and duct, skin, and mucous membrane of the nose may be followed up and rooted out, it can be hardly possible to hunt out all the lines of communication. But in those cases—and they form the great majority—in which the lesions do not affect the mucous membranes, but are situated on the open skin, whether they spread directly by local infection, or suddenly, owing to the action of some acute tubercular process, become general about the body in the form of multiple metastatic patches, their reappearance after treatment can only be due to lack of thoroughness in the process employed or in its execution. The first desideratum is, therefore, a practical and thoroughgoing method of destroying not only the visible, but also the invisible nodules in the skin.

The choice of methods by which this can be effected depends largely on the extent and position of the diseased area. If the lesion is recent and the process would not cause too great a cosmetic disfigurement, Schutz recommends a clean removal of the whole patch, and sewing up of the wound. In my opinion, this recommendation is by far too sweeping. It is true that excision will at once remove the disease, but in how few cases does lupus start in places in which the disfigurement caused by the dragging together of the sides of an open wound would not be very considerable, as on the face, or seriously interfere with the mobility of the part, as on the hands and feet. Then, again, he quite ignores the fact that it is precisely in these very cases in which he especially recommends excision, where the growth is young and fresh, that the best results are obtained by absorption brought about by the persistent inunction of ointments. By means of ointments containing the more penetrating mercurials, the oleate or the pure metal, assisted by the keratolytic action of salicylic acid or mollin, which increase their capability of penetration, I have several times removed completely and permanently superficial patches of lupus on the face and neck, the excision of which would have caused permanent disfigurement. And even if the absorption is not complete, or even not extensive, it is sufficient to limit clearly the area which should be excised, and often to reduce considerably its extent.

He certainly does mention the attempt which was made to promote the breaking up and absorption of the lupus tissue by the

injection of substances hypodermically into the general system. Koch's tuberculin he dismisses summarily in two lines. In this course, however, he is not quite justified, for Crocker (*Clinical Journal*, December 7, 1892; "Diseases of the Skin," 1893) is still satisfied that it both helps to heal lupus sores in young strumous subjects, and to cause the absorption of the hypertrophic scar-like tissue (lupus fibroma of Unna) in a way which no other means is capable of. But, as Crocker insists, it should only be regarded as a subsidiary help, and employed when everything which can be scraped out has been removed, and the floor of the wound cauterized with carbolic acid, salicylic acid, or some like selective drug. When thus used it assists in securing a longer freedom from recurrence, and a larger amount of permanent cure.

Morris is of the same opinion ("Diseases of the Skin," 1894): "Tuberculin seems to modify the lupus process in such a way that the disease becomes more amenable than before to local treatment. My own experience has been decidedly encouraging, all the more that my earlier expectations were grievously disappointed. . . . Further observation has convinced me that tuberculin, while failing by itself to effect a cure, prevents recurrence when the disease has been destroyed by other means." Twelve old cases, which had been treated by all kinds of surgical and chemical methods for years, were subjected to the full action of tuberculin injections, and although they quickly relapsed the after treatment by the various procedures which had previously failed has now resulted in the practical cure of the disease. Morris thus differs from Crocker in using the injections as a preliminary, and not as an after, cure.

Of Hans Hebra's thiosinamin there is as yet but little to be said. In three cases in which I tried it the effect was not marked, but it caused no constitutional disturbance. In one case it seemed to have a beneficial action, but not nearly so decided as in those shown by Hebra himself. Probably his further statements about its action and method of exhibition in the Congress this month may help to determine its real worth. If it be found really to remove the indurations, soften the scars, and clear away the corneal leukomata, as it appeared to have done in some of his cases, it will be a decided addition to the armamentarium.

The extensive transplantations of healthy skin on to the wounds caused by excision of whole lupus patches, either by flaps of epidermis merely shaved off a sound limb, as in Thiersch's method, or by thick flaps embracing the whole skin, as in Wolff's, are more in favor with the surgeon than the dermatologist. I have not had a

favorable experience of Thiersch's process, and what I have makes me agree with Schutz's criticism concerning it, that it is very uncertain in its results, and too dependent for its success on either unknown or unpreventable factors. Unexpected vomiting during the dressing, a restless night, and many other eventualities may easily lead to a complete failure; and in private practice it is not easy to get the patients, or their friends, to submit to the loss of a second slice being taken from another limb. In the discussion on this subject in the British Medical Association, in 1893, it was stated by those who had seen a number of supposed successful cases that the disease was by no means completely removed, and that the cosmetic results were certainly inferior to those produced by slower but less radical procedures.

For the great majority of lupus cases we are thus driven back to the older methods of mechanical removal and selective caustics. The method so long in vogue in the Vienna School of burrowing through the nodules with a point of nitrate of silver, toughened by fusing with nitrate of potash and cooling slowly, may be considered as obsolete. It is tedious, very painful, except in a few cases—the very few which are curable by erosion alone—inefficacious, and may lead to the darkening of the scar by the deposit of silver oxide. Veiel, of Constatt, communicated to me his method of treatment, which I have used many times with good effect. He has since published it in the *Deutsche med. Wochenschrift*, No. 93, 1893. It is as follows: With a sharpened stick of caustic potash the whole of the lupus area is first ploughed up. This must be done quickly, and the surface rapidly dried with lint, or the erosive action is apt to be too great. The wound is then dressed with a ten per cent. pyrogallol ointment, which is kept in place as long as the patient can bear it. When it becomes too painful, a two and a half per cent. ointment is substituted, and under this the wound is allowed to heal up. The healing is slower than under milder dressings, but the scar produced is cleaner and softer. This process certainly gives excellent results. It is distinctly painful, but pain is, unfortunately, a more or less inevitable concomitant to all the operative and caustic measures employed in treating lupus. In superficial cases the necessity for narcosis may be avoided by employing a strong pyrogallol plaster (Beiersdorf's or Turinsky's), which efficiently corrodes the nodules, leaving a slough which heals quite satisfactorily with the weak pyrogallol ointment.

The method which Schutz recommends is, in some respects, a copy, though it seems a quite unconscious one, of Veiel's. In sev-

eral respects it seems to be more efficacious, and his very temperate accounts of his results are very encouraging. It is as follows: Under anæsthesia the whole lupus surface is vigorously scraped, and the surrounding edge for the distance of $\frac{1}{2}$ — $\frac{3}{4}$ inch thoroughly scarified by means of a multiple scarifier. Very free bleeding follows; and as soon as it has been completely stopped by pressure with moist gauze compresses the whole area is painted over with a saturated solution of zinc chloride in alcohol, to which a small quantity of pure hydrochloric acid has been added to keep it clear. The surface turns white, and becomes intensely painful for the next six hours. The pain is best combated by ice compresses. In about twelve hours the whole field of operation swells considerably, and there may be œdema of the surrounding parts, but with the application of boracic lotion dressings this all gradually subsides, and in one or two days the wound is clean. Dressings of pyrogallol vaselin (1:4) are next applied, and changed three times daily. On the third day the pain again becomes considerable, and the wound black, sloughing, and bullous. After four days of this dressing the boracic lotion is again used, and in four or five days the wound is again clean. Then, again, another four days of pyrogallol, the effect of which and the accompanying pain being this time much less marked. With a further two days of boracic lotion the wound is again clean, and then follows the third and last application of the pyrogallol, which now lasts only three days. The wound has by this time generally begun to show signs of healing, and a few days of boracic lotion serve to make it smooth and healthy. Iodoform powder and boracic ointment (I find zinc ointment with ten per cent. carbolic acid clean and very effectual) soon promote complete closure, but the best effect from a cosmetic point of view is obtained by the employment of a mercurial plaster. The whole time taken to heal an extensive wound is from two and a half to three months, and the resulting scar is smooth and soft.

The rationale of the process is the destruction not only of the bulk of the lupus tissue, but the exposure and gradual sterilization of the spores which lie in the minute masses of the round cells and plasma cells, which microscopic sections show to exist round the walls of the vessels in the corium for a distance of $\frac{1}{2}$ — $\frac{3}{4}$ ctm. from the visible lupus nodule. It is these outlying foci which are the cause of the constant relapses, and unless they can be reached and the enormous resistance of their contained spores overcome every treatment remains ineffectual. The zinc chloride opens the whole wound without coagulating the blood, and thus renders possible the

entrance of the pyrogallol which, by its repeated applications, sterilizes by degrees even the most obstinate spores. This, at least, is Schutz's explanation. He condemns the actual cautery, because it coagulates the tissues and stops the way for the after action of chemical agents. But in this assertion he is certainly wrong, at any rate, as far as the use of the punctiform galvano-cautery is concerned, for if the hole produced by the point be filled at once with salicylic acid and perchloride of mercury dissolved in spirit the small partition of coagulated corium is soon removed and the surrounding tissue exposed and satisfactorily cleared of spores and bacilli. He acknowledges the necessity of the cautery in some operations on the mucous membranes where the tuberculous area is with difficulty accessible, but finds that in places such as the mouth a painting with 20—30 per cent. zinc chloride solution every three days is equally effectual. Strong zinc chloride is certainly one of the most effectual applications for lupus tissue of the nose and mouth, but its action is distinctly increased by previous puncturing of the lesions with the cautery points.

The after results in all these cases depend very largely on the patient himself. No operation for lupus, however carefully carried out, can be relied upon to give an absolutely perfect result. Some relapse, however slight, is almost certain to recur, even though it be but one or two minute nodules, and it is only when the patient will allow every recurrent nodule, whilst still in its early stage, to be destroyed at once that the disease can be finally removed. For this purpose I use a match stick, or the cautery point, followed by the application of corrosive sublimate and salicylic acid ; Schutz waits until the bleeding has been stopped by compression, and then applies zinc chloride solution. But whatever process be chosen, the constant control and immediate destruction of recurrent nodules remain an absolute *sine qua non* of successful treatment.

And, lastly, but of equal or even greater importance than the direct operative attack, the general life and hygiene of the patient must be attended to, his tuberculous or scrofulous tendencies combated, his food, clothing, living quarters, and possibly his employment altered and improved. For only if these conditions are favorable can we look forward to a finally successful result.—*Medical Chronicle*.

Progress of Medicine.

MEDICINE

IN CHARGE OF

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AND

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GLYCERIN IN CERTAIN AFFECTIONS OF THE STOMACH.

Sawyer (*Lancet*, July 4, 1896) remarks that some years ago Dr. Sydney Ringer recommended the administration of glycerin by the mouth in certain affections of the stomach. Acting upon his suggestion, he has since treated many cases of painful gastric digestion, such as are usually attributed to subacute or chronic catarrh of the gastric mucous membrane, with glycerin, with satisfactory results. So far as he has seen, this employment of glycerin is not widely extended in professional practice, and he has not noticed further reference to it in the periodicals. The familiar routine seems to be a ringing of changes upon bismuth, alkalies, acids, and digestives. Many cases of gastric maladies of the kind indicated yield to glycerin; he gives a drachm, a drachm and a half, and sometimes even two drachms, some with a little of simple bitter stomachic tincture, diluted to an ounce with water, thrice daily, between meals.

NEW TREATMENT FOR SCIATICA.

Dr. Negro, from Turin, has successfully treated sciatic neuralgia by digital pressure over the painful points. The method employed is as follows: The patient is placed in a horizontal position, with the lower limbs extended and in contact with each other, so as to completely relax the gluteal muscles. Determine by palpation the

situation of the great sciatic notch, through which the sciatic nerve passes; apply the tip of the right thumb over the nerve, and above the nail of this place the left thumb. With the thumbs in this position, a very energetic pressure is exerted during fifteen or twenty seconds directly; slight lateral movements being executed in every direction, but without displacing the thumbs. After an interval of a few minutes the pressure is applied a second time in the same way, this operation being much less painful than the first. After the second compression, the patient is, as a rule, able to walk without great difficulty, and the pain is relieved for a time varying between several hours and a day. The compression is repeated every other day, six sittings being usually sufficient for the complete cure of sciatic neuralgia, a result which Dr. Negro has obtained in the immense majority of cases (100 out of 113) in which he has had occasion to employ this method of treatment.—*Medical Times and Hospital Gazette.*

COLD BATHS IN DELIRIUM TREMENS.

The *Presse Med.* announces that cold baths, eighteen degrees C., have been found very effective in quieting even the most violent attacks of delirium tremens. The patient is placed in the water up to his shoulders, and it is poured over his head. The bath is repeated two or three times in the same day. The effect was surprising in two cases described, where all other treatment has been without results. A few glasses of warm wine were given afterward, followed by quiet sleep for two hours.—*Jour. Amer. Med. Assoc.*

NARROWING OF THE PULMONARY ARTERY CONSIDERED AS A MANIFESTATION OF TUBERCULAR HEREDITY.

