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No. 2

Original Communications.

PYELO-NEPHRITIS IN PREGNANCY.*

By J. F. W. Ross, M.D.,

Professor of Gynecology, University of Toronto.

I must apologize to the Association for the fact that this has been called a paper; it is merely a note to draw the attention of the practitioners to a rare and serious condition.

The pregnant woman has many pitfalls to encounter, and not the least serious of these is pyelo-nephritis, the disease I propose to discuss shortly. In the literature of the subject there is not much to be found that is helpful to the practitioner or of much benefit to the student. The disease seems to have been to a very great extent lost sight of, and many works on obstetrics do not even mention it. One of the best references I find in Edgar, and even there the subject is not dealt with as fully as it might have been. The experience of any one man is necessarily limited, and we naturally turn to the larger institutions for information. In the Paris *maternité* they meet with about one case a year of pyelo-nephritis complicating pregnancy. On account of the rarity of the condition, I propose to give you in detail my experience.

In May, 1898, my attention was first called to this subject. A Mrs. B., advanced in pregnancy to the fifth month, showed evidence of ill-health. Pus appeared in the urine in very considerable quantity. She suffered from loss of appetite, headache, and some elevation of temperature. After a few weeks high fever and chills set in, with an increase of pulse. She went through with the pregnancy, and though very ill bore a living

* Read at meeting of Ontario Medical Association, held at Hamilton, Ont., 1908.

child and survived. Upon frequent subsequent examinations no pus was found in the urine, though there were at times traces of albumen. She became pregnant again in June, 1901, and when two or three months pregnant no pus was present in the urine. Gradually the old symptoms reappeared—pus and albumen in the urine, ill-health, loss of appetite, a haggard appearance, lemon-colored, waxy-looking skin. I advised the induction of labor and brought the patient to the city for that purpose, but the other consultant did not agree with my views of the case, and the patient was sent home to go on to full time. She was delivered and recovered, I believe, after a desperate illness. Owing to the action taken in the case, I have never seen the patient since, and can say nothing as to her subsequent condition.

The next case with which I was brought in contact was Mrs. R., a young married woman pregnant for the first time. When six months pregnant she was taken ill with pain in the right lumbar region. At first it was supposed that it might be connected with the appendix, but upon a more thorough examination after her admission into St. Michael's Hospital, the real nature of the trouble was discovered to be a pyelo-nephritis. I saw her in consultation with Drs. J. L. Davison and H. B. Anderson. She was then very ill with rapid pulse, high fever, and she looked very ill; the temperature was 105. I advised the emptying of the uterus, and passed a bougie to bring on uterine contractions. The recovery was uneventful. I lost sight of the case until she became pregnant for the second time, and again in the sixth month the old symptoms returned—high fever, rapid pulse, haggard appearance, pain over the right lumbar region, and pus in the urine. Her physicians, Drs. Davison and H. B. Anderson, being out of town, I saw her with Dr. Hendry, acting as locum tenens for Dr. Anderson, and again advised the production of premature labor. Soon after the uterus had been emptied pus disappeared in the urine, and she made a very rapid and uneventful recovery. Soon the bloom of youth returned, and she felt in perfect health. On the 16th of December, 1907, she presented herself at my office and said that she had just missed her menstrual period. I examined the urine and found it normal. She returned once or twice a month to enable me to follow up her condition upon the advance of pregnancy. Each specimen of urine was drawn from the bladder by means of a glass catheter and examined at once. About the third month of pregnancy bacteria (diplococci) were found in profusion in the urine, and a little later pus made its appearance. Her husband came to see me about her health, and expressed a wish that if

anything was to be done it should be attended to at an earlier period before she suffered so much pain. He stated that already she was delirious at night and was looking ill. I referred him to Dr. J. L. Davison, one of her attending physicians, for his opinion, and he also advised that the pregnancy be terminated. The patient was sent into St. Michael's Hospital, and when I saw her with Dr. Davison I was amazed at the change in her appearance. The same peculiar haggard look, with dark rings under the eyes, the unhealthy color and waxy appearance of the skin were very apparent. There was as yet but slight elevation of temperature, but the right kidney was now excessively tender on pressure. The left kidney was not tender. The uterus was emptied for the third time. I intend to sterilize the patient by removing a portion of each fallopian tube to prevent impregnation. This case was of particular value from a clinical point of view, owing to the fact that I was able to observe it during three successive pregnancies, and that the observations also covered the intervening periods.

The next case to be related is that of Mrs. P., admitted under my care in the Toronto General Hospital. She was 32 years of age, and had given birth to one child. She was pregnant four months. A sudden pain set in over the left kidney at the end of the third month of pregnancy; it was of a sharp, stabbing character, and did not radiate. The day after her entrance into the hospital, in the fourth month of pregnancy, a severe chill came on, and lasted for 45 minutes. She had, in all, four or five chills, at intervals of from 6 to 24 hours. When admitted temperature was 102 3-5, pulse 128, respirations 30—the urine contained pus, no casts were found, a trace of albumen was present. I append the temperature chart. The chills ceased, the health improved, and the patient is as yet under observation. She may go on to full time without any return of her serious symptoms, though this has not been my experience with similar cases. Even after delivery the patient is not necessarily out of danger, and the damage done may be of a permanent character. This is borne out by the history of the next case.

Mrs. C., 45 years of age, the mother of eight children. She had never had convulsions or swelling of the feet. When four months pregnant she had chills, but these disappeared. She had suffered from a good deal of soreness across the loins. In the last pregnancy the urine had been very scant—not a cupful in 24 hours, she said. On the 12th day after delivery she was seized with a severe pain over the left kidney, in the left lumbar region, and up the left side of the abdomen. A chill came on and was very

severe. Dr. Cleland saw her; she had high fever and the urine contained considerable pus. In this case the patient had a period of ill-health at the fourth month, and then she improved and went on until full time and was delivered. Twelve days after delivery she showed the severe symptoms that called for a consultation, and I saw her with Dr. Cleland. She had severe pain, a chill, elevation of pulse and temperature, and pus in the urine. The convalescence was rather slow. For the purposes of this paper I saw her a few weeks ago, and found no ill-health, no tenderness over the loins, and a very small amount of pus in the urine, indicating a permanent lesion.

In order to show the difficulties with which we have to contend, and to emphasize another phase of this condition, I relate the following case:—Mrs. G., age 20. She entered St. Michael's Hospital when four and a half months pregnant. She felt ill. Her temperature was elevated, varying from 100 to 103. Finding an abundance of pus in the urine, I advised that the uterus be emptied. This was objected to. I lost sight of the patient for a time, but when asked to see her again she was emaciated, looked as if in the last stages of septicæmia, and looked so ill that I hesitated to advise the induction of premature labor, feeling that it would be fraught with very considerable danger in the present condition of the patient. She was taken home, remained a week, and was readmitted to the lying-in department of St. Michael's Hospital in a desperate condition, and delivered of a still-born child. Labor set in without any interference. She lay abed for weeks, but at last regained her health. Some months later I catheterized her and obtained a specimen of urine. This was examined by Dr. Geo. Smith. It contained pus cells, singly and in groups, but they were not numerous. A diplococcus was also present in a fresh specimen. The relation of these cases, embracing, as I think they do, the sum total of my experience with pyelo-nephritis of pregnancy, may serve as of some assistance in studying the disease. The condition is in no way connected with the nephritis or albuminuria that accompanies eclampsia. There is a factor common to each condition, namely, the almost total disappearance of the pathological changes in the interval between the pregnancies. In the case of eclampsia, it is the albumen that disappears or greatly diminishes; in pyelo-nephritis it is the pus that disappears or greatly diminishes. In albuminuria of pregnancy we frequently have convulsions; in pyelo-nephritis we frequently have severe rigors; while rigors are not met with in albuminuria and convulsions are not met with in cases of pyelo-nephritis. The two