Commencing with the remark that narrowing of the pulmonary artery is commonly looked upon as a cause of phthisis, Victor Hanot, M.D. (*Gazette hebdomadaire de Médecine et de Chirurgie*, March 19, 1896), reports three cases that seem to lead to another interpretation. The first was a male of twenty-six years; both parents had died of phthisis, and he had always been delicate and, in his youth, slightly cyanotic. Examination of the heart revealed a harsh frémissement at the base, and a loud systolic murmur in the second left intercostal space transmitted towards the middle of the left clavicle. The second patient was a female of twenty-six years, whose father had died of phthisis, and who had suffered from palpitation upon exertion; at twenty she had had an attack of acute

articular rheumatism, and the cardiac phenomena were the same as in the preceding case ; aside from a slight temporary bronchitis the lungs were normal. The third was a female of sixteen years, whose father had died of phthisis, and whose mother was suffering from the same disease. Two brothers had died of tubercular meningitis in youth. She had always suffered from palpitation, but never had from articular rheumatism ; the lungs were intact ; the heart presented the same phenomena as in the preceding case. Hanot discusses the possibility of this form of stenosis being similar to the congenital narrowing of the aorta such as occurs in chlorosis, and whether both are not manifestations of heteromorphous tubercular heredity. He believes that this narrowing may have absorbed the whole or the greater part of the inherited tubercular tendency, and that it acts therefore to a certain extent as an element of immunity against phthisis.—*Internat. Med. Mag.*

OBSTETRICS

IN CHARGE OF

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ON THE RELATIVE FREQUENCY OF PELVIC CONTRACTIONS.

In attempting to deal with the somewhat minute and precise points as to the forms of pelvic contraction most commonly found in my maternity practice I have thought it best to endeavor to do so, on the figures showing the work, under my charge, of the Royal Maternity Charity of London during the last ten years. The number of deliveries during that period is 38,035; in other words, nearly 4,000 per annum. These deliveries are not confined to any special quarter of London, although they include those which occur in the poorest and least healthy districts. The result of the figures I have to lay before you are corroborative of the statements made by my father and myself in our "System of Obstetric Medicine and Surgery," published in 1884. We there pointed out, in resuming this question, that: "It is quite probable that deformities vary in kind and degree in different countries, as they certainly vary in frequency. In England the poorer classes are better fed, clothed, and housed than in most of the countries on the Continent, and the general hygienic condition is superior. In some districts on the Rhine and around Milan osteomalacia is a frequent result of the miserable conditions under which the laboring classes exist; whilst in England the disease is so rare that many men in large practice have never seen a case. This will account for the richness of the literature upon the narrow pelvis produced by our German brethren, and the meagreness of our own. It is the best answer to the reproach made against us by Spiegelberg. If we cannot vie with the German school in writings upon the subject, it is because they write from abounding materials which with us are wanting. We have

prevented and abolished those conditions. Before the introduction of the Factory Act, some forty years ago, an act which limited the ages at which girls may be employed in this country, deformities of the pelvis were common in London and other large manufacturing towns." In Manchester, where the Cæsarean section was then a common operation, that method of delivery has died a natural death. Pelvic deformity has almost ceased to exist. My own personal experience of over twenty years in difficult midwifery in London is : That pelvic deformities have, and still are, decreasing, as a result of the improved hygienic conditions referred to above. It is to a great extent as a result of the infrequency of pelvic deformities in London that it is impossible for me to give such minute details on pelvic deformities as you seek. Given the relative absence of these conditions it is impossible to make measurements of conditions which we do not come across. I may, however, state, generally, that in London the simple flat pelvis is by far the most common, and next to this the non-rachitic with small conjugate, and the flat rachitic contracted in all diameters. In my experience it has been the exception to see any other form of distortion of the pelvis. I may here state that my father and I have up to the present only seen one case of osteomalacia in London. In the measurement of the pelvis, I have invariably used the hand alone. The finger passed under the pubic arch to the promontory of the sacrum gives a measurement 0.50 less than the true conjugate diameter. When a still more precise measurement is desirable I explore the pelvis with the hand, the patient being in a state of narcosis. This method allows of the most perfect pelvimetry. I may state that during the last ten years there have been delivered under my superintendence in the Royal Maternity Charity of London a total of 38,065 women. Of these eighty have died. Out of this number no woman has been delivered by Cæsarean section. The operation of craniotomy was only necessitated in fifteen cases. Version as a means of delivery was employed in seventy-four cases. The forceps was used to effect delivery in 196 cases.

A rough glance at the above statistics, which, by the way, are trustworthy, affords ample testimony to the statement I have made as to the infrequency of pelvic distortion in London. It must be borne in mind that a large proportion of these contractions of the pelvis are found in our clinic among recently arrived destitute foreign immigrants. Of the cases in which the pelvis was judged to show a conjugate diameter of less than 9.5 cm., there were 150. There were forty-five cases of generally small pelvis, and no case of osteo-

malacia. As I have just remarked, the above figures would make the proportion of women in London with deformed pelvis appear to be larger than it really is. The imported deformed pelvis is an integral factor, but one which is not easy to gauge with absolute precision. The figures which I have laid before you of my experience in the Royal Maternity Charity are equally true as tested by those of the British Lying-in Hospital during the seventeen years that I was attached to that institution as accoucheur. In my opinion the above figures may be viewed with satisfaction. The small maternal mortality of eighty in 38,065 deliveries, the absence of the Cæsarean section, and the small number, only fifteen, of cases in which craniotomy was resorted to, are all witnesses to the benign and preventive influence of better sanitary conditions of life. The moral of this is that the real treatment of contracted pelvis consists in preventive treatment.—*Read at the Gynecological Congress, Geneva, by Fancourt Barnes, M.D., F.R.S. Edin., Senior Physician, Royal Maternity Charity of London.*

ALLEVIATION OF PAIN IN LABOR.

At the Pirogoff Congress in Cracow Hr. Bukoemski read a paper on the alleviation of pain in normal labor. After careful consideration he concluded that alleviating remedies did not retard labor, they never did harm and were sometimes of great service. By the toxodynamometer (ether forty-five cases, and chloroform-eight cases), he determined that when ether was used the pulse and respiration were unchanged. The labor was shortened, albumen was never seen in the urine, the uterine contractions were more powerful, and involution was improved. Ether was a reliable and non-dangerous drug that did not require accurate dosage. Chloroform rather retarded labor, but was not injurious to either mother or child. Ether deserved the preference. Both were good and reliable.

Hr. Ssawitzki had obtained good results from antipyrine, of which he gave ten grains along with fifteen to twenty-five drops of Tr. opii in enema, and repeated in from two to six hours.

Hr. Dobronrawow purposed a collective inquiry into the alleviation of pain during labor. An inquiry of that kind was being carried on in Russia, and the report would be submitted to the twelfth International Congress of Medicine in Moscow. The proposal was accepted by the Congress.—*Medical Press.*

STRUCTURE OF THE RIPE PLACENTA, AND THE CHANGES WHICH
OCCUR IN PLACENTÆ RETAINED IN UTERO AFTER THE
DEATH OF THE FÆTUS.*

The author (Thomas W. Eden, M.B., M.D., M.R.C.P. Lond., Physician to Out-patients, Chelsea Hospital for Women) commenced by pointing out that the placenta, though an organ of complex arrangement, was composed of the simplest elements, and when its purpose was fulfilled was shed; in other words, the placenta is a caducous organ. All caducous structures commence to degenerate for an appreciable time before they are cast off; indeed, the immediate cause of their shedding is that they are degenerated. He then discussed this failure of vitality as evidenced by certain changes in the placental tissues, all the constituent elements of which are affected. In respect of the changes in foetal structures he pointed out that the first and most important change was a slowly-progressing obliteration of a certain number of branches of the allantoic (umbilical) arteries, the affected branches being most numerous in the marginal cotyledons, and the process being of the nature of endarteritis. The corresponding capillaries and veins remained unaltered until the circulation through them was suspended by the ultimate complete obliteration of the arterial branches supplying them, when they became thrombosed. This process might be detected as early as the seventh month, and at term the total number of arteries affected was numerous, though few of them became altogether obliterated except in the marginal cotyledons. The first effect of the diminished blood supply was to cause atrophy and degeneration of the epithelial covering of the villi, which underwent hyalin or fibrous degeneration (coagulation necrosis).

Layers of true fibrin were then deposited over the degenerated areas from the maternal blood. In this way the villi become enclosed in thick layers of fibrinous material and neighboring villi become welded together. Scattered areas of consolidation are thus formed in the spongy placental tissue, to which the name of "white infarcts" has been applied. Some of these may attain the size of a pea or a filbert, and even an entire cotyledon may be consolidated. The structures involved in the areas of degeneration atrophy, and in the larger infarcts there are seen evidences of fatty and calcareous degeneration. He also described another form of consolidation, known as the non-fibrinous infarct, which occurs in the ripe placenta. This form, he suggested, was probably due to blocking of the maternal arteries, and not to foetal endarteritis.

*Abstract of paper read before the Obstetrical Society of London, Nov. 4th, 1896.

Infarction represented, he observed, the extension during the later months of gestation to the placental chorion of changes which occur with regularity in the extra-placental chorion during the earlier months. It is not a pathological change, but is the natural outcome of the processes of evolution and decline. Passing on to the changes in the maternal structures, he referred to the fact that thrombosis of the subplacental sinuses had been described as occurring as early as the seventh month by Friedlander and Minot, but pointed out that as the number of sinuses affected was not great and as there is free anastomosis the intervillous circulation was probably not materially hindered. The superficial (compact) layer of the serotina became the seat of a degenerative process akin to that affecting the chorionic epithelium, the change beginning in the intercellular substance, which is converted into a deeply-staining fibrillated material allied to fibrin. The protoplasm of the decidual cells then becomes involved, and finally their nuclei break up and disappear. Fibrin from the maternal blood is deposited on the degenerated surface. Coiling serotinal arteries may sometimes be found at term, thrombosed for a considerable distance, and veins are often more or less completely blocked by deposits of fibrin.

Changes in the Retained Placenta.—He defined a retained placenta to be one which has been retained *in utero* after the death of the foetus, irrespective of the period of gestation to which it belonged or of the length of time that had elapsed between the death of the foetus and the evacuation of the uterus. The two factors to be borne in mind were (1) the morbid condition which led to the death of the foetus, which may have directly affected the placenta, and (2) the arrest of the foetal circulation, *i. e.*, the death of the villi. Changes due to the first factor he called primary, and those due to the second factor secondary. When the changes were far advanced the difficulty in distinguishing primary from secondary changes was very great. He divided these cases in two groups, (a) cases where the placenta had been retained only for a short time after the death of the foetus, born in a non-macerated or but slightly macerated condition, and (b) cases in which the placenta had been retained a considerable time and the foetus was more or less markedly macerated. In the second group the primary changes are obscured by the superimposed secondary changes, so that the best chance of studying them occurred in the first group. The secondary changes, on the other hand, were most pronounced in the second group, though their beginnings might be found in the first. When the foetus perished the placenta might remain attached

to the uterine wall and the maternal circulation through the intervillous spaces continue, although the foetal circulation through the villi had ceased. Although technically dead, therefore, the villi remained in contact with the maternal blood and were thus preserved from decay, so much so that after retention of several weeks areas of villi might be found which could scarcely be distinguished from those of living placenta. At the same time the villi never showed the least sign of growth or multiplication, and in retained placantæ signs of recent activity were altogether wanting. The condition of the extra-placental tissue formed a marked contrast to that of the placenta. The membranes, the cord and the tissues of the foetus itself necrosed with rapidity because there was nothing to preserve them from the fate of dead organic matter. Where the maternal circulation through the intervillous spaces was maintained, no marked change occurred in the placental villi, but as that circulation was arrested and the villi became cut off from the maternal blood they perished. He then proceeded to trace (1) the arrest of the maternal circulation, (2) the changes which result in the villi, and (3) the changes in the extra-placental tissues. He demonstrated by photographs of sections that the arrest of the maternal circulation occurred by a process similar to that already described in connection with the formation of white infarcts in the living placenta. He insisted, therefore, that it was necessary to examine with great care evidence adduced in support of the doctrine that a vital process such as cell proliferation could occur in foetal tissues after the foetus itself had perished. The obliteration of the intervillous spaces in the retained placenta appeared to be due rather to progressive failure of the maternal circulation from shrinking of the uterus and loss of the stimulus of the growing ovum than to foetal arterial changes. The maternal blood clotted more readily and deposited fibrin more freely than in the living placenta.

The intervillous spaces were first obliterated around infarcts and upon the foetal and maternal surfaces of the placenta. In this manner the retained placenta becomes extensively consolidated, and its tissues display microscopical characters closely allied to those of infarcts and differing widely from those of spongy placental tissue.

He had never succeeded in finding any true connective tissue formation in any of his specimens. Without vascularization there could, he observed, be no true formation of connective tissue, and he did not believe that any occurred. On the contrary, he believed that the blood-clot underwent the usual necrotic changes and ultimately broke up and disappeared. Although the obliteration of the

arteries was irregularly distributed, the placenta which had been longest retained was usually the most extensively consolidated. The changes in the villi, he explained, were practically the same as in the middle and inner zones of large infarcts in the living placenta. They underwent atrophy and necrosis, lost their epithelial covering, then their connective tissue, stroma, and blood vessels, and finally their nuclei. In addition, large areas of placenta might become consolidated by the process of non-fibrinous infarction. Extensive fatty degeneration usually occurred in all the consolidated areas, and calcareous deposits were also abundant.

The most frequent cause of the death of the fœtus in the earlier months of gestation appeared to be some pathological condition of the decidua, and one must be careful to distinguish between primary and secondary changes. In retained placenta of the fifth month or later the compact layer is generally fused with a superjacent stratum, consisting of several rows of villi embedded in fibrin and blood-clot, its structure being barely recognizable. The spongy layer, as a rule, was much less altered, but was generally thinned and atrophied, though the characteristic decidual cells were distinct and the vessels often full of blood. The process of fibrinous degeneration never affected this layer except to a very slight degree, a point of importance, seeing that any process tending to consolidate this stratum would inevitably render separation of the placenta difficult. The amnion, he added, always necrosed after the death of the fœtus, though the changes proceeded less rapidly over the placenta than over the extra-placental chorion. The extra-placental chorion and decidua vera also in all cases, but not so rapidly as the amnion, being longest preserved in the neighborhood of the placental margin, and perishing soonest in parts most distant from it.

The changes in a retained ovum which followed death may be summed up as follows:—(1) Necrosis of the following structures commencing at once; (*a*) the body of the fœtus; (*b*) the umbilical cord; (*c*) the amnion; (*d*) the extra-placental chorion and decidua vera. (2) Gradual arrest of the maternal circulation through the placenta by thrombosis of the intervillous spaces. (3) Necrosis of the various divisions of the placental chorion as they become shut off from the maternal blood; and (4) fatty and calcareous degeneration of the necrosing tissues.

DISCUSSION.

Dr. Horrocks asked how the placenta itself received its nutrition, and how it increased in bulk, that is to say, did the corpuscles of the fœtal blood absorb from the maternal blood the food stuffs neces-

sary for the development of the placental structure, or did the villi themselves bathing in the maternal blood, take out of that blood the nutritive substances they required? Inasmuch as it was possible for a degenerated placenta to grow to a considerable extent, as in the vesicular mole, he thought it was quite conceivable that a retained placenta might grow likewise; in other words, if it could grow when diseased, there was no apparent reason why it should not grow when healthy. Clinically, he had seen cases suggesting that growth had taken place in retained placenta. Looking at the sections, it seemed as if after the denudation of the epithelium the foetal and maternal blood must come into contact. (Dr. Eden pointed out that the capillary wall still remained.) He added that the evidence of the mingling of the foetal with the maternal blood under certain circumstances was incontestable, though, on the other hand, there was overwhelming evidence that, except under pathological conditions, no such mingling took place.

Dr. Griffith protested that they were all desperately ignorant of the pathology of the placenta. Denudation of the epithelium was certainly a common thing in advanced placenta, but what had struck him particularly was the considerable thickness of the tissue which existed between the trunks of the capillaries and the surface of the chorionic villi, so that even if the epithelium were absent there would still remain a separation. With regard to extravasations into the placenta, he asked how there could be an extravasation into what was virtually a mass of circulating blood.

Dr. A. Routh asked which the author considered to be the most important of the changes that took place in the placenta, at or about term? He had noticed that in inducing premature labor, say at the eighth month, the placenta came away without any difficulty, and this raised a doubt whether the changes were as important in this respect as they were believed to be. He was surprised to hear the author say that the blood in the placenta never became organized, and asked whether this was believed to be the case under all circumstances, as, for instance, in cases of central apoplexy of the ovum. With regard to changes after the death of the foetus, one met with specimens of retained placenta where it was quite impossible to say how long it had been *in utero*. He recalled the case of a woman whose husband had been away for two years. She had had repeated hæmorrhages for six months, which had brought her to death's door, and her statement was that she had had a child two years previously, but conception had not taken place since. The pieces of placenta removed looked like pieces of placenta at full term of recent origin.

Dr. Dakin remarked that the author had not alluded to the cysts often seen in placenta possibly because he did not regard them as physiological. He had seen them in a fairly large number of placenta, usually situated in connection with infarcts, and containing a clear or grumous fluid.

Dr. Gardiner commented on the curious fact that the foetus was seldom affected by any anaesthetic given at the time of parturition, this being probably due to the non-mingling of the foetal and maternal blood. He referred to a case reported by Tait many years ago, in which after operation for extrauterine gestation near full term, the woman being under ether, the infant was found to be quite unconscious and its breath smelled of ether. He suggested that the structure and position of the uterus in these abnormal cases would account for the occurrence.

Dr. Eden, in reply, pointed out that the fact of there being marked degeneration of the chorionic villi after the death of the foetus in vesicular moles hardly justified the assumption of the possibility of actual growth in the healthy villi. The alleged hypertrophy in retained placenta had, he observed, been proved to be due only to haemorrhages into the substance of the placenta, and not to real hypertrophy. There was, however, a pathological condition of placental hypertrophy which led to death of the foetus. The areas of degeneration, as compared with the total placental mass, were infinitesimal, and they could hardly interfere with the functions of the organ. Sometimes, however (in three or four cases), the placenta had perished at the seventh or eighth month, and in these instances the same thing has occurred at successive pregnancies. The only changes noted in these placenta were those he had described, but on a more extensive scale. The ease with which the placenta separated was due to the spongy nature of the deeper layer of the serotina, which connected it with the uterine wall.

A LONG PREGNANCY.

Ross reports in the *Australian Medical Gazette*, April 20, 1896, a pregnancy of extraordinary length. On September 30, 1895, the patient, a multipara, thought she detected foetal movements. One week later, October 6, she called upon Ross to have her suspicion of pregnancy confirmed. He felt the movements distinctly at that time, and every week thereafter until the day of delivery, May 20, 1896, *i.e.*, 227 days after he first felt foetal movements. Presuming that they can be felt as early as the end of the third month, it would be necessary to add eighty-four days, making 311 days for the dura

tion of the pregnancy. The condition of the child at delivery coincided with these figures. After a long labor the os was dilated, the very thick membranes were ruptured, and a female child weighing about nine or ten pounds was delivered with high forceps. Liquor amnii was scanty, and the placenta adherent. The posterior fontanelle was completely closed, and the anterior one small and firm, and non pulsating. The appearance of the child indicated a greater age than 311 days, which is the very shortest conceivable duration of this pregnancy.—*Medical News.*

ANTI-STREPTOCOCCIC SERUM IN PUERPERAL FEVER.

Letrain describes the following case in the *Progress Medicus*: "Madame R., aged twenty-five, living at Joen-en-Charnrei, was confined February 7, 1896, by a midwife of the locality. On the 10th she was seized with a severe rigor, and on the 13th I was called in to take charge of the case. The diagnosis was not obscure; the woman was evidently suffering from grave puerperal sepsis, but the immediate source of the infection was indeterminate. I may mention, however, that the lying-in room was reeking with emanations which came from an adjoining privy through an ill-fitting door! At my second visit, on the 15th, the patient's condition had changed for the worse; she was semi-delirious; temperature 104.7° ; pulse 150, small and compressible; abdomen swollen, and very tender on pressure; tongue dry; there was foetid diarrhoea. The case seemed too far gone for curetting of the uterus. In this opinion I was supported by Dr. d'Lageniere Mans, whom I had occasion to meet during the course of the disease. I promptly telegraphed to Dr. Recin, of the Pasteur Institute, who, with alacrity for which I shall be forever grateful, at once gave an order for me to be supplied with the anti-streptococcic serum wanted. On the morning of the 16th, the temperature being 104.3° , pulse 148, five cubic centimetres of the serum were injected. On the 17th, temperature 101.3° , pulse 120, the second injection was administered. On the 18th, temperature 100.4° , pulse 110, another injection of five cubic centimetres was given. On the 19th, temperature 104° , pulse 130, the patient complained of pain at the seat of the first injection, and on examination it was found that at this point there was a slight tumefaction, with redness and puffiness of the integument. On the 20th the fourth injection was administered; temperature 98.2° , pulse 80; the inflammatory phenomenon of the preceding day had disappeared; the patient felt quite well. Another injection was given on the 22nd; temperature 98.6° , pulse 70. The abdomen had returned to the normal condition, sustaining pressure everywhere without

dian. The diarrhœa had ceased, and the patient had now a good appetite. The sixth and last injection of five cubic centimetres was given, and henceforth the case progressed most favorably, and at my last visit on 1st of March I found Madame R. enjoying perfect health.—*The Scalpel.*

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

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THE ANATOMY OF THE ANUS.

The following is a summary of conclusions drawn by Dr. Bert B. Stroud, embodied in a paper on "The Anatomy of the Anus," published in the *Annals of Surgery*. The article is most elaborate and carefully prepared.

(1) The anus presents a general similarity of structure among mammals, but certain features are most highly developed in man, with approximations in the anthropoid apes and in the domestic cat and dog. The *sacculi Horneri* are especially large in the dog.

(2) The transitional epithelium between skin and rectal mucosa is a narrow zone of thick, stratified epithelium, the pecten containing nerve elements which the writer believes to be the peripheral ends of nerves concerned with a special rectal sense. This zone varies in width from about three to nine millimetres. Its caudal border is about at the junction of the ectal and ental sphincters. The cephalic (upper) border is demarkated by the *linea dentata*.

(3) From the dentations of the pecten in some human individuals there are developed papillæ, composed chiefly of stratified epithelium, nerve elements, and a minimum amount of connective tissue. These are believed to be important additions to the "rectal-sense" apparatus, and to make the possessor physiologically superior to those individuals who have no papillæ.

(4) There are also developed in some human individuals more or less extensive anal pockets just cephalo-peripherad of the pecten. *Sacculi Horneri* are found in their walls. In the cases observed a papilla was located on each side of the pocket. Papillæ and pockets cannot be considered pathologic, since both were found in a child fifteen months old.

(5) When the sphincters are closed the pecten forms the central

part of the floor of the rectal ampulla. And from Andrews' ('95, p. 303) description of Whitehead's operation for hæmorrhoids, I judge that the pecten is excised in this operation. Perhaps this fact accounts for the large percentage of incontinence of fæces resulting from this operation.

(6) The caudal border of the rectal mucosa is at the linea dentata. The character of the epithelium is seen to change markedly here. And the mucosa is thrown into folds like a ruffle.

(7) Clinical observations tend to show that there are few sensory nerve elements in the rectal mucosa, since serious injuries may be inflicted, or the gravest diseases, such as ulceration or cancer, may exist without causing pain. (Kelsey, '90, p. 24.)

(8) Among the nerve elements present may be mentioned :

(a) Small nerve cells with anastomosing dendrites which form the epidermal plexus.

(b) Large ganglion cells in the dermis.

(c) Amyelinic nerve fibres. In the sections examined all appeared to be normal.

(9) The nerve supply of the rectum and anus is derived from both the neuron (central nervous system) and the sympathetic nervous system.

(10) The writer suggests that some rectal reflexes may be due to pressure upon the nerve elements, caused by congestion of the blood vessels in this region.

Clinical observations appear to indicate that reflexes may also be caused by pressure upon irritated papillæ from spasm of the sphincter.

(11) Pockets may be torn by hard fæces, causing a laceration of the pecten. Continued irritation and even ulceration frequently result.

(12) Small hardened lumps of fæces may lodge in a pocket and cause perforation of its floor, or even a fistula.

(13) Irritated papillæ are often injected with serum.

(14) No evidence of sclerosis was found in any of the papillæ examined.