diseases must, therefore, be looked upon as distinct and separate. But again they meet on another common ground. Each is specially connected with pregnancy and the sufferers are in apparent good health when not pregnant. The cause of the onset of acute symptoms in either case is the presence of pregnancy. Pyelo-nephritis assumes serious proportions in the fourth and fifth month, while albuminuria assumes serious proportions as a rule in the latter months. In either case the disease may present serious symptoms after delivery. If pressure be the cause of the conditions, it is less difficult to explain cases of albuminuria than cases of pyelo-nephritis, because the former comes on when the pressure is at its greatest, namely, in the latter months of pregnancy. I confess that it is difficult for me to understand why the slight pressure of a three, four, or five months' pregnant uterus upon one or both the ureters should be capable of producing such a serious disturbance in one or both kidneys. Again, it is difficult upon such an assumption to explain the occasional amelioration of the symptoms even with the increasing pressure of advancing pregnancy. And it is more difficult to explain the recurrence of the serious symptoms after all pressure has been removed by the delivery of the child. Perhaps some venous congestion of one or both kidneys may be produced analogous to the venous engorgement noticed even in the very first months of pregnancy.

The symptoms are characteristic. Generally during pregnancy a feeling of malaise, weakness, and ill-health. Then comes on the severe pain of pyelo-nephritis similar to that of the disease when produced by an inflammation ascending the ureter from an inflamed bladder. This pain may be aching or stabbing in character, and is fairly well localized. The kidney on that side becomes excessively tender to the touch. Rigors set in, and the pus is found in the urine. This ill-health may continue until labor sets in or until the uterus is emptied after the induction of premature delivery or miscarriage. This would appear to be the rule, although from my experience there appears to be some amelioration of the symptoms, with a recrudescence of the disease at a later date.

The treatment to be adopted should be that of pyelo-nephritis, whatever that may be. If the disease is, as we know it is, due to the presence of pregnancy, and if the disease is a serious one, as we know it is, surely the most rational method of treatment is to terminate the gestation. This should only be done under the protection of a consultation with one or more confrères, and should not be deferred until it becomes dangerous to the mother.

My experience does not accord with that of some other observers. It has been stated that pressure of the gravid uterus and the pressure of tumors will produce the condition. I have not found pyelo-nephritis, nor yet the further advanced condition of pyo-nephrosis as a complication of myomatous or ovarian tumors, or even of uterine cancer, with all the pressure it produces. The condition most frequently met with here is hydro-nephrosis, and not pyonephrosis, nor yet pyelo-nephritis. In my cases there has not been any tumor of the kidney present upon bimanual palpation of the loin. The cases have not all been permanently damaged in the interval between the pregnancies in so far as pathological changes could be made out by a urinary analysis. Pain has been a constant accompaniment of the condition, and the symptoms set in early, namely, about the fourth, fifth, and sixth months of gestation, and not in the later months.

In this country some years ago, Dr. Meek, of London, drew attention to the condition. Those who are interested in the literature of the subject will find a long list of references in a paper by Tremont Smith, in the *New York Medical Journal*, December 8, 1906.

DISCUSSION.

DR. WM. F. METCALF.—The etiology of the various forms of toxemia occurring in pregnancy is not well understood. Why one patient presents symptoms of nephritis without pus in the urine, with eclampsia, and in another the urine is loaded with pus and even pus casts, with no symptoms of eclampsia, while others have repeated rigors with high temperature but no increase of polymuclear leucocytes and no evident impairment of kidney function, is a question yet to be solved, and the medical profession is indebted to Dr. Ross for the report of so many cases from his personal experience of an affection which, though not common, is doubtless frequently overlooked.

I have one case at present under observation. In my records of the last three years, I find only one other case reported, of which the following in brief is the history:

Mrs. D. S., aged thirty-four. Had missed four menstrual periods. For ten days she had severe chills, with fever reaching 104 deg. Leucocytes, 26,200, of which polymorphonuclears made up 98 per cent.; erythrocytes, 2,400,000; hemoglobin, 50 per cent. Vaginal examination excluded salpingitis. Pain in the right renal region was severe. Tumor could be palpated. Urine examination: Very cloudy, with heavy white deposit;

spec. grav., 1010; albumin, more than would be accounted for by the pus present; microscopically, masses of pus-cells and many small round epithelial cells. Specimen taken by catheter gave pure culture of colon bacillus. The patient's opsonic index to the colon bacillus was 1.4. The temperature was typically septic, showing striking remissions.

The case was so clearly one of pyonephrosis, and the patient was in such bad condition, that I did not think it advisable to catheterize the ureter. Cystoscopy and catheterism of the ureter are essential to a positive diagnosis in some cases, but are difficult in the later months.

Here was a woman, anemic and poorly nourished, in a condition most favorable for sepsis. Little pressure is necessary to obstruct the ureter; the pressure of the urine, thus dammed back upon the renal structures, would disturb the vitality of their cells, while the stagnated urine is readily infected by the colon bacillus. In 19 out of 21 cases reported by Rovsing, the colon bacillus was found in pure culture.

I advised termination of the pregnancy because of the bad general condition, and ether was administered on February 4th, a dead macerated fetus being removed. The blood-examination, twenty-four hours later, gave 9,800 leucocytes, of which 92 per cent. were polymorphonuclears; forty-eight hours later there were 4,800 leucocytes, with 82 per cent. The following note appears ten days later: "Many specimens of urine have been examined and there has been a steady improvement; today's sample still shows many pus-cells, some albumin, no casts, sp. gr., 1011." On March 2nd, the report is that the deposit, fine and white, is lessening in quantity. On May 9th, "a few pus-cells, an occasional red blood corpuscle, and a few small round epithelial cells remain." The patient has remained in good health since.

The right kidney is the one usually involved. Swift reported 41 cases in which the right kidney only was affected in 37. This fact points to pressure as a factor, since the left ureter is somewhat protected by the sigmoid flexure, and the diagonal attachment of the mesentery tends to allow the small intestine to fall to the left. I do not agree with Dr. Ross's statement that the pressure on the ureters is greater in the later months of pregnancy. I believe it to be greatest just before the uterus rises above the pelvic brim; and it is true that a vast majority of cases are first observed in the fifth month.

In all the cases reported by Swift, in which bacteriological examination was made, the colon bacillus in pure culture was

found; it is therefore likely that the condition of the alimentary canal is an important etiological factor. This would suggest that digestive disturbances and constipation in the pregnant woman should receive especial attention.

According to the reports of cases found in the literature, it is not always necessary to empty the uterus. Twenty-eight of these forty-one cases went to term. Spontaneous premature labor occurred four times, induced premature labor only once, yet eventually in twenty-nine of these cases pus entirely disappeared from the urine. When the infection is bilateral, we may be left no choice but to empty the uterus; but Leguen (*Rev. de Gyn.*, 1904) urges that we should carefully distinguish these cases from those that are unilateral. He performed nephrostomy in eight cases where the condition was unilateral, and says that the operation does not compromise the pregnancy. He further says that, in urgent cases, *before* the child is viable, the operation is incontestably indicated; however, when the child is viable he would prefer premature delivery. Milligan reported (*Ob. Rev. de Gynec.*, 1906) a case of recovery after nephrostomy. Fournier, reporting two cases, states that in one nephrostomy was refused and at the seventh month the patient was delivered of a dead child, while in the other, a case of a severe type, nephrostomy was performed and a living child born at term."

Treatment, aside from operative measures, will, of course, be aimed toward overcoming the infection by the same means used in any form of pyelo-nephritis. The urine should be made a less favorable culture medium by the administration of such substances as urotropin and helmitol, and insisting upon the ingestion of large quantities of water. In the case under observation this method alone has been employed, since operation was refused. The patient has been in bed about two months. She is improving, but there is still pus in the urine.

In brief, we are dealing in the pyelo-nephritis of pregnancy with a condition from which the mother may recover with little of treatment except hygienic measures in a large percentage of cases; but, in all except the most advanced intoxications, our greatest concern is for the life of the child. For this reason we may properly consider Leguen's operation as a valuable suggestion in selected cases.

Dr. Ross is to be congratulated upon his splendid results in the cases reported.

PULMONARY GANGRENE AND ABSCESS.*

BY G. E. ARMSTRONG, M.D., MONTREAL.

Pulmonary gangrene and abscess, although recognized by Hippocrates, and considered by various writers from that time up to the present, has become of practical interest to the surgeon chiefly since the era of Listerism. Indeed, it is only within the last few years that the surgery of the lungs, including pulmonary gangrene and abscess, has received serious attention, and been placed upon a sound, scientific basis. The various details connected with the diagnosis, operative treatment and prognosis of these conditions have been advanced very largely by the labors of Quincke, Tuffier, Gluck, Karewski, Garrè and Körte.

The present paper is based upon 14 cases of pulmonary abscess and gangrene.

The ages were from 20 to 53. There were 10 males and 4 females.

The right side was diseased in 6 and the left side in 8 cases. The upper lobe was involved in 3 cases; the middle in 1, and the lower lobe in 11.

Three of these patients were epileptics and 3 were alcoholics. In six cases the disease seemed clearly to be secondary to pneumonia, and probably in all of the six it was an aspiration pneumonia.

In two the pneumonia immediately followed the administration of anesthesia for the extraction of teeth, alveolar abscess being present in both instances. In one it began by sudden, severe pain in the right side two days after confinement. The following day the patient spat up a mouthful of blood-stained material. A pneumonia then developed which would seem to be embolic in origin.

In one instance the abscess followed trauma. An Italian fell 40 feet, striking on his back. A traumatic pneumonia developed, followed by abscess.

In no instance was a foreign body found or suspected. Foreign bodies in the bronchi as a cause of gangrene are very rare. Weis, in a collection of 1,000 cases of foreign bodies in the air passages does not mention gangrene as a sequel. Hoffman, in 252 cases, reported in Nothnagel's System, men-

* Read at the meeting of Ontario Medical Association.

tions it only twice, while Murphy, in his article on "Surgery of the Lung," in a collection of 59 cases of abscess, does not give foreign bodies as an etiological factor. Clarke and Marine, after a careful search of the literature, found but 31 cases in which gangrene followed the inspiration of a foreign body. In these 31 cases, the foreign body was a tooth twice, a pin once, a piece of wood once, a button twice, a head of grain or grass seven times, a bit of evergreen twice, a fruit-stone twice, a bone ten times; not mentioned, 4 times. The gangrenous process in these cases lasted from three days to four years, most frequently from two to four weeks. The right lung was involved in 14 cases, the left in 7 cases. Death occurred in 21 cases, recovery after thoracotomy in 2, and spontaneous recovery in 4 cases. The foreign body was coughed up in 5, four of which subsequently died, and one made a rapid recovery.

The diagnosis and location of pulmonary abscess is sometimes extremely difficult, and differentiation between abscess and gangrene is, in many instances, quite impossible. Lenhartz and Körte think the differentiation artificial and uncertain. In both lesions the primary condition is infiltration and smelting together of the tissues, and whether these tissues break down and form large sequestra, or break down into small particles, often as elastic tissue, is only a question of degree. In fact it is difficult and sometimes impossible to tell whether there is a sequestrum or not. The differentiation by examination of the sputum may lead to erroneous conclusions, for although a pure purulent expectoration would stand for abscess, and a fetid ichorous expectoration for gangrene, yet a sequestrum may be present with a purely purulent expectoration. In one of Körte's cases ten days after the opening of the abscess cavity in the lung a sequestrum the size of the end of the thumb was removed. In fact, a condition of abscess and gangrene may both obtain in the same cavity. The prognosis would seem to be better in cases of pure odorless pus.

Foul-smelling purulent sputum containing lung tissue or elastic tissue indicates the presence of pulmonary abscess, or gangrene or both. Traces of blood are frequent and hemorrhages are not uncommon. If a putrid sputum follows acute lung disease, three things are possible: abscess or gangrene, bronchiectic cavities, or a bursting of pus into the lung from the pleura, subphrenic region, or the mediastinum. In the differentiation of these three conditions, a careful study must be made of the history of the cases, as well as a careful physical examination. A thin layer of normal lung tissue over the

cavity will completely mask the condition. Fluoroscopic and X-ray examinations are most valuable aids in these cases, and will often show the location of the cavity when physical signs and other methods of examination fail. They may also show how deep or how far removed from the surface of the lung is the abscess. For instance, the physical signs may indicate that the abscess is at a certain level, but a fluoroscopic examination may show clearly that the cavity extends downwards and that its lower end is farther removed from the surface of the lung than the upper end. This knowledge may prove most valuable to the surgeon, showing him where to place his incision, to secure the best drainage of the cavity subsequently.

The diagnosis of bronchiectatic lesions by the fluoroscope is much more uncertain. As remarked by Pfeiffer (*Zur Diagnose der Bronchiektasen im Röntgenbilde. Beitrage Zur. Klin. Chir. Band 50, 1906, pp. 279*), the similarity of the symptoms of bronchiectasis when accompanied by fetid bronchitis to those of lung gangrene and abscess is very close and the difficulty in differentiating between the two is extremely great. In bronchiectasis the condition, of course, is generally more wide-spread and diffused over one or more lobes in one or both lungs.

The use of the exploring needle as a diagnostic measure is inadvisable, because of the danger that the two layers of the pleura are not adherent. The pleural cavity may then become infected and a septic empyema develop. There is also the danger from puncturing vessels and hemorrhage. I have known hemorrhage to be quite smart after the use of the exploring needle, although never fatal. Even if the pleural layers are adherent infection may pass into the over-lying tissues of the chest wall and give rise to a phlegmonous inflammation.

The interesting relationship of bronchiectasis to lung abscess is, however, not alone in the question of differential diagnosis. Bronchiectatic conditions have been known to develop in the neighborhood of a healed lung abscess as a result of shrinking of the scar tissues and dilatation of the adjacent bronchi. Such cases have been reported by Garrè i.e. Helferich-Lichtenauer, *Deutsche Zeitschrift f. Chir. Bd. 50, S. 389*. Körte also reports a similar case upon which he had operated for acute abscess of the right lung. A month after the cavity was healed, the patient returned suffering from a recurrence of putrid expectoration. Seven months and a half after the first operation an incision was made through the scar and a system of dilated bronchi was found. He reports further three other cases of acute gangrene of the lung, where, in the region of

the cavities, at autopsy, was found beginning dilatation of the bronchi where no healing process was apparent. Körte admits that there may have been in these cases a pre-existing bronchial dilatation which favored the development of the gangrenous process.

Tuberculous cavities are not suitable for operation.

Patients sometimes seem to develop gangrene without a pre-existing pneumonia or lung disease. Emboli may arise from a puerperal infection, retro-cecal and appendical abscess. Embolic abscesses are frequently multiple and in that case are not adapted to surgical treatment. In one, inspiration of water while bathing was a cause. Typhoid fever, measles, facial erysipelas and bronchitis may be etiological factors; in one, tropical dysentery and liver abscess. In acute cases the abscesses are generally solitary.

When once the diagnosis is made and the cavity located it is unwise to delay operation because of the danger of hemorrhage, extension of the disease in the lung, bursting into the pleura, and the occurrence of metastasis and sepsis.