MIXED URINARY INFECTION—PRESENCE OF BACILLI PYOCYANEI IN THE URINE.

LeNoir ("Soc. de Biologie") reports the case of a male patient upon whom lithotrity had been performed one year ago, who pre-

sented symptoms of renal calculus and pyelitis, with urine containing bacilli pyocyanei and the bacteria coli. The bacillus pyocyaneus was in a saprophytic state in the bladder; it had caused no appreciable accident; its presence, however, had to be considered as dangerous. The bacillus pyocyaneus, which is easily cultivated in the normal urine, in the urine of this patient had lost its chromogenic power; however, by the addition of a certain quantity of sugar, this property could be restored.—*Medical Fortnight*.

THE RESULTS AND THE POST-OPERATIVE TREATMENT OF NEPHROLITHOTOMY.

Dr. E. Vigneron, Professor at l'Ecole de Marseille, recently presented the following case. The history of the patient in question is as follows: A male of twenty-six years, who, ever since his youth, had suffered from his kidneys and urethra, his urine containing blood, and always considered as containing also gravel. At the age of nineteen years, he had a gonorrhœa, which had been poorly taken care of, with the result that it had been very protracted and had been complicated with arthritis of the wrist; it is impossible to state whether there was an infection of the superior urinary passages at that time; however, there existed such an infection in 1892, when a physician passed a sound for the first time. At this time pains became frequent in the neighborhood of the left kidney, especially during violent exercise.

The author saw him for the first time in July, 1893; his urine was purulent and bloody, with moderate vesical symptoms, but very severe lumbar pains, especially on the left side. The vesical examination which was made giving no indications which were in proper relation with the extent of the existing pyuria, it was thought that there was a renal infection of probably calculus origin. The patient was told of the necessity of a second examination, and the probable ultimate need of an operation, but he was too much frightened to think of permitting either. However, as the symptoms persisted and became worse, the patient decided to go to Paris, where, in May, 1895, Dr. Albarran practised upon him a left nephrolithotomy. A stone as large as a small egg was found, and extracted from the superior part of the left ureter; above the stone the ureter and the infected part of the kidney formed a vast pouch. This large cavity was left open and drained. On his departure from Paris, the patient was stout, had recovered his powers, did not suffer any more, but had a lumbar fistula, which emitted an abundance of purulent urine;

the urine passed through the urethra was equally purulent. Dr. Albarran recommended him to consult me on his return to Marseilles ; we saw him about the end of October, having a lumbar cicatrix with only a very small opening, which opened intermittently. During these periods, lumbar pains and light febrile condition. A probe could be passed, not without pain, to a depth of eighteen centimeters ; the passage, enlarged by this exploration, emitted at least 300 grammes of purulent urine ; with incision of the fistula, drainage, and the application of irrigations of silver nitrate, 1-500, there ensued immediate disappearance of the pains and the fever, and a general amelioration. A fortnight later, the patient, feeling better, was permitted to remove the drain, and, at the end of some days, the opening closed. On December 6, 1895, the patient had retention ; as re-incision of the fistula was immediately followed by relief, the opening was kept patent, permitting irrigations, until the end of January, 1896, when the patient disappeared. At that time the pouch had diminished considerably in volume ; instead of holding 300 grammes of the irrigating fluid, as it did formerly, it only held 200, while it permitted the probe to be passed only to a depth of twelve centimeters ; the urine remained purulent, there being, however, neither pain nor frequency of urination. The fistula soon closed, and from February 16 light fever ensued until March 10, when a more violent attack brought the patient again to our notice. An immediate incision of the cicatrized wound revealed a relatively small pouch, about eight centimeters in depth. We noted that the probe seemed to strike against some concretion while we were exploring the pouch.—*Medical Fortnight*.

PÆDIATRICS AND ORTHOPÆDICS

IN CHARGE OF

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WARM BATHS IN THE DIFFUSE BRONCHITIS OF CHILDREN.

Treatment of acute bronchitis by repeated warm baths is advocated by Renant (*Bulletin de l'Académie de Médecine*, 1896). The cases in which this treatment is indicated are these in which the inflammation has not extended to the terminal bronchiole. Renant has treated over a hundred cases, and has not seen a single case develop capillary bronchitis or terminate fatally. Whenever the rectal temperature, which is taken every three hours, is over 102° , the child is immersed in a bath at $101^{\circ}.5$, leaving him in the bath for seven or eight minutes. Water of the temperature of the room is applied to the head. A little stimulant may be given while the child is in the bath. The bathing is to lower the fever and prevent toxic effects. Quinine is given in suppositories, either the sulphate or hydrobromide, morning and evening.

SYMMETRICAL SOFTENING OF THE BRAIN DURING WHOOPING COUGH.

A case of cerebral softening during pertussis is reported by Yorke (*Archives Kinderbeikunde*, 1896, B. xx., H. iii., iv.). While cerebral disturbance of some kind is not uncommon in whooping cough, yet but little is known regarding the anatomical changes that take place in the brain. The rule is that the paralyses, attacks of blindness aphasia, etc., are transient. The case reported was a seven-year-old girl with a tuberculous family history. The girl had had whooping cough for several weeks in moderately severe form, when suddenly the severity of the disease increased, both in the number and the

severity of the paroxysms. Symptoms pointing to brain involvement soon followed. The patient complained of feeling tired, and slept more than usual. In a few days it was noticed that she could not walk well—there appeared to be a weakness of the left leg. At this time the face was also noticed to be involved. It was slightly drawn to the right. Saliva escaped from the mouth. The child laughed a great deal without cause. There was no fever. The pupils were dilated, but responded well. She slept a greater part of the time, yawned a great deal, and cried loudly when she awoke. But little food was taken. There was now, one week after the onset of the nervous symptoms, right-sided facial paralysis. The tongue pointed to the left, and could not be protruded. The uvula pointed also to the left. Swallowing was difficult. The left leg and arm were completely paralyzed. Sensibility was normal. There was no rigidity of the neck or of the muscles of the back. The apathy increased. The patient could evidently understand, but would not speak. During the following four days all the symptoms increased in severity. Cheyne-Stokes' respiration was followed by comatose state and death. There were no convulsions.

Autopsy showed marked congestion of the pia, and a general hyperæmia, with two areas of softening in both hemispheres. The area in the frontal lobe was about two cubic centimetres in diameter; it was located three cubic centimetres from the apex of the frontal lobe, and one and one-half cubic centimetres from its inner wall. The area in the parietal lobe was somewhat large, and occupied the white substance. Microscopic examination showed only the usual inflammatory changes. No micro-organisms were found. There were no tubercles to be seen on any portion of the brain. The cause of the inflammatory process was probably a repeated hyperæmia and stasis, following upon the paroxysms. This in turn was followed by diseased blood vessels, transudation into the tissues, and inflammation. The child being a weakling, and with a bad family history, was unquestionably less able to resist the general effects of the disease.

MORBID ANATOMY OF FRIEDREICH'S DISEASE.

The *Post-Graduate* of July, 1896, has the report of the examination of the cord from a case of hereditary ataxy, by Dana, of New York. The patient, aged nineteen, first showed signs of the disease when eleven years of age. His gait became unsteady, and about one year later the arms became affected. There was steady progression in the

symptoms. Electrical reaction of the muscles was diminished. No paralysis or atrophy existed. There was no disturbance of sensation except occasionally a feeling of numbness in the extremities and a diminution of cutaneous sensibility. Patellar reflex and ankle clonus were absent. There was occasional incontinence of urine. The intellect was but little affected, and memory was good. The inco-ordination became much more apparent whenever the eyes were closed. The patient had frequent attacks of vertigo, preceding attacks of syncope. Three attacks were observed. At the commencement of these attacks he felt dizzy, the head swayed, the face became pale, the radial pulse disappeared, the muscles relaxed, and unconsciousness supervened. The relaxed condition (with imperceptible pulse and respiration) lasted about half a minute, and was followed by a sudden tonic convulsion, with opisthotonos, lasting about one minute. Then consciousness returned, and he complained of pain in the back. Post-mortem, the spinal cord was found reduced in size, and flattened antero-posteriorly. The pia mater was much thickened. A sclerosis of the posterior and lateral columns existed through the whole length of the cord, but was more marked in the lower portions. This sclerosis involved nearly the whole of the posterior columns, and in the lateral columns the crossed pyramidal tracts, the direct cerebellar tracts, and, to some extent, the area of the ascending lateral columns. A margin of sclerosis enveloped nearly the whole circumference of the cord. Another peculiar morbid change existed throughout the whole length of the cord. This consisted in the presence of holes (as seen in the sections) varying from a half mm. to 2 mm. in diameter. These holes were seen to be distributed in both the gray and the white matter, but chiefly in the white matter. Dana believes them to be dilated perivascular spaces, but could not find any one of them in which the remnant of a vessel was present. No such vacuolization was observed in three other spinal cords from cases of Friedreich's disease which were examined by Dana. The brain and nerves in the present case could not be examined.

A CASE OF SUPERFICIAL GANGRENE.

A curious case of gangrene of the skin and superficial tissues is reported by Rachford, of Cincinnati (*Archives of Pediatrics*, December, 1896). The patient was a male infant of seven months. Until the present illness the child had always had remarkably good health, and was fat and well grown. The father of the child was not strong, and had syphilis. The mother was in every way healthy.

On January 20, at 8 a.m., the child was bathed and dressed, and was quite well. At 9.30 a.m. it began to cry, and continued to do so for two hours. At 11 a.m. the mother undressed him in order to investigate, and found a "blue-black" spot about the size of the palm of her hand on the left buttock. The child was seen by the reader of the report at 2.30 of the same day. The child was found to be perfectly normal in every way except that over a circular patch of three and three and a half inches in diameter the skin was black and plainly gangrenous. There was not the slightest history of trauma of any kind. The gangrene was perfectly dry; there were no blebs, and the outline was distinct. The spot remained of the same size from the time it was first seen, and remained dry. No other spots appeared.

January 23. Child in perfect health except for gangrenous spot.

January 27. Still well. Temperature from beginning has been normal.

January 30. Contracted influenza; temperature 102.5°.

February 8. Dead skin came away. Slough involved only skin and a little subcutaneous tissue.

February 21. Rash over neck and shoulders and back; erythematous in form. Given mercury and chalk night and morning. Child has failed very much.

Mercury and chalk continued for six weeks

May 9. Child seen after an interval of six weeks. Baby seems well except for a well-marked erythematous rash and the scar on the hip. Again put on mercury and chalk, one grain night and morning. Last report child was quite well.

The author would attribute the gangrene to sudden vaso-motor spasm occurring in a limited area, and continued long enough to obliterate the blood vessels. Whether or not the syphilis had any relation to the gangrene the author is unable to say.

PATHOLOGY AND BACTERIOLOGY

IN CHARGE OF

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THE BACILLUS TUBERCULOSIS IN THE NASAL CAVITIES OF HEALTHY* INDIVIDUALS.

(Per J. Strauss; *Rev. de la tuberc.*, October, 1894.)

Experiments were made upon sound individuals who frequented wards, etc., occupied by tuberculous patients.

Results: Quite positive.

Technique. Wads of absorbent cotton were wound upon small sticks of wood, and the wipers so formed sterilized in autoclave. Nasal cavities were wiped out with these wipers and the wads then introduced into tubes of sterilized water or bouillon; agitation and squeezing upon side of tube; six or eight tampons were thus used in each tube in order to collect a considerable amount of material from the nose in each.

The contents of the tube so infected were injected into the abdominal cavity of sound guinea pigs.

Twenty-nine experiments were made.

Results: Twenty-nine cases. In seven cases the eight pigs died early of septicæmia, or purulent peritonitis; in thirteen cases the animals gave no sign, and when killed were found healthy; in nine cases died or were killed in from three to five weeks; tubercular lesions found arising from injection point; bacilli demonstrated in all.

Healthy means free from tubercles.

Thus about thirty-three per cent. of those examined, though in perfect health, carried tuberculous bacteria in nasal mucosa.

Of these nine cases, six were "infirmier" living in hospital; of three chronics (non-tuberculous) living in hospital for some months, one gave positive results; of seven students passing several hours a day in hospital, two gave positive results.

V. Cornet; Die Verbreitung der Tuberkelbacillen Ausserhalb des Körpers; Zeitschf. f. Hygr., 1888; t. v., p. 191.

PRELIMINARY REPORT UPON THE DISEASE CAUSED BY
TSÉ-TSÉ FLY.

This disease is called by the natives of Zululand, nagana.

The tsé-tsé is a small fly the size of the ordinary cattle fly of this country. The results of its puncture are sufficiently distressing, however, whether it is killed upon the spot or allowed to fill its abdomen with blood. The pain and redness which follow its wounds are like those caused by the common fly.

The disease called nagana is invariably fatal to the horse and the dog, but the pig and the cow recover sometimes. It is characterized by fever, infiltration of the subcutaneous tissues of the neck with coagulable lymph; also of the abdomen and extremities and extreme emaciation; rapid destruction of red blood cells, and the constant presence in the blood of a hæmatozoon, closely resembling, if not identical, with trypanosoma Evansi, found in a similar disease in India. The connection between the parasite and the disease seems undoubted. It appears in the blood with the onset of the disease, increases as it becomes more acute, and disappears with recovery, or is seen in enormous numbers at death. Bruce found in fatal cases 73,000 per c.c. of blood.

Description. A transparent, elongated cell, very mobile, showing a gliding, serpentine movement amongst the blood cells, and appears to live upon them, or, at least, displace them. In thickness it is about one-quarter of its (blood cells) diameter and to three times its length. It has no resemblance in form to the parasite of malaria, but some of the symptoms are similar, and it has been thought that one could be attacked by nagana in the dangerous areas, as with malaria in ague districts. This idea was the more natural since the characters of the nagana and malarial districts resemble each other. This hypothesis seems incorrect, and Bruce appears, without actually proving, to have rendered highly probable the constant intervention of the tsé tsé in the spread of the disease.

The bile of one of these flies is ordinarily without danger, but if

the fly has beforehand sucked the blood of an animal infected with nagana and carrying the hæmatozoa its proboscis dart becomes coated with blood carrying hæmatozoa, and it then inoculates with the disease any sound animal which it may (soon?) afterwards pierce. Experiments made with dogs (very susceptible to the disease) support these ideas completely. Flies were shut up in a sack of gauze, and the sack laid upon animals already ill of the disease; the sack was then transferred to a sound animal. Several days later the healthy animal showed all the ordinary symptoms of the disease and the parasites appeared in its blood. If one inoculates a healthy animal with blood of a diseased animal, the result is the same. A good proof that neither by inspired air nor by food is infection taken up, but, as described above, would be the allowing flies collected in a dangerous district to pierce an animal living in a perfectly safe territory where the disease was not known. Bruce made several experiments of this sort, and finally succeeded in conveying a nagana to a sound horse, which he kept upon the healthy plateau of Obombo.

It seems without doubt, then, that the tsé-tsé is but a harmless fly, which acts as a *conveyer* of a *dangerous germ*.—*David Bruce*.

TUBERCULOSIS IN PARROTS.

Parrots seem to be very liable to tuberculosis—so much so, indeed, that of 154 parrots treated in the Veterinary Institute of Berlin 56 (equal to 36 per cent.) showed tuberculous symptoms. As the tuberculosis of these birds is caused by a species of Koch's bacillus it is possible that the disease may be transmitted to their owners or other persons. Dr. Brantiz, while attending a patient suffering from tuberculosis, observed that the parrot in the house was ailing, and as examination by a veterinary surgeon proved that it was the subject of tubercle he directs attention to the possibility of tuberculous disease being acquired from these domestic pets.

Editorials.

ANNOUNCEMENT.

THE CANADIAN PRACTITIONER has been purchased from The Bryant Press by The Practitioner Publishing Company, and the business management of the journal will, in the future, be in the hands of Dr. Edmund E. King. It will generally be conceded that Mr. Bryant made a decided advance when he changed the old form of publication in January, 1893, and adopted the methods under which it has appeared since that date. The changes added materially to the cost of publication, but have proved so satisfactory in all respects that the present proprietors will continue what we may call the Bryant methods.

The editorial and literary staff will not be greatly altered, excepting in the respect that some additions are likely to be made within a few months. Our policy in the future will be similar to that which has prevailed in the past. We are glad to say that our association with Mr. Bryant has been exceedingly pleasant, and we can only regret that, on account of increase of work in other branches of his business, he felt impelled to part with THE CANADIAN PRACTITIONER. His great desire was to publish a thoroughly respectable and high-class medical journal. No one could aim higher—we will endeavor to aim as high.

THE COUNCIL PETITION.

EVERY member of the profession in Ontario has received from the Registrar of the Council a form of petition to the Legislative Assembly of Ontario, together with a circular explaining the details of the same. We sincerely hope that physicians will not treat these with carelessness and indifference. We believe that the matters referred to are of vital importance to the profession. We cannot discuss in detail all or any of the questions referred to in the

circular ; but we desire simply to call attention to clause "first," in which Mr. Haycock's proposed amendment in the Legislature is mentioned. Undoubtedly grave danger of a practical destruction of the Council existed at that time, as those who were present in Toronto during the session of 1895 well know. We very cordially support the action of the Council in distributing these petitions ; and we desire now to ask each one of our readers living in Ontario who has not yet responded to sign his petition *at once*, enclose it in the sealed envelope, and post it without delay. We recommend those in doubt to read carefully the circular, as we consider that it makes very clear the reasons which should induce all physicians of all parties to support loyally the Council in its present action.

THE CULLINGWORTH FUND.

IN our last issue we referred to the case of Beatty *vs.* Cullingworth. Miss Beatty, a hospital nurse, sued Dr. Cullingworth, the senior obstetric physician to St. Thomas' Hospital, for damages because he removed both ovaries because he found them diseased after he made his section. We expressed the opinion that the verdict in Dr. Cullingworth's favor was just and right ; but, at the same time, we thought that it would only be a poor compensation to the defendant for the worry and expense necessarily associated with the trial.

We are very glad to be able to announce that his brother practitioners in Great Britain promptly started a subscription towards a fund to reimburse Dr. Cullingworth for the expenses he incurred during the trial. The subscriptions came in so rapidly that the fund in a short time became sufficiently large to cover the whole expenditure, and the organizers of the good work have announced that no more subscriptions will be received.

ROENTGEN RAYS AND THE BLIND.

THE daily press, more especially the sensational papers, have been publishing glowing accounts of sight restored by "X" rays. The physiological impossibility was apparent, but in this age of wonders nothing should be pooh-poohed without investigation—we decided to make an experimental test of the matter and demonstrate its absurdity or prove its possibility before denouncing it.

Sixteen persons, male and female, young and old, those with eyes and those with the eyeballs removed, those blind from birth

and those recently blind, those totally blind and those partially blind, those with detached retinae, and those with opacities of cornea and lens, were experimented with. An absolutely negative result was the case in every instance excepting those in which daylight was perceptible. In these a luminosity was apparent, but no shadow was produced by the rays. The apparatus employed was up to date in every respect. The publication of certain unverified experiments as established facts raises the hopes of the most helpless creatures to such an extent that the depression following is painful to behold. It is cruel to a degree. Those who are unfortunate enough to be deprived of sight should be more thoughtfully treated than to be made the tool of some ignoramus who is hunting for cheap and despicable notoriety. The press should demand some authentic verification of such matters before publishing them as demonstrated facts.

LISTER.

LISTER and Listerism will not be forgotten as long as the science of surgery exists. We have heard much of Mr. Lister as a scientist and a surgeon. His country desired to honor him, and made him Sir Joseph Lister, Bart. The medical world was glad to see him thus honored, but valued more the great work he had done than all the well-deserved honors which he had received. A recent cablegram from England informs us that Sir Joseph Lister exists no longer, but that Lord Kinneair lives in his room and stead. In other words, he has been elevated to the peerage on account of the great services he has rendered mankind by his practical researches and his clinical work in aseptic and antiseptic surgery. We believe this is the highest honor which has ever been conferred upon a physician or surgeon in Great Britain. We are certainly delighted to see Lister thus honored ; but why did they take away the name we have learned to love so well ? Why didn't they make him Lord Lister instead of Lord Kinneair ? Perhaps peerage ethics would not admit of such a thing.

Well Lister, or Kinneair (call him what you please), is coming to Canada this year. He will be present at the meeting of the British Science Association which will be held in Toronto, August 18 to 27. It will be remembered that he presided at the last meeting of this society, which was held in Liverpool in August of 1896. What sort of a welcome will the profession of this city and country extend to this truly great man ? The subject has been discussed in a quiet

way by individual members of the profession ; but, so far as we know, has not been officially considered by any society or corporate body. We are not prepared at present to suggest any definite plan ; but we are very glad to know that some of our leading men in the profession are determined that this distinguished scientist will receive a hearty and royal welcome when he comes to Toronto.

MEDICAL JOURNALISM.

MEDICAL journals are as a rule considered necessary for those members of the profession who wish to keep up to the times ; and it is generally conceded that their wants in this direction are pretty liberally supplied in these modern days. This continent has lately produced something new in the shape of a free journal which is generally worth the subscription price. The managers of this new journal are working in the interests of the advertisers, and sometimes furnish us with a strange mixture of reading matter, reading notices, and advertisements all jumbled together in a heap. This acephalous monstrosity has not proved an unqualified success, even from the advertiser's point of view. The free journal has met with another difficulty in the shape of postal regulations, which interfere with the free passage of this sort of cheap literature. In consequence of various drawbacks it has been deemed advisable to make slight changes. A nominal subscription price is added, which possibly the publishers may hope to collect. The modified product looks, it is thought, more respectable ; and reading notices, describing in glowing terms the virtues of certain preparations, are ingeniously mixed up with the ordinary matter in such a way as to give the unwary the idea that such words of praise are endorsed by the regular contributors and the editorial staff. Respectable practitioners are asked to lend their names in order to give some weight and influence to this modified form of the modern product. In many instances they comply, apparently without considering that they are thereby aiding and abetting illegitimate journalism. We have sometimes been amazed to find practitioners of good standing in all other respects giving their assistance to journals that are neither legitimate nor respectable, as those terms are generally understood among the best journals and journalists in all parts of the world.

A fifty-cent, or a dollar, medical journal may or may not be respectable ; but it is certainly important that those who give their

names and their influence to a medical magazine should be certain that such magazine will be thoroughly legitimate both in a business and a literary way. The profession have seen the free journal sufficiently often to grow weary of it. We are not sure, however, that the semi-respectable journal, if such a thing can have any actual existence, is thoroughly understood by a large class of practitioners, who have no desire to offend medical ethics in any way, and yet do violate professional consistency by assisting doubtful ventures in medical journalism. We will not now make any reference to any special medical journal or journals; but we desire to say that we strongly object to any degradation of medical journalism in this country. The publishers and editors of certain medical magazines in Canada have steadily endeavored to raise the status of their productions for many years; and we think that it is in the interests of higher medical education, and also in the interests of both readers and advertisers, that their efforts should be encouraged by all regular and respectable physicians.

BRITISH MEDICAL ASSOCIATION.

MONTREAL MEETING.

THE local committee in Montreal are still working in the interests of the next meeting.

We understand that the authorities of the British Medical Association in London have also been very active. They have addressed circulars and forms of application for membership to every practitioner in Canada, inviting membership of the nearest local branch. We are desirous to state that, if there are any who have not received this prospectus, the local branches at Montreal (2204 St. Catherine street), at Toronto (Dr. W. B. Thistle, McCaul street), at Halifax (Dr. G. C. Jones, 136 Hollis street), at Victoria, B.C. (Dr. G. L. Milne), and at Ottawa (Dr. C. P. Dewar) will be glad to forward all information and forms of application.

The branch of the association at Ottawa was established on the 15th instant. Dr. C. R. Church was elected president; Dr. L. C. Prevost, vice-president; Dr. W. C. Cousens, hon. treasurer; Dr. C. P. Dewar, hon. secretary; Sir James Grant, Drs. H. P. Dwight, W. R. Bell, A. J. Horsey, and P. A. MacDougall, council.

The Toronto branch was also established in November, with Dr. I. H. Cameron as president; Dr. W. J. Wilson, vice-president; Dr. Machell, hon. treasurer; Dr. W. B. Thistle, hon. secretary; and with the following members of council:

Drs. Allen Baines, John Caven, Charles Sheard, A. McPhedran, and R. A. Reeve. Drs. Wilson, Baines, and Caven are Presidents of the Medical, Clinical, and Pathological Societies of Toronto respectively.

At the annual meeting of the Montreal branch thirty-one new members were added, and in the ten days that have elapsed since then close upon forty further applications have been received by the secretaries in Montreal.

We may again point out that members may be transferred from the Montreal and other local branches to other branches which may be formed in their neighborhood during the ensuing months. It is in all respects advisable that members belong to the branch in their immediate vicinity.