Reasons which justify delay in operation are persistence of the acute pneumonic process and the desirability of having firm adhesions of the two pleural surfaces. These, however, should not be allowed to weigh against early evacuation of the pus when there are well-marked indications for the same.

In the early stages the abscess walls surrounding the tissue are softer and more yielding than they are later on.

In chronic abscess the conditions of healing are much less favorable, as the walls are hard and unyielding. To bring a chronic abscess to healing generally requires extensive resection of ribs and often of the thickened visceral pleura as well.

While it cannot be denied that certain cases recover after rupture of the abscess into the bronchus, yet experience has shown that this is an uncertain result, and that the mortality in unoperated is very much larger than in operated cases. In diffuse bronchiectasis the conditions are quite different, the disease is not so localized—operation is not so satisfactory, and the prognosis is not so good. The drainage of localized bronchial dilatations is sometimes successful.

Resection of a whole lobe has sometimes been found necessary, and is sometimes followed by success. The operation, as a rule, is undertaken for the relief of abscess and gangrene.

Operations for the relief of large hemorrhages are not easy. There is the difficulty of coming directly upon the bleeding point and the danger of the patient bleeding severely into the

bronchial tubes while the operation is going on. If one is sure that there is only one abscess from which the bleeding comes and if the physical signs and fluoroscopic examination show that the abscess is superficial and the patient's life is jeopardized by recurrence of large hemorrhages, one might be justified in such instances in opening the cavity with a view to controlling the hemorrhage by ligature, or by packing. If the cavities are multiple, or if the condition is one of bronchiectasis, operation is certainly contraindicated. Nordman, in the *Gaz. des Hopitaux*, No. 87, 1906, draws attention to the possibility of hemorrhage occurring in cases of pulmonary gangrene, and to the small mention of this complication in the books. Lannee and Trousseau do not mention it at all. Grisolle, Eichhorst and Nothnagel simply refer to it. Hardy and Behier, on the contrary, clearly indicate its importance and gravity. It must be divided into two forms; the small capillary hemorrhages which are sufficiently frequent, and the grave hemorrhages, due to rupture of large vessels, and which are generally fatal.

In some instances there may be some preparation made before operation. Only too often, however, patients are brought to the hospital in a desperate condition, and require immediate relief. In other cases, for some unaccountable reason, the physicians transfer these patients to the surgical side only when they are *in extremis*. When possible, these patients should be prepared for operation in the usual way, with the added special preparation to get them to cough up as much as possible beforehand. Many of them know what position to assume to accomplish this end. They know that by turning on one side or the other—by lying on the back, or on the face, or by hanging the head low, they can empty out a large quantity of matter, which renders the subsequent operation much safer.

I prefer, when possible, to operate under local anesthesia, but this is difficult in the cases of foreigners, who cannot be spoken to and encouraged in their own language. In such cases I use ether as being probably safer than chloroform, or any mixture containing chloroform.

After portions of one or two ribs are resected over the cavity, the next question is, are the layers of the pleura smelted together and adherent? Tuffier reports 215 cases, in which the pleura was adherent in 190, or 95 per cent. It is not always easy to decide this point. Putting in a needle and expecting it to be moved up and down if the pleura surfaces are not

adherent is an uncertain test, because it is almost impossible to stop the point of the needle just when it pierces the visceral pleura, and if it goes much further the lung tissues move it up and down. I have usually found that if the parietal pleura was thickened adhesions were present. If in doubt, and the patient's condition permits, one may remove one or more bits of rib and suture the two layers together as recommended by Yean, Tuffier and Roux. In suturing the pleural layers, round needles are preferable, and Garrè recommends inserting them during expiration and covering the pleura with the finger during inspiration. I have never known any infection to occur from this operation. If the condition is urgent, incision may be immediately made and the lung entered, but it is safer to wait for a couple of days for adhesion to take place. In other cases when in doubt I have applied the cautery, and in others simply packed the cavity tightly with iodoform gauze with equally satisfactory results. The first, however, is the procedure of choice. In one instance, when in doubt, I made a small puncture with the end of a knife—the entrance of a puff of air discovered that no adhesions were present. I packed the cavity with iodoform gauze, and three days later found adhesions sufficient to allow me to go in without any trouble.

If the pleura is accidentally opened and the lung recedes, W. Müller has found it possible to catch the receding lung with a pair of forceps and bring it back into the wound and suture the two pleural layers together. Incision through the lung tissue into the abscess cavity may be made in several ways. In some cases where the tissue is hard and dense, particularly if the fluoroscopic examination has shown the abscess wall to be near the periphery of the lung, one may enter simply by blunt dissection. In these cases I have found it very satisfactory to first insert a director, and when entrance into the abscess cavity was demonstrated by the flow of pus, to pass a pair of narrow-bladed forceps along the groove, and by separating the blades to secure an opening sufficiently large to permit the introduction of a finger for purposes of exploration. I have found this a valuable detail, as it enables one to determine the size and direction of the cavity and the location of any communication with a bronchial tube. In one of my cases I found the communication with the bronchial tube at the very upper end of a long cavity. This patient did not do particularly well for some weeks after operation. Then finally I made a second opening through the chest wall into the lower end of the cavity, thus securing a dependent drainage, when the cavity closed rapidly,

and the patient has remained well ever since. If there is much lung tissue to pass through in reaching the cavity a thermo-cautery enables one to enter with comparatively little loss of blood. An incision, however, may be made if good access has been obtained previously, and any bleeding points caught and ligatured.

In three of Körte's cases, sudden death occurred after operation from arrest of breathing with collapse. The first patient, who had had several hemorrhages, was operated upon under local anesthesia, morphia and local infiltration with eucaïne; a large gangrenous cavity was opened on the left side behind; the pleural layers were adherent. The patient did not suffer from any great pain and the bleeding was insignificant. The pulse was good and the operation was in every way successful. While the bandages were being applied and the patient in a partially elevated position, the breathing suddenly ceased, the pulse became bad and the patient died at once. The autopsy of Prof. Benda showed no good reason for the sudden death. The second case was being operated upon for the second time three months after the first operation. While the fistula was being enlarged under morphia and eucaïne infiltration, a few drops of chloroform having been given towards the end, breathing suddenly stopped, the pulse became bad and the man died. The autopsy of Prof. Benda showed many bronchiectatic cavities in the left lower lobe, but no reason for the sudden death. The third was that of a man 52 years of age. The sixth and seventh ribs on the right side were resected under chloroform anesthesia, the adherent pleural layers were excised and the bronchiectatic cavity opened. After the operation, just as the patient was being put to bed, breathing stopped, the pulse ceased. Artificial means, tracheotomy, inflation of lungs, venesection and saline infusion into the median vein restored breathing temporarily, but three hours later he died. Körte thinks the only explanation of these sudden deaths is through the reflex action of the pneumogastric nerves. He does not seem to think that the method of narcosis contributed in any way.

The after treatment consists in providing free drainage and easy emptying of the cavity. This is generally accomplished by the insertion of a soft rubber tube. At the time of the operation the cavity may be wiped out with gauze swabs, and sometimes a considerable mass of gangrenous tissue and shreds are wiped away in this way without causing hemorrhage. Later, during the period of granulation, healing may be promoted by packing with gauze, and by using tincture of iodine, nitrate of silver or balsam of Peru.

The incision of the tissues in the chest wall must not be allowed to close until the lung cavity is healed. Small hemorrhages are not infrequent before operation, as has already been mentioned, and hemorrhages of considerable quantity sometimes follow the use of the exploring needle. Hemorrhages after operation and after the cavity is opened sometimes occur. In two of my cases the hemorrhages were really severe. In one it was necessary to pack the cavity very tightly with gauze. When the packing was removed in twenty-four hours, bleeding recurred and a similar experience after the next twenty-four hours occurred. In this case good access had been obtained and one could distinctly see into the cavity where the bleeding was going on. It did not come from any spouter that could be seen, and was controlled with packing. After the third twenty-four-hour interval no hemorrhage occurred. In the second case, although not severe, it was necessary to keep the cavity packed forty-eight hours. If access has been good and a vessel is seen spouting there should be no difficulty in applying a ligature.

The wound has ultimately healed without permanent fistula in all of my cases in which there was not at the time of operation an accompanying empyema. Permanent fistula is rare and may be said not to occur in those cases in which the two pleural layers are adherent at the time of operation. If, however, before drainage is established, the abscess or cavity has burst into the pleura before the pleura layers were adherent, then the same rules for healing apply as for empyema. The visceral layer may become so thick as to seriously retard the expansion of the lung and the healing of the cavity. The cavity seems to close generally by granulation and scar tissue, gradually contracting and obliterating the opening. During this process, as has already been mentioned, the bronchial tubes in the neighborhood may become stretched and dilated. Mikuliz has reported one and Körte two instances in which the cavity, instead of being obliterated by contraction of scar tissue, became covered with a layer of epithelium. All three cases occurred in the upper lobe where the anatomical difficulties of bringing about apposition of the walls and the spaces are present. If there has been much contraction during the healing process there will be the usual flattening of the chest and alterations in the spinal curves. In only one instance was I obliged to operate the second time, and that, as has already been mentioned, was where the drainage and the bronchial tube were both from the upper end of the cavity. So far as we have been

able to trace these cases, the recovery has been permanent—no cough or bronchitis being complained of.

No. 3 died suddenly a month after operation from ulceration with erosion of a branch of the pulmonary artery.

No. 6. In this case the accompanying condition and contributory causes of death were acute miliary tuberculosis of the peritoneum, fatty heart, septic splenitis, peri-splenic abscess and acute parenchymatous nephritis.

No. 13 was a case of bilateral bronchiectasis with fetid bronchitis, in which I drained one side. He died from asthenia on the fifth day after operation.

No. 14. Contributory causes of death were bronchopneumonia; emphysema of lungs; chronic int. nephritis; acute int. nephritis and fatty liver.

Resection of one lobe of the lung has been carried out by Kümmell, Gluck, Krause and Heidenhain. Garrè and Lenzhartz seem to think it the only rational procedure in certain extreme cases with a limited disease. It is said to be feasible and may be carried out largely by ligature en masse. So far, I have had no experience with this procedure. Good access obtained by the removal of portions of several ribs would seem to be a necessary detail, thus securing control of the field of operation.

In conclusion it may be said that while some lung abscesses and some localized bronchiectatic cavities may, under favorable circumstances, when communicating freely with a large bronchus, empty themselves sufficiently to permit of cure, yet on the whole the results of medical treatment only in lung abscess and gangrene are bad. Much better results are obtained by incision and drainage, so that not more than a few weeks should be spent in medical treatment. Operation in a rarefied atmosphere, from what I saw of the method in Breslau, and from what I have read of it since, seems to promise a good deal, and should enable one to operate on these cases more independently of the union of the two layers of the pleura, and enable one more freely to explore the cavity, to ligature, suture, and to do better work generally.

The mortality in lung abscess and gangrene varies under surgical treatment. In 28 cases following pneumonia operated on by Körte, 20 recovered and 8 died, a mortality of 28½ per cent. Of 8 cases of putrid empyema associated with gangrene, 1 recovered and 7 died, a mortality of 87 per cent.

Tilton reports a mortality of 50 per cent. in 20 cases. In

the 14 cases reported in this paper, including one of putrid empyema, there were 4 deaths, a mortality of 28½ per cent.

The case complicated by putrid empyema is making a very satisfactory recovery, but further operation may be necessary to obliterate the pleural cavity, as the lung is tightly bound down and is expanding very slowly.

BRIEF REPORTS OF 14 CASES.

Case 1. Male, aged 38. Dr. Lafleur. Alcoholic and epileptic. Gangrene. Following a prolonged spree developed a severe pain in the side and began expectorating blood-stained, greenish sputum, measuring 20 to 25 oz. in 24 hours. Cavity 2½ x 2½ inches, with smooth walls opening into a bronchus from the upper corner. The pleural surfaces were adherent. Drainage. Recovered. His habits were such as would point the clinical history to this being originally an aspiration pneumonia. The absence of elastic tissue and the smooth walls of the cavity suggest bronchiectasis, but the gangrenous odor of the sputum, the fever and the pleurisy point to its being gangrene.

Case 2. Male, aged 33. Dr. Molson. Alcoholic. Illness began with chills and rigors. Two months after had chills with profuse perspiration and fetid expectoration. Signs of consolidation in the right lung, but difficult to localize. The sputum had a gangrenous, offensive odor and contained elastic tissue. The patient was transferred to the surgical service and rib resected. Drainage. Recovery.

Case 3. Male, aged 48. Dr. Finley. No alcohol or epilepsy. Illness began with chill, followed by daily chills and night sweats. Signs of cavity at the base of the upper lobe of the left lung. Fluoroscopic examination showed a shadow in this region and foul pus was drawn by the exploring needle. Sputum frothy, muco-purulent, and contained elastic tissue. Patient was transferred to the surgical service, where, previous to operation, he expectorated 40 ounces of fetid sputum. At the operation a large gangrenous cavity was explored and packed with gauze. The patient improved, but died suddenly a month later from ulceration of the posterior left apex with erosion of a branch of the pulmonary artery.

Case 4. Male, aged 45. Dr. Ridley MacKenzie. Alveolar abscess causing trismus. Dr. MacKenzie administered ether to relax the jaw, and the removal of the tooth liberated a lot of foul smelling pus, and a sub-maxillary abscess formed later which was opened. Three weeks afterwards dry friction rub

of the right side which improved after strapping. A week later a dull area developed with signs of consolidation and gangrenous expectoration. An exploratory aspiration was performed below the angle of the scapula and gangrenous foul smelling pus was found. The expectoration was profuse and gangrenous, but no elastic tissue was found. He was transferred to the surgical service and a piece of the ninth rib excised, and a fetid-smelling abscess was opened lying between the diaphragm and the lung, almost fecal in character. Drainage. Recovery. The man is now in perfect health.

Case 5. Female, 26. Dr. Ridley MacKenzie. Illness commenced with alveolar abscess in the upper jaw. The tooth was removed under an anesthetic, the anesthetic being prolonged preparing the tooth for bridge-work. A week later a pleuritic friction rub developed in the right axillary region, followed by signs of consolidation with blowing breathing, accompanied by muco-purulent fetid expectoration, but no elastic tissue. An effusion developed, and gangrenous pus was aspirated. Resection of the ninth rib liberated a large quantity of greenish gangrenous pus. The pleural layers were adherent, the lung cavity presenting irregular sloughing walls. The patient's condition was very bad. She was septic with acute dilatation of the heart. The apex of the heart was in the anterior axillary line and the pulse was not countable. Good drainage was secured, and expectoration ceased and the patient's recovery was perfect. Dr. MacKenzie accordingly regards this condition as one secondary to aspiration-pneumonia, the gangrenous abscess not being in direct communication with a bronchus. It was in the outer aspect of the lung, rupturing into the pleural cavity.

Case 6. Aged 20. Died April 1st, 1907. Primary tuberculosis of the ovary, resulting in acute miliary tuberculosis of the peritoneum. Gangrene of the lung. Right inguinal fistula. Acute fibrinous pleuritis. Fatty heart. Septic splenitis. Perisplenic abscess and acute parenchymatous nephritis. The patient was a very large, fat girl, weighing about 180 pounds.