That the Montreal City Council is most anxious to render help is evidenced by the fact that \$3,000 to this end has been inserted among the items of the loan, for which the city seeks authorization in the Quebec Government.

Among the local entertainments to be given to the members of the association and its guests at the meeting will be the excursion to Ste. Agathe and Monté Tremblante in the lovely country fifty miles north of Montreal. An afternoon excursion down the river in one of the finest boats of the Richelieu and Ontario Navigation Company; a similar excursion to Ste. Anne and down the Lachine rapids, and an entertainment upon the mountain—these will be given by the local branch.

THE PHYSICIAN IS AT THE MERCY OF THE DISPENSER
—THE DISPENSER IS A NECESSITY TO THE
PHYSICIAN.

IT may be owing to recent hard times or a public demand that the sale of patent nostrums and cure-alls have received such attention from the druggists. Departmental stores have established complete drug departments, cut prices, and otherwise interfered with the drug trade to such an extent that the existence of the legitimate druggists is in danger. No business can be carried on without a profit. Large departmental stores can afford to accept a smaller percentage of profit than stores dealing in any one single line. Competition is usually healthful, but when it comes down to cutting prices in dispensing prescriptions a very serious condition of affairs exists.

There are honest and dishonest druggists, and the dishonest ones

will *cut* to meet the *cut* from the departmental stores, and quite likely the patient and doctor will both suffer. The *cut* by the dishonest druggist will be in the shape of substitution or using inferior drugs. The conscientious druggist will simply say that a prescription cannot honestly be filled for the price and decline to dispense it. The departmental store will fill it, charge low to secure custom for the general store, and thus *cut* the legitimate druggist—an absolute necessity—out of his business. The few cents saved on the prescription may be profit, but if it is at the expense of quality it is a distinct loss. The physician has a right to know by whom and how his prescription is dispensed, because there are honest and dishonest druggists. He has a right to demand that some thoroughly competent and reliable dispenser compounds it. He has also a right to see that his patients are not overcharged.

Druggists have not treated the physicians fairly. Some of them placard their stores with Bunyon's Remedies, Dr. Blank's Sure-Cure-All, etc., in such a manner that physicians become disgusted. They counter-prescribe, fill repeats without orders, or make up an extra bottle for a friend, and do many other things that are not right. They say that the doctor does not treat them fairly, by allowing his prescription to be filled anywhere. There exists overcharging by druggists and percentage receiving by doctors, but we believe that these are only in rare instances. As a rule, charges are fairly made by honorable druggists. We believe that in a city the size of Toronto there is room for three or four, at least, thoroughly reliable dispensing chemists, who will handle *no patent nostrums whatever*. No objection could be raised to keeping perfumes and toilet articles, but in every other respect they should be simply dispensing chemists. If such announce themselves, we believe that they will receive the support of the physicians. Who will try the experiment?

Meetings of Medical Societies.

THE TORONTO MEDICAL SOCIETY.

THE regular meeting of this society was held in the Council buildings on the evening of the 7th of January. Dr. W. J. Wilson presided. The minutes of the previous meeting were read and adopted.

Dr. G.A. Peters read a paper on

PROCIDENTIA RECTI.

It began with a discussion of why and how this condition, a normal phenomenon, occurs in the horse. The points of difference between prolapse and procidentia were referred to. He then gave a classification of the forms of the latter condition, according to Allingham. Water-color drawings were shown which illustrated the various forms. Authorities differed as to the age at which this condition was most usually found. The various causes were then given. Methods of cure, both palliative and radical, were then detailed. The history of a case treated by the essayist was then read. The patient was a boy aged two years and seven months, admitted to the Victoria Hospital for Sick Children in September, 1896. The anterior wall of the abdomen below the umbilicus was wanting, there being ectopia vesicæ. The symphysis pubis was also absent. The doctor described the anomalous condition of the genitalia. The posterior wall of the bladder bulged forward as a florid fungating mass, irregular in shape. It was ulcerated in parts, and very tender and sensitive. The mother said that the child had always strained severely when the bowels moved. Prolapse was noticed about eighteen months ago. When first observed the bowel came down only one inch. The protrusion rapidly increased in size and came down with each evacuation. At first it was easily returned, but soon refused to remain reduced. It had been down almost continuously for one year. When the child lay quiet the protrusion measured about four inches in length, but when it cried it reached eight inches below the anal

ring. It had the shape of a truncated cone. In the quiescent state the color was pinkish, but during straining, or if exposed to the air, it became purplish. There were a few spots of ulceration on its surface. Some sloughs also. There was a small depression just external to the external sphincter. There was great pain and straining when the bowels moved, the child showing the most intense agony.

Before referring to the particular treatment used in this case the doctor referred to the treatment of prolapse and procidentia in general.

In prolapsus recti, first remove any cause—such as pin worms, stone, phimosis. The child should be made to stand or lie down when the bowels moved. If the bowels protruded the application of cold or astringents should be made. In the severer forms applications of strong nitric acid should be made, the patient being anæsthetized.

The treatment of procidentia was more serious. Many cases were intractable and incurable. Sometimes the nitric acid treatment would effect a cure. Astringents should be avoided, and injections into the tissues around the perinæum should not be made.

One surgical procedure was to remove elliptical or triangular portions of the mucous membrane and stitch the edges together; another process was to remove such pieces with the clamp and cautery. Another procedure described was that of removing the whole mass by means of an elastic ligature. The ligature was applied a short distance from the anus, made tight enough to shut off the circulation. An incision was then made into the perineal sac and any hernial protrusion reduced, the incision being made on the distal side of the ligature. Having reduced the protrusion, the ligature should be tightened; next a cannula is introduced from before backward through the whole mass on the outside of the ligature. Each half of the bowel can then be tied off by an elastic ligature, leaving the end to slough off. The method adopted by Treves was to dissect off the mucous membrane and stitch the edges to the skin. This had met with a good deal of favor. Lange's method, in which the coccyx is removed, was described and commented upon. Another method was to open the abdomen anteriorly, and stitch the rectum after it had been drawn up to the abdominal wall. The method employed in the case reported was to make an anterior abdominal incision, draw up the rectum, narrow the intussusceptions by stitching, so that two lines (longitudinal) on the bowel would be approximated and thus make a fold, the sutures being left long, and subsequently

stitched through the anterior abdominal wall, thus suspending the rectum. Thus far, some three weeks, the patient was doing well.

Dr. John Hunter spoke of the value of a mixture containing magnesium sulphate, morphia, and aromatic sulphuric acid in cases of prolapse.

Dr. H. B. Anderson related the history of a case which had come under his observation in which the cautery had been used. A good recovery followed. Dr. Anderson discussed some other points in the paper.

Dr. H. B. Anderson presented a tubercular testicle for examination. The specimen showed an involvement of the epididymis and cord.

Dr. W. J. Wilson presented, for Dr. Henry, a surgical kidney and its mate which was actually congested.

The specimens were from a young woman aged twenty. She consulted her physician for irritability of the bladder at first. After a time she was attacked with a sudden severe pain in the region of the left kidney, became feverish, was put to bed, and never was up afterward. Examination revealed an enlargement in the region of the pain, and cystoscopic examination showed pus oozing from a ureter. Death subsequently ensued.

Dr. William Oldright read a few notes on some points in midwifery practice. He made it a point always to examine the urine of the patient he was asked to attend in confinement. He would call the patient's attention to any vaginal discharges and emphasize the necessity of frequent cleansings. It was important to secure an intelligent nurse; this the doctor should superintend; if not very often, he would find one employed who had no ideas of asepsis. The introduction of the hand prior to the application of the forceps to dilate the vaginal outlet was a useful device; in this way the time of descent of the head would be greatly lessened; care should be taken to apply the forceps in such a way as to impinge on the face. Due deliberation should be observed in this important procedure. The position should be noted, so as to avoid delivery of the face to the pubes, as was often done, time not being allowed for turning to take place. In version one should not be particular to secure both feet, as one was enough. The speaker advised a plan he uses to support the perinæum, viz., with both hands around the orifice at the same time the head may be directed in such a way as to avoid undue stretching of the weak places. Another important point was to determine after expulsion of the placenta whether any membranous shreds were left in; this would often save hours of painful wait-

ing for oozings of blood to cease. In a case reported the speaker said that after eight days of normal convalescence the temperature rose to 104° , with other symptoms of sepsis. After the use of a blunt curette and irrigation with an antiseptic solution, patient did well.

Dr. Oakley said that under the teaching of Meggs, who held that meddlesome midwifery was bad midwifery, he believed he had erred in being too cautious, and leaving the progress of labor in many cases in his earlier practice too much to nature. He thought it was better to err on the side of boldness rather than wait too long for delivery to take place. He thought it required a great deal of thought to perform Crede's method of expelling the placenta properly. In his early practice he used to make traction on the cord. He expected a good many of the older men had done the same. It was probably wisest, on the whole, to allow the placenta its own time to come out. He had been taught to apply a folded napkin to the perinæum while the head was coming down. This, however, tended rather to laceration than to preservation. Better, he believed, to introduce the four fingers of one hand between the coccyx and the rectum and press downward and forward, using the other hand to bring down the head under the symphysis. It was important to keep the head well flexed. As to cutting the cord, it was his custom to wait until it was flaccid. He thought the use of ergot in the third stage was of benefit, and should not be given before. Dr. Fletcher asked as to the advisability of attending to lacerations of the cervix immediately after labor. He had observed this lesion in two cases. Instead of anæsthetizing under chloroform to do perineal repair, he had found that local obtunding with cocaine did very well.

The president, referring to the necessity of inquiring into the matter of who the nurse was, related a case of puerperal sepsis with death, where the nurse employed was a neighbor woman who had only a short time before recovered from the same disease. He had had a child die from hæmorrhage. The other children of the family had been handling it somewhat roughly and had drawn off the ligature. He had taken the precaution recommended by the first speaker of tying the ligature a second time. The matter of after douching in normal cases was, perhaps, unnecessary. He had often found that the blood serum was a normal disinfectant. As to the use of urine stimulants in the early stages, he had found quinine and wine of ipecac of decided value. He would not recommend ergot.

Dr. Oldright closed the discussion.

TORONTO PATHOLOGICAL SOCIETY.

REGULAR meeting held in the Biological Building, December 29, 1896, the president, Dr. J. Caven, in the chair. Members present, F. N. Starr, Geo. A. Carveth, H. B. Anderson, G. A. Peters, J. Fotheringham, W. Oldright, H. H. Oldright, J. J. McKenzie, R. Reeve, W. J. Wilson, J. E. Graham, A. Primrose, W. P. Caven, H. J. Hamilton, E. E. King. Visitors—Drs. H. A. Laffleur, Montreal, J. McCrae, N. Harris, and W. Pepler, and Messrs. Maybury and McGillivray.

OSTEOMYELITIS.

Specimens from a case of osteomyelitis, the head of the femur and vegetation on the valves from ulcerative endocarditis, were presented by Drs. Graham and Peters. Dr. Peters quoted Tillman's statement as to the point of origin, and expressed the opinion that while that point is the side of the epiphysis next the shaft, still it is often seen to begin under the periosteum near an epiphysis.

In this case, a single organism, the staphylococcus pyogenes aureus was found. It was also present in the blood. Typhoid infection absent. Fatal result from constitutional poisoning and endocarditis.

Pyæmic abscesses and petechial hæmorrhages were present.

Dr. J. E. Graham read the clinical history of the above case, and showed the temperature chart. Discussed by Drs. Peters, J. J. McKenzie, and J. Caven.

CYSTIC KIDNEY.

Dr. Graham presented a kidney which had undergone cystic degeneration.

History.—Patient, lumberman, æt. 51 years. No previous illness except ague thirty-two years ago. Seven years ago met with an accident, was struck over the region of the right kidney, gave up work, had hæmaturia for some days and severe pain over the kidney for two or three weeks; went to work but never fully recovered. Dr. Graham saw the patient for the first time three years ago. He suffered from what he, the patient, termed bilious headaches.

On examination a large mass in the region of the right kidney was felt very distinctly. Malignant disease was thought most probable at that time. Arterio-sclerosis and accentuation of the second

aortic sound were marked. He suffered from palpitation on exertion.

Dr. Graham did not see him again until three months ago. He did not appear to be very ill, nor present the appearance suggestive of Bright's disease. He suffered from intense headache, bilious attacks, and dyspnoea. Urine, quantity large—sixty, seventy, and eighty ounces daily; specific gravity low; albumen present in large quantity; only a trace on his first visit three years ago.

On examination two large tumors were found in the kidney region. The right was the largest, being twelve inches in length. The left kidney was normal in size three years ago. Died suddenly of uræmic coma, after remaining in the hospital for about four weeks.

Remarks. Cases in adult life are rare. One case recorded in Guy's Hospital Reports. Patient about the same age. Had hæmaturia after injury, and died seven years after the injury. Cause of death was hæmorrhage in this case.

Origin. These cysts differ from retention cysts. None of the constituents of urine are found in some of the cavities or cysts; these are found in some and pus in others.

Impossible to consider this a retention cyst. Same general condition as cystic degeneration of the liver and spleen is sometimes present. Dr. Graham looks upon it as being due to a congenital condition, the injury acting as a stimulus to the new growth. The Woolfian bodies have been supposed by some to act a part in the etiology, but this could not account for the cystic degeneration in the liver and spleen.

Dr. Caven asked for an explanation regarding the increased secretion of urine.

Dr. Graham referred to Bradford's experiments on dogs, when large portions of both kidneys had been removed, and supposed that the increase was due to a change in the blood pressure.

Dr. Caven thinks that there must be a cystic condition at birth, and that they have grown throughout life, and cannot think that a blow of itself would cause it.

Dr. Fotheringham asks the condition of the cyst walls. Dr. Graham says they are lined with tessellated epithelium.

Dr. Lafleur referred to a case he had seen with the same symptoms, with the exception of hæmaturia. The condition was bilateral, and death resulted from uræmia. Kidneys were not as large as in this case. There was no history of injury. The remaining kidney structure was markedly fibrosed, and there were very few

glomeruli. H. B. Anderson has a specimen which shows a cystic condition, calcareous in nature.

Dr. J. Caven referred to a case of hydronephrosis recorded by Mr. Samuel Glass in the Philosophical Transactions for 1747. Patient was said to have been born dropsical, and continued to increase in size until her death at the age of twenty-three years. Before the autopsy the abdomen was found to be six feet and four inches in circumference, and the distance from the xiphoid to the os pubis was four feet and half an inch. The diaphragm was pushed upwards into the thoracic cavity. The base of the heart was under the right clavicle, and the apex on a level with the third rib on the convexity of the diaphragm. The lungs were about the size of those of a newborn babe. On tapping the large cyst which presented thirty gallons of coffee-colored, limpid fluid were withdrawn. The orifice of the ureter opened obliquely into the cavity of the sac. The left kidney and ureter were healthy.

Dr. Graham presented a Meckel's diverticulum situated four feet ten inches from the ileo-cæcal valve.

Dr. Graham then presented the lung from a case of empyema. Before death there had been some expectoration all the time, but about once in two weeks, by a severe fit of coughing, the contents of the sac were emptied. November 10 the patient was operated upon by Dr. Peters. A free opening was made and two tubes inserted. Death in twenty-four hours was preceded by very marked dyspnœa. The specimen showed a perfect opening between the pleural cavity and the bronchus.

Dr. J. Caven asked if empyema usually resulted from rupture of a tubercular cavity. Dr. Graham says he has seen some cases in which this did occur.

Dr. Reeve presented two cases of endogenous infection of the eye.

CASE 1. Patient, æt. 65. Apparently had la grippe in the beginning. Seen ten weeks after the onset of the trouble. There was slight ophthalmia of one eye; the other soon became inflamed, and patient could not see. Choroido-iritis was present. A few weeks later there was acute œdema of the retina. Eye became fixed and prominent, the anterior chamber practically *nil*. The vitreous chamber was tapped. Trouble progressed, and the eye was removed a few weeks later. Had fits; died six or seven days later.

CASE 2. Choroido-iritis with exudation into the vitreous chamber of a patient some time after confinement. The other eye

was free from disease. The diseased eye was removed. The patient is still living.

Dr. Reeve said that no micro-organisms had been found.

Dr. Caven thinks we could not assume that the condition was not due to micro-organisms simply because they were not found.

Dr. Dwyer presented :

(a) Cord from a case of locomotor ataxia of thirteen years' duration.

(b) Lungs from a case in which there was a large cavity found in the apex of the left lung. Death resulted from hæmorrhage from a large vessel.

(c) Large carcinoma involving stomach, with secondary deposits in the heart, liver, and lungs.

(d) Heart with secondary deposits from primary carcinoma of the stomach.

E. E. King presented a cyst in the liver, containing a calculus. No communication with the gall bladder. Proved to be an angioma. Meeting adjourned.

TORONTO CLINICAL SOCIETY.

THE regular meeting of the Clinical Society was held in St. George's Hall on the evening of December 10.

President Dr. Allen Baines presided.

Fellows present : Ryerson, Meyers, J. O. Orr, Davison, Bingham, Spencer, Burns, Aikins, Primrose, McDonagh, King, Oldright, Strange, N. Walker, Grasett, Pepler, Baines, Brown. Visitors : Mr. J. J. McKenzie, Drs. Wigle and H. J. Hamilton.

NEURASTHENIA.

A paper with this title was read by Dr. D. C. Meyers. He pointed out that owing to the wide prevalence of this disease much attention was being paid to the anatomical conditions which underlie it. The relation existing between intellectual effort and alteration of brain tissue was a subject which had been studied with much interest by different investigators. One of the most frequent causes of the condition was mental exertion. During mental exertion hyperæmia and changes in the cell structures were going on. This had been proved by experiments, which the essayist described. Two factors contributed to this condition : first,

a general increase of blood pressure during psychological activity ; second, the manner in which the greater veins of the pia mater enter the longitudinal sinus, since these are directed in an opposite course to that in which the blood in the sinus flows. Hence the latter would tend to retard the venous flow, and both acting together would favor the rapid production of hyperæmia. Experiment had shown that the products of cerebral metabolism being absorbed by the lymph which bathes the walls of the vessels possessed the power of causing variations in the calibre of the blood vessels. Experiments showing the change in cell structure had been carried on in bees and birds, examinations being made before and after the day's labor. The changes noted were referable to the changes in the form of the nucleus and the protoplasm. Photographs shown by the essayist showed (1) that in the unstimulated cell the nucleus stained lighter than the protoplasm ; (2) that the first effect of stimulation reduces the staining both of the nucleus and the protoplasm to one of equal intensity ; (3) that the nucleus stains steadily and distinctly darker, and that it becomes deformed and crenated.

After referring to other observations of experiments of the above sort, the essayist referred to the great strides which had been made (1) in placing mental disease on a firm anatomical basis ; (2) in allowing us justly to conclude that, since the nervous system presides either directly or indirectly over all the other functions of the body, any serious disturbance in its action could influence the functions of these organs and lead to the various disturbances met with in neurasthenia. As an example he referred to the dyspepsia common in nervous weakness. It had been said that this was crushed by the absorption of toxins from the alimentary canal. That toxins were so absorbed at a later period was more than probable, and the trouble by this means prolonged ; but he thought the primary cause was to be sought for in the changes in the cortical cells of the brain, which caused the impairment of the digestive functions ; and that it was only after these had occurred that the toxins played an important rôle. A number of the Fellows discussed this paper.

RELIEF OF EYE STRAIN FOR CURE OF EPILEPSY AND CHOREA.

Cases illustrating the cure of epilepsy and chorea by the relief of eye strain. A paper with this title was read by G. Sterling Ryerson. He said headache often arose from errors of refraction and muscular insufficiency. It was only a step further to admit that severe manifestations of nerve disorder, attended by gross lesions, might be caused by the same sources of irritation. The first case referred to was that of A.W., aged 25. Consulted the essayist on account of headache, dizziness, loss of memory, and, at times, loss of consciousness. She had been under general treatment

without benefit. Patient was found to be suffering from hyperphoria and esophoria, and considerable weakness of vision. The right superior rectus was tenotomized, and in nine or ten days the head was better and she complained of no dizziness. Complete recovery ensued. In the second case the patient was a young woman suffering from severe headache in the occiput and the nape of the neck. Pains in this region were almost invariably caused by defects of the ocular muscles, whereas frontal pain was generally due to refractive troubles. She had marked chorea. The vision was affected, and there were three and a half degrees of right hyperphoria. Partial tenotomy of the right superior rectus was done. Recovery good. He had not operated on many cases of epilepsy referred to him in which hyperphoria existed, because the degree of defect was small. Two or three examinations of such cases should be made in as many days to make sure of the average amount of defect. A constant average of two per cent. would justify operation.

Dr. Bingham proposed a query as to how the pain occurred at the angle of the scapula. His own explanation was that the sympathetic system, which was directly connected with the nerves that supply the angle of the scapula, would be affected in ocular strain.

Dr. Spencer asked if obstinate constipation was not often associated with eye defect. He remembered a case of astigmatism, which he had referred to the reader of the paper. The patient reported after treatment that he was not only cured of the trouble, but the constipation as well.

Dr. Myers pointed out some phenomena which arose through the artificial production of eye strain, muscular rigidity, unconsciousness, and attacks resembling epilepsy, showing the connection of the eye to the cuneate lobe. This case showed the importance of always examining the eyes in cases where the diagnosis was obscure.

Dr. Ryerson concurred with the remarks of the preceding speakers. He said the relief afforded to the nervous system by the removal of the source of irritation had an indirect effect on the digestive organs.

CLINICAL NOTE.

Dr. Norman Walker gave the clinical notes of a case that had come under his care during the past month. Patient had come to the office complaining of great pain in the back of the neck and headache which had existed for about a week, together with general malaise. Paralysis followed, which subsided under suitable treatment in eight or ten days. Cause of trouble was mental excitement.

Dr. Myers said certain symptoms of the case pointed to meningitis, but other symptoms excluded this, particularly the absence of fever and eye trouble, and if the disease had been due to graver lesions recovery

would not have occurred so soon. His own opinion of the case was that it was hysterical or functional paralysis. In these cases the urine is often retained. The suspicious point was the brushing of the fly off the nose when paralysis was present, that the diagnosis was borne out by the cause—mental excitement previous to the coming on of the attack.

Dr. Oldright added that another point which emphasized the neurotic nature of the attack was the fact that the patient got relief from having somebody move his arms backward and forward.

PROSTATIC HYPERTROPHY.

Mr. I. H. Cameron made some remarks on prostatic hypertrophy. He said he would not enter into a discussion of the pathology and nature of this trouble, but would rather confine himself to the matter of the treatment. He inclined to the view of Harrison, that the prostate gland was a muscular sphincter of the bladder rather than a gland, as the amount of muscular tissue was relatively much greater than that of the glandular. Under certain circumstances where hypertrophy of this structure took place, there was apt to be increase of function. Following this there was more or less retention of the urine. All were agreed that Sir Henry Thompson was right in establishing the teaching that when a man has residual urine he should have artificial relief by catheter frequently. That doctrine had held universal sway until one day a celebrated physician, now gone over to the majority, unfortunately, wrote an article on catheter fever, and set the world agog by pointing out the frequency of cystitis and distension of the urinary tract through the catheter, which, if properly used, and not abused, relieved the condition, which latterly ended in this distressing state. After Clark had written his paper there was a strong reaction on the part of the older men, who began to fear that their patients would die of surgical kidney. The speaker said no doubt many had died, and many would die of it as long as the catheter was used without antiseptic precautions. If antiseptic precautions were observed, however, surgical kidney would be avoided rather than caused by the proper use of the catheter. In advanced stages of prostatic enlargement where micturition was impossible and the intolerance of the bladder was very great, though only a small amount of urine was in it, and where it was necessary to use the catheter, a surgeon could not constantly be present; therefore there was great need of insistence that in cases of prostatic hypertrophy the proper use of a catheter would lead to cure. It was only in its misuse that dangerous results followed by infection by pyogenic organisms from without. Another method of treating the condition had found its strongest advocate in White, of Philadelphia, and was that by orchidectomy. In one hundred and eleven cases in which operation had been done, there had been twenty

deaths. The average age of the cases in which recovery took place was sixty-six and a half years; the average of fatal cases, 75. So age seems to have some influence in determining the mortality—something that would be expected because of the probable presence of arterio-sclerosis and less recuperative power of the tissues the older the men were. Of the twenty fatal cases, White, for one reason and another thought that thirteen might be excluded, as the precedent condition of the patient was such as to prevent success in the operation. This seems to be a fair showing. On the other hand, Falls, of Glasgow, had had six cases with five deaths as a result of operation, the remaining one not being benefited in thirty days. The speaker himself would refer but to four of the cases which had come under his observation as being typical examples of classes of cases in which this operation was applicable. The first case was that of a man sixty-nine or seventy, who came under his care in the hospital suffering from retention of urine and with cystitis. Prostatic enlargement was noted, and it was determined to do orchidectomy to relieve him. Due care was not taken to ascertain the condition of the kidneys before operation. At this time catheter drew urine at ten inches. Operation presented no difficulty. Patient was returned to bed. Never very well afterwards, but urine was drawn by catheter at nine inches. Autopsy showed he had surgical kidney on both sides. He should not have been operated upon, the speaker held.