Case 7. S., aged 31. Pulmonary abscess. Chloroform anesthetic. Was discharged well and gained in weight. Incision $2\frac{1}{2}$ inches long of the eighth rib in scapula line. Rib resected. pleural layers adherent. Abscess approached by blunt dissection and one ounce of pus evacuated. Tube put in. On Nov. 14th, the abscess was re-entered and 150 c.c. of bloody fluid withdrawn.

On Oct. 14th, the patient was brought to the hospital, having

fallen about 40 feet and was bruised and sore, especially over the back and abdomen. There was a hematoma of the left side of the neck. This was followed by an abortive attack of pneumonia, mainly confined to the base of the left lung. Pleurisy followed this with effusion. Pleural surface adherent. No tbc. were found. Elastic tissue was present. Recovered.

Case 8. Age, 29. Pulmonary abscess. Lobar pneumonia. Marked scoliosis. Diminished expansion. Resection of eighth rib—left side in scapular line. Pleural surface adherent. Pulmonary abscess opened by blunt dissection. About one ounce of greenish pus evacuated. Illness began with pain in the left side and cough.

On admission to the hospital there was a friction rub over the left anterior axillary line. Cough with muco-purulent bloody sputum.

Developed from lobar pneumonia left side and septicemia. Culture obtained. *Staphylococcus pyogenes albus*. *Streptococcus pyogenes*. No tbc.

Case 9. Mrs. J. M. Age, 39. Pulmonary abscess. Complication. Hemorrhage. Recovery. A small opening still persists at the time of discharge, but the patient feels very well.

Part of the eighth rib resected in scapular line. Pleural layers adherent. Pulmonary abscess opened by blunt dissection, 6 oz. dirty pus evacuated. Tube inserted. Examination through this by reflected light showed a pulmonary abscess immediately in front of incision.

The patient was confined Dec. 1st. On Dec. 3rd, had a chill and a second one on the following day, accompanied by very sudden and severe pain in her right side far down towards the base of the chest and thorax. Had no cough or expectoration with pain. Severe headache after the chill and very feverish. On the 4th of December she spat up a mouthful of blood-stained material. Was brought to the hospital on the same day. Would seem to be embolic in origin. The pulmonary abscess was opened on Dec. 13th. On the 31st and 23rd of Dec. there were profuse hemorrhages from the pulmonary cavity, requiring packing twice a day with gauze. Calcium lactate and stimulants were administered.

Case 10. Mrs. K. Age, 26. Operation 15th November. Abscess of right lung. Abscess of three months' duration. Fetid expectoration and pneumococcus—no tbc.—a great deal of elastic tissue. Abscess located in the right base. The aspirating needle was used to locate it exactly. Several punctures were made before it was found just under the spine of the

scapula. Very little pus was aspirated. Incision three inches long over the eighth rib and two inches resected. Pleural layers adherent. Pleural surfaces seemed to be moving freely over each other, and an actual cauter was applied with a view of promoting a pleuritis. The wound was then plugged with iodoform and gauze.

On Nov. 13th, had quite a large hemorrhage. There was considerable difficulty in locating abscess, but finally a tube was inserted.

Present illness began on the 2nd of March, shortly after an operation for the removal of the left eye. On March 5th, pain developed in the right side of the chest, followed by cough and expectoration.

About May 1st, sputum was blood-stained, and May 12th she spat up a wineglassful of bright-red blood, and was admitted to the hospital, where she remained till July 25th. The diagnosis at this time was fetid bronchitis. Came back Sept. 27th, saying that she had another hemorrhage the day before, spitting up a half-cup of bright-red blood after a fit of coughing. Examination proved negative. Discharged improved 5th October, 1907.

On Oct. 23rd, she began to notice blood in the sputum. In the evening she coughed up two or three spoonful of bright-red blood.

Case 11. W. P. Age, 27. Was very healthy until two years ago, when he began to have epileptic attacks which persisted ever since. Has used alcohol in excess for past seven years in all forms. No venereal history.

On Dec. 23rd, 1907, sudden, sharp, catchy pain in left side, so severe that it kept him awake at night. Next morning pain was easier and he worked all day. Dec. 26th, when entering his house, tripped and fell to the ground, striking his head. Walked four or five steps and fell in an epileptic convulsion—became unconscious and rigid all over and remained so for three minutes. During the attack he frothed at the mouth, bit his tongue and passed urine. Had three more similar convulsions the same night.

On Jan. 14th, pain in the left side became more severe and required morphia to relieve it. This pain had been present a little more or less since it first started. Jan. 15th, breathing rapid, and pain present, but not very severe. Jan. 20th, coughed and expectorated a large quantity of very effusive, thick, greenish matter. Later the sputum became watery. In bed

since Jan. 14th. Well-marked pyo-pneumothorax. No tubercle bacilli.

Operation: Two inches of the eighth rib resected in the line of the angle of the scapula. About 8 oz. of foul-smelling sero-purulent material was evacuated. I think this was the most horrible fetid stuff that I have ever had to do with in my hospital experience, and continued so for ten days or a fortnight. Recovery.

Case 12. Male, aged 28. Inmate of Verdun. Epileptic. Large pulmonary abscess—left side. Excised portion of eighth rib in line of angle of scapula. Fetid ichorous pus and air escaped from cavity. On introducing the finger, cavity was found to be the size of a small orange and to be especially connected with the upper surface of the lower lobe. The two lobes were quite separate, the abscess evidently lying between the two, but apparently taking origin from the lower. The cavity was wiped out and drainage established. Recovery.

Case 13. E. J. Aged 45. Bronchiectasis. Autopsy diagnosis.

While working in bush got wet, from which an attack of pleurisy followed some three years ago, and was in R. V. H., Montreal, eight months. Previous to entering the hospital would spit up pus and blood as much as a tumblerful. Expectoration greenish, not fetid. No pain. Matter rises up in throat whenever he stoops down.

Operation: Left lung. Died fifth day after operation.

Case 14. Dr. Finley. M. W. Age, 38. Abscess of lung.

Operation: Resection of ribs and suturing of pleura. Temperate in habits. Illness began about a month previous to operation after a bad wetting, which was followed by a severe cold. Had no chills nor pain, except when coughing. During severe fits of coughing expectorated about a pint of almost pure blood in a night. Sputum rancid, tenacious, rusty-colored and foul-smelling. Neither tubercle bacilli nor elastic tissue. Behind right lung area of dulness beginning at fourth dorsal spine above and extending downward for about 4 in. Died day after operation.

Autopsy: Abscess R. Lung (upper pt. lower lobe); broncho-pneumonia (all stages, left lung L. lobe); Emphys. and Bld. of lungs; old adhes-pleur's; ac. muco-purulent bronch's; thoracotomy; Chr. int. Neph'r's and acute interstit. Neph'r's; Cryst's of pelvic (kid.) wall and of trigone of bladder.

Fatty liver: Suppuration of gland at base of appendix and of bronch. glands.

THE ITCH.*

By DOUGLASS W. MONTGOMERY, M.D., SAN FRANCISCO.

The two chief symptoms of the itch are: Itchiness, and the burrows of the itch mite. The accessory or secondary symptoms are: Papules that are usually excoriated; vesicles filled with a transparent crystalline fluid, and which arise directly from the sound skin and have no inflammatory base, and are situated principally on the fingers and hands; pustules, with large ecthymatous crusts; and scratch marks.

The itch may be complicated by urticaria, impetigo, ecthyma, vesicular eruptions, pemphigoid bullæ, eczema, lichenoid eruptions, furuncles, abscesses, lymphangites and adenites.