The second case was that of a man sixty-four or five where this condition was present. Unilateral orchidectomy was done. So far as voluntary micturition was concerned, this had no effect whatever. He came in a year or two later for an aggravated cystitis. Sounding him, a stone was discovered. Lithotomy was done and bladder drained. Good recovery. Returned in two years. Another stone found. Nucleus was a hair, likely carried in by catheter. Later, the patient returned again. Bladder was drained, and recovery followed. Patient returned still again, suffering from cystitis. The other gland was removed. During convalescence, patient became extremely depressed and melancholy. Was given the fresh testicle of sheep. Mental trouble disappeared. The function of voluntary micturition was not restored. It was not expected, as for two years the function had been in abeyance.

The third case was that of a man eighty-one or eighty-three, upon whom the speaker had operated last May. The patient had suffered for some time from febrile disturbance incident to prolonged cystitis. An operation was followed by prompt and decided improvement. He presented rather active delirium during convalescence, but this passed off.

The fourth case was that of a man aged sixty-seven, suffering from acute retention of urine, which had existed about six weeks. Operation

was done; within three or four days he was able to pass urine. Recovery complete.

Dr. Grasett said he leaned to conservatism in the treatment of this condition. Thus far he had been able to treat these cases without resorting to the method advised by White. He thought surgeons were not sufficiently careful in regard to the cleanliness of urethral instruments. Where the catheter was kept clean its use could be maintained a long time. A patient, under observation, æt. 83, had used one twelve years—a man in active life. He had had most beneficial results from drainage also. Cases treated in this way were referred to.

Dr. E. E. King thought that the operation of orchidectomy would never become the operation of choice in enlarged prostate, but in those where great urgency was necessary. A case of this latter sort on which he had operated showed marked improvement within eighteen hours. A second case, in which he had done vasectomy, was not much benefited by the operation. A third case, in which orchidectomy was done, died of pneumonia subsequent to the operation. In six other cases results were so good that the speaker was very well satisfied with the operation.

Dr. G. A. Bingham concurred with the views expressed by the leader of the discussion as to the treatment of long-standing and obstinate cases of prostatic enlargement. In the earlier stages he had found the method of stripping the prostate and the vesicles of decided value. This relieved the glandular congestion and enlargement. The speaker cited cases in which he had noted distinct benefit from this course of treatment. Before resorting to removal of the testicles he would examine the bladder by suprapubic cystotomy. In this way drainage could be performed, the condition of the walls of the bladder ascertained, the diagnosis established, and, if necessary, remove a portion of the middle lobe.

Mr. Cameron closed the discussion.

The regular meeting of the society was held in St. George's Hall, Wednesday evening, January 13th, 1897, President Dr. Allen Baines in the chair. Fellows present: Temple, J. A., Strange, Ryerson, Aikins, Pepler, Fotheringham, Anderson, Strathy, Baines, Brown, Graham, Spencer, King, McDonagh, Burns, Primrose, Grasett, Wright.

Dr. W. H. Pepler was appointed treasurer *pro tem.* in the absence of Dr. Walker, who has removed from the city.

Dr. A. Primrose read the history of a case of

LACERATED PERINEAL WOUND,

with death from sepsis.

The patient was a little girl aged twelve, admitted under his care

into the Children's Hospital, October 25, for a lacerated wound of the perinæum. Six days before she had fallen astride of a picket fence. The external sphincter was torn, and the wound extended forward to the right labium, which was very much swollen. The child was in great pain. The temperature was 100°. The next day when he saw her the temperature was 101°, and the pulse 100. Pain only upon examination. The next day the patient was operated upon, being the eighth day since the wound. The wound did not penetrate deeply. It had split the anterior wall of the rectum, extending to some depth into the perinæum and through the vaginal wall. The abscess was opened in front. Pure cultures of the streptococcus were found. Iodoform gauze was passed up into the wound and boracic acid poultices applied. Next day the pulse was 96 and the temperature 100°. The swelling subsided. Two days after the operation the patient complained of pain in the abdomen. Evening temperature 100.2°. Was somewhat restless; next day temperature 102°, pulse 138. Evening temperature normal, pulse 120. Wound was dressed and a dose of calomel was administered. Child vomited some yellow fluid. The urine passed involuntarily. Pain in abdomen increased; morphia administered. Great thirst. Temperature fell to subnormal. The abdomen was not much distended, but was tender on palpation. 10 c.c. of antistreptococcic serum were administered. Vomiting persistent. Subsequently three other doses were given. After these doses the child seemed to rally from the almost collapsed state she was in. Salines per rectum and hypodermically over the chest were given. Rectal enemata were also given during the later stages of the case. For the last two days no serum was obtainable. Death ensued.

Post-mortem. There was a gaping wound in the right labium two inches long. The perinæum was practically absent. There was greenish-yellow pus in the peritoneal cavity. Pus was also found on the dorsal aspect of the sternum. There was a clot in the right ventricle. The heart-muscle was pale and mottled. There were old pleuritic adhesions. There was a tubercular nodule in the right apex. The glands at the root of the lung were enlarged. The stomach was adherent to the liver. The spleen was pale and granular. The right lobe of the liver extended to the iliac crest. Section showed the liver pale and fatty. Looking into the bladder, which was normal, the end of the urethra was found to be gangrenous. The rectum was dark and gangrenous one inch from the anus. The intestines were distended with gas. No communication could be found between the perinæum and the peritoneum.

The doctor adverted to some of the more interesting points in connection with the case. He thought the serum did some good in prolonging life. In looking into the sparse literature of the subject he had found one case of an acute septic peritonitis and metritis successfully treated with the serum.

Mr. J. J. Mackenzie was invited to discuss the question. He said :

The case was one of great interest to me, as it was the first opportunity I had had of administering the antistreptococcic serum. The first work in connection with this kind of serum was done in the Pasteur Institute by Marmorek. The results were published, and a short account of some cases of erysipelas in which it was used. There was little in the clinical notes that would allow one to judge of the value of the serum. The serum was got by inoculating horses with a virulent culture. The horses would take larger and larger doses until 200 c.c. were reached. It looked as if a condition of immunity had been established in the horse. Marmorek's work was not confirmed by Petrowsky, of Berlin. The work in connection with the antistreptococci serum presents this difficulty. Bacteriologists have confused the various forms of poisons secreted by micro-organisms, and have spoken of the toxins as substances very similar to one another. They have extended the results obtained in diphtheria and tetanus to other diseases. As a matter of fact, there are two sorts of poisons produced by these organisms. First, a soluble poison, similar to the toxin of diphtheria, excreted by the germs. But, in addition to these, there is a poison associated with the bodies of the germs which is eliminated at their deaths.

This latter toxin has an intense nephritic action upon the cells. In diphtheria this is of little importance, because the germs are thrown off very rapidly, and the poison will not pass into the system. In streptococcic and staphylococcic cases the germs are practically in closed cavities, and instead of being thrown off are continually absorbed. We might get an antistreptococcic serum which would counteract the soluble toxins, and be of service in the case if administered early, but it would not have any effect on the latter named poisons.

In the successful case referred to by the reader of the paper he was doubtful if the serum had any effect.

There would be a greater difference in the character of the antistreptococcic serum than there would be in the diphtheritic serum, as the streptococcus varies so tremendously in its virulence. So to get an active serum it would be necessary to get an exceedingly active culture. Marmorek's serum was so virulent that he claimed a single organism introduced into a rabbit would kill it in seventeen hours.

(To be continued.)

Medical Items.

LOOK at the address label and see if your subscription has been properly credited. *All subscriptions received by 13th of month will be credited on the label of that issue.*

DR. NORMAN WALKER has removed from Toronto to Niagara Falls.

DR. OSLER, of Baltimore, spent a few days of Christmas week in Toronto.

DR. RUTHERFORD, Listowel, has returned from a three months' course at Johns Hopkins, Baltimore.

DR. HAY, of Elmira, was in the city on a flying visit to see his brother-in-law, who is dangerously ill.

DR. G. H. CLEMENS, Port Perry, leaves shortly for an extended trip to England and Germany. He will be gone about a year.

DR. LAFLEUR, of Montreal, was the guest of Dr. J. E. Graham, of Toronto, for a few days during Christmas week.

DR. GRAHAM invited a number of local physicians to meet Drs. Osler and Lafleur on Monday evening, December 30, at his residence on Bloor street. A most enjoyable evening was spent.

DR. A. E. AWDE (Tor. '92) has removed to Philadelphia, where, we understand, he will hold a position in one of the large hospitals. He has resigned his position as a member of the Public School Board of Toronto.

DR. JAMES F. ROSS, of Toronto, made a flying visit to Buffalo, Philadelphia, and Baltimore during Christmas week. His main object was to meet certain members of the Council of the American Association of Obstetricians and Gynecologists, of which he is the president, and complete, as far as possible, arrangements for the next meeting of the association, which will be held at the Cataract House, Niagara Falls, N.Y., Tuesday, Wednesday, Thursday, and Friday, August 17 to 20, 1897.

OBITUARY.

WILLIAM GRANT, M.D., C.M.—Dr. William Grant, of Perth, died suddenly at his home, January 17th. Heart disease is said to have been the cause. He received his medical education at McGill University, and graduated in 1867. Shortly after he commenced practice in Perth. He was successful as a physician, and for many years took an active part in municipal matters.

WILLIAM JOHN GLASSFORD, M.D., C.M.—Dr. W. J. Glassford died at his home in Scotland, Ontario, December 2, aged thirty-six. He was born in Vaughan, and was educated in the Toronto School of Medicine. He received his degree from the University of Victoria College in 1887, and shortly afterwards commenced practice in Scotland, a village in the County of Brant. As a student and as a practitioner he was highly successful, and very popular with his friends and associates. He was quiet and kindly in manner, but also active and energetic in his work. He died of pneumonia, after a very brief illness. He left a widow and one child. His mother, widow of the late Rev. P. Glassford, of Vaughan township, resides in Toronto.

Book Reviews.

A TREATISE ON OBSTETRICS. For Students and Practitioners. By Edward P. Davis, A. M., M. D., Professor of Obstetrics and Diseases of Infancy in the Philadelphia Polyclinic; Clinical Professor of Obstetrics in the Jefferson Medical College, of Philadelphia. In one octavo volume of about 600 pages, with 217 engravings and 30 full-page plates in colors and monochrome. Cloth, \$5; leather, \$6.

This work, which is one of the most recent on obstetrics, is very well gotten up.

The work is divided into seven sections. Section I. deals with pregnancy and labor; II., with pathology of labor; III., with obstetrical operations; IV., with abortion and the puerperal state; V., with infancy in health and disease; VI., with diseases of infancy; VII., with the jurisprudence of obstetrics.

We think the author has very wisely omitted the usual chapter on anatomical description of the female genital organs, which occupies many pages in most text-books. He only touches on anatomical description just in so far as it will elucidate the study of the art of obstetrics.

Under the subject of obstetric diagnosis reference is made to the recent work with "X" rays, and a couple of skiagraphs are given by way of illustration. On page 53 are statements concerning the action of the "X" rays on cells and bacteria which we think are not yet proven to be true. In fact, there are some cases on record which show that at least a dermatitis with more or less pain may be produced by the action of these rays. (See CANADIAN PRACTITIONER, November, 1896.)

There are many plates to accompany the text, some of which are extremely good, and others are rather poor. We think the illustrations on pages 318-325 are hardly up to the mark. In all other respects, however, the book is well worth perusal and study, and will hold its own with all the best and most recent treatises on obstetrics.

THE INTERNATIONAL MEDICAL ANNUAL, 1897. A complete work of reference for medical practitioners. The conjoint authorship of forty-one distinguished American, British, and continental authorities. Price \$2.75. Fifteenth year. 8vo. morocco cloth, about 700 pages. Illustrated: E. B. Treat: 5 Cooper Union, New York.

This very welcome annual will shortly be ready for distribution. We always look forward to the "International Annual." The review of the past year's work is always thorough and complete. About forty of the most prominent men of international reputation contribute to the success of this work. The articles are concise, yet complete.