The itchiness is usually well marked, and frequently sets in at night on retiring. The patient tosses on a distressful bed until the early morning, when he gets a little sleep, and so on night after night till worn out and hollow-eyed with fatigue. With people particularly sensitive to the mite the itchiness continues during the day also, and many a complaint is made of dignity deeply wounded by an uncontrollable desire to scratch.

The burrow or run is made by the female in the lower layers of the cornified epithelium of the skin. It can be seen as a rough, curved furrow, sometimes running over a papule, sometimes having a papule or pustule at one end. Frequently the burrow is black from dirt that settles in its rough surface. It is said that the feces of the animal deposited along the "run" also blacken it, but it is doubtful if they are ever present in quantity great enough to have this effect. These runs are usually best seen on the anterior surface of the wrists, or on the neighboring volar surface of the palms, or between the fingers.

In those in whom the disease is very light and causes only a few vesicles between the fingers, filled with a clear fluid and arising from a non-inflammatory base, the burrows may be easily overlooked and the affection may be considered a transient irritation. Where pustules are found on the hands and wrists of an adult, a painstaking search should always be undertaken to find the burrows and the itch mite, as the erup-

* Abstract of a paper read before the Alumni Association of the Medical Department of the University of California, April 10, 1908.

tion is so likely to turn out to be that of the itch. In fact, in every eczematous or itchy disease of the hands and wrists, it is well to think of the possibility of the itch mite as being its cause.

As a patient stands before you even the locations of the eruption are characteristic; on the hands, at the wrists, at the axillary folds, on the belly, on the penis, with the face clear of trouble. Then, as the patient wheels round, the back down as far as the loins is seen clear of eruption, with a papular outbreak on the nates and in the folds just below them, and a rash in each popliteal space. There are also over the elbow tips dirty, heaped-up, irregular crusts, quite different from the well circumscribed buttons of psoriasis. As before mentioned, the nipples in women are frequently affected. If a papular impetiginous eczema occupies the above-mentioned sites, even if burrows are not found, the diagnosis of scabies may be made.

In regard to differential diagnosis, a dermatitis among cement-workers, caused by the very active chemicals in cement, must be considered. During the past few years cement has grown more and more in favor as a building material, and physicians must expect to encounter an increasing number afflicted with this dermatitis. It is particularly apt to give rise to a crusted eruption between the fingers, that strikingly resembles that of scabies.¹

To my mind, the treatment of scabies as given in the text-books is too rigorous. The parasitocides themselves are irritating, and when applied to the raw lesions on the skin produce a variety of discomforts. When, in addition, these parasitocides are combined with such ingredients as soft soap and carbonate of potash, with a trifle of chalk added to the ointment to make it gritty, the patient feels that the adjective "unctuous" is not applicable to the composition in question.

The principal parasitocides used for killing the sarcoptes are sulphur, betanaphthol, balsam Peru, creolin and styrax. Epicarin and petroleum may also be used. A simple sulphur ointment, if intelligently applied, and for a long enough time, kills the parasite, and usually with little inconvenience to the patient. As remarked by Malcolm Morris, even the simple sulphur ointment of the British Pharmacopœia ($\frac{1}{4}$) is too strong, and a half a dram or a dram of sulphur to an ounce of lard is quite strong enough. The patient should first take a hot bath, with plenty of soap, and then be directed to rub the ointment particularly into the favorite locations of the parasite for nine successive nights. During the whole course it is

better to wear a full suit of woollen underwear, so that the ointment by getting into the underwear may be returned to the skin and rubbed in with every movement of the body. The patient should therefore be directed to wear the same undershirt and drawers during the whole nine days and nights of treatment, only taking off the garments to rub in the ointment. In such a treatment it is particularly necessary to rub the ointment well into the hands and wrists, as these do not receive the benefit of the constant application of the salve by the clothing. In women it must also be remembered that the drawers, being open at the back, do not come well into contact with the gluteal folds, which should therefore receive the same special attention as the hands. Although the ointment is only rubbed into the points of election previously spoken of, yet these points are so widely distributed that the underwear spreads it over the entire clothed body and limbs. Furthermore, it makes a better impression on the patient, and one is more apt to get one's orders carried out if these certain points are explicitly designated for attention.

I have seen repeated failures to cure because of the treatment being confined to one or two localities where the eruption was most marked. In all cases, therefore, a general treatment for the itch must be instituted, and at the same time any severe local inflammations may be controlled, for example, by starch poultices, to which is added about five per cent. of boracic acid powder. At times we have to treat a patient for scabies who is suffering from a broken limb, and find the beasties quite at home under the restraining splint.

Balsam Peru is an excellent remedy for the itch, and it is often used in the same ointment with sulphur, as, for example:

R.		
	Sulphuris precipitati	
	Balsami Peruviani	a a dram. iii
	Lanolini	
	Vaselini	a a oz. iss

M.

In cases where, as in infants or in severe local dermatitis, great care must be taken not to injure the skin, it is often desirable to use Balsam Peru alone, as in the following:

R.		
	Balsami Peruviani	1 to 2 oz.
	Lanolini	
	Vaselini	a a 1 oz.

M.

Julien highly recommends the method which he saw used in Italian clinics, of painting patients with balsam of Peru without any preliminary baths or other preparation. It is best applied at night, and followed in the morning or later by a bath. It usually causes no irritation whatever, and is effective. It should not be forgotten, however, that in rare instances balsam of Peru produces violent dermatitis.²

Matzenauer gives the following directions in regard to the application of balsam Peru or styrax: A hot bath with plenty of soap should first be ordered, and after the skin is perfectly dry the balsam Peru is to be well rubbed in with a piece of flannel. As it easily spreads, a very small amount, 8 or 10 grams, according to Mosler and Piper, is enough for each rubbing. The application should be made twice a day for two succeeding days. The patient should neither bathe or change his underclothing for four or five more days, after which a bath is taken. The undergarments may be thrown away, as they are rendered unwashable by the balsam.

In the same manner styrax may be applied, prepared according to the following formula:

R.	
Styracis liquid.	25.00
Spts. vini. rect.	10.00
Ol. oliv.	65.00
M.	

Or the styrax may be combined with balsam Peru.

R.	
Styracis liquid.	80.00
Balsam. Peru.	20.00
Spts. vini. rect.	
Glycerini	a a 16.00
M.	

Although sulphur, balsam Peru, and styrax are excellent remedies for scabies, yet there are other fine agents, such as creolin and betanaphthol. An ointment composed of:

R.	
Betanaphthol	10.00
Lanolini	
Vaselini	a a 75.00
M.	

may be used in the same way as a sulphur ointment. Betanaphthol has been known, by absorption, to irritate the kidneys, so that one would hesitate to prescribe it when the patient is suffering from Bright's disease, and in any case due care should be taken in using the remedy.

Through Dr. Werther, of Dresden, I first became acquainted with the use of creolin, who uses it in the following combination:

R.		
	Creolin	10.00
	Saponis viridis	30.00
	Adipis benzoati	ad 100.00

M.

S.—Rub in morning and evening.

I have used it, leaving out the soft soap, and have found it a most satisfactory remedy.

In my personal experience, as I have previously indicated, I have found the ointments as usually recommended for the itch too severe, and have preferred to treat my patients a longer time and less drastically, both to my contentment and to theirs. Another modification I have found most comforting is to change the parasiticide during the treatment; to use a sulphur, balsam Peru ointment for three days, a betanaphthol ointment for further three days, and a creolin ointment for the remainder of the time. In this way, if a person be delicately sensitive to sulphur and gets a commencing sulphur dermatitis, this will subside under betanaphthol, and before the betanaphthol has time to irritate severely, it, in its turn, is discontinued, and creolin is used.

In many instances a dermatitis caused by sulphur can be controlled by a judicious use of talc powder or of Lassar's paste. A good formula for Lassar's paste is:

R.		
	Acid. salicyl.	gr. xx
	Amyli.	
	Zinci. ox.	a a oz. ss
	Glycerini	oz. i

M.

S.—Apply twice a day.

At times a pruritus, or an urticaria, or an eczema, may persist long after the scabies is cured. These obstinately annoying eruptions may frequently be controlled by Boeck's paste,

to which is added ten per cent. of liquid carbonis detergens. The formula reads as follows:

R.		
	Liquoris carbonis detergentis	30.00
	Amyli.	
	Talc.	c c 40.00
	Glycerini	20.00
	Gummi Arabici	1.00
	Liquoris plumbi subacetatis	4.00
	Aquæ	200.00

M.

S.—Use as a lotion two or three times a day.

The patient's underclothing should all be boiled; this is disinfection enough. I have never found it necessary to disinfect the outer garments, with the exception of gloves. As for the gloves, that is an important matter, and orders should be given to search out industriously all the gloves in the house, burn those that are old, and dust sulphur powder into the still useful ones. Gloves, in a disease that shows such a predilection for the hands, should be admirable carriers of infection, although I have never personally found them to be so. Julius Heller thinks it would be wise for the public health authorities to disinfect gratis the dwellings of the poor that are infested with any of the animal parasites, such as pediculi and acari.³ Several other remedies besides sulphur, betanaphthol, balsam Peru and creolin have been advised for scabies. Epicarin is apt to be quite irritating to the skin. Petroleum is so nasty and may cause such severe irritation of the skin that it is only used in the very poorest practice in poor countries.

Ichthyol has been used in baths, but such a quantity has to be employed as to make treatment unnecessarily expensive; furthermore, the method has no special advantage, except that it does not irritate the skin.⁴ I have never used ichthyol as an antiscabitic. Franz Nagelschmidt recommends theophinol, a sulphur derivative, to be used in baths and as a salve.⁵ Michel Steiner speaks favorably of tardermsan in the treatment of scabies.⁶ Walter Schneider uses anthesol as a substitute for tar to control the itching in scabies.⁷

As I have never employed theophinol, tardermsan or anthesol, I cannot speak either for or against their use.

The principal object of this paper is to ameliorate the condition of those having the itch by modifying the rigors of

treatment. Those dear scabby ones deserve consideration, at our hands, for notwithstanding their torments, they are a good-natured lot. Many diseases tend to sourness, and to the nursing of wrath against the world and especially against the physician who endeavors to help them. This is rarely the case with those having the itch. We ought, therefore, to take especial pleasure in lightening their burdens. I often think of the kindly Hippocratic maxim: "We must never do our patients any harm," and in the case of scabies, it might be enlarged to say with Rudyard Kipling, "and not afflict them with any of the unnecessary hells."

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Selected Articles.

OBSTETRICS DURING THE LAST DECADE.

By ADAM H. WRIGHT, B.A., M.D., M.R.C.S. (ENG.)
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The fact that our opinions and methods of to-day differ from those of ten years ago does not necessarily mean that we have made progress. It is possible, for instance, that those surgeons who are attaching a new meaning to the word asepsis, are doing positive harm, especially to the student body. We as obstetricians have learned much from Lister. Let us hope that we will never unlearn any of it. We shall do well to aim at improving Listerism. Let us never endeavor to subtract anything from it.

PUERPERAL SEPTIC INFECTION.

Curettage was largely employed at one time in cases of septic infection, but it has recently gone out of fashion to a great extent. Curettage of an empty septic uterus is always useless, and very dangerous. If debris is retained in the uterus it is advisable to remove it; but the gentlest means possible should be used—the safest curette being the gloved finger tip. It is doubtful if even this should be used after the third day following labor. Drainage in this connection will be considered later.

To those who thought that the days of the sharp metallic curette had gone, it caused a certain amount of surprise to find that Sir Wm. Sinclair, and some of his confrères, in conservative England, are now using this instrument in all cases of puerperal septicæmia. In a recent number of the *British Medical Journal*, Gordon, of Manchester, one of Sinclair's followers, said that he treated all such cases in this way with good results. After curetting he "goes over the raw surface thoroughly with swabs of undiluted izal, and then packs the uterine cavity." Notwithstanding our respect for these men, we have to express our decided disapproval of what we had hoped were antiquated methods nowhere now employed in the civilized world.

Apart from these considerations as to local treatment we hope we have made some advances in the last decade with reference

both to diagnosis and treatment of puerperal sepsis. We are commencing to realize that it is not correct to wait until three or four days have elapsed after labor before we make a diagnosis. To say, as some authors do, that in "cases of septic endometritis everything goes smoothly for the first three or four days of the puerperium, when the patient suddenly experiences more or less malaise, possibly has a chill, after which the temperature rises to 103 deg. F. or higher," is grossly incorrect. Things never "go smoothly for three or four days in a case of puerperal infection." Symptoms always appear within twenty-four hours after infection, and include the following: Slight headaches, sleeplessness, slight coating of the tongue, listlessness, and slight abnormalities of the pulse and temperature. If two or more of these symptoms appear we should at once commence treatment. The treatment recommended is elimination by means of calomel and saline cathartics, and afterwards the administration of opium in sufficient doses to relieve pain.

We cannot now speak in detail respecting the unfortunate and intemperate discussions which took place in the United States some time ago respecting the use of opium in certain forms of peritonitis. Some surgeons became actually hysterical over "battening a patient down with opium." We may say briefly that a great many, if not the majority of obstetricians, think now that opium is a valuable medicine when properly used. If possible it should be withheld until a diagnosis is made, and also until eliminative treatment has been carried out to some extent at least, and when administered it should be given in doses sufficient to produce a profound effect upon the nerve centres. Insufficient doses of opium or morphine do more harm than good.

Drainage is now recognized as very important. If there is infection within the uterus the patient should be put in the Fowler position, *i.e.* sitting up in bed, or nearly so, for a good portion, or nearly all the time, if possible, as long as there are serious symptoms. This tends to cause the intra-peritoneal fluids in cases of peritonitis to gravitate from the upper to the lower part of the peritoneal cavity, and tends to prevent general inflammation of the peritoneal cavity, encouraging instead the safer form of localized pelvic peritonitis. It also helps drainage from the uterus. Let us suppose one clearing out of the uterine cavity in a case of sapremia was indicated, and has been accomplished. After that we leave the uterine cavity absolutely alone so far as local interference is concerned. In carrying out such treatment we are following closely the general surgeon.

For instance in empyema, many have ceased to wash out, but keep the patient at rest and encourage free drainage. Many of our abdominal surgeons employ the Fowler position, keep the patient at rest, and endeavor to promote free drainage. We recognize their difficulties in draining from a peritoneal cavity in which inflammatory processes are going on. We, fortunately, have no such difficulties to contend with. We can keep the uterine cavity absolutely drained by means of the Fowler position, or some of its many modifications.

The administration of oxygen in many cases of puerperal septicemia is generally endorsed. We have learned, however, what some of our forefathers knew before us, that it should be properly diluted, and we find that the best oxygen compound known is Heaven's pure air. Fortunately our physicians are teaching us to appreciate the inestimable benefits of the inhalation of fresh air. For several years, as is well known, they have been taking our tuberculous patients out of their hot rooms, as nearly hermetically sealed as possible, and have kept them in the open air. They have gone so far, to the horror of the laity be it said, as to adopt similar methods for patients suffering from pneumonia. We are now adopting the open air treatment for patients suffering from puerperal septicemia. The man who has done most in this direction, so far as I know, is Dr. Kennedy McIlwraith, of Toronto, who will soon, I hope, give us more definite reports of his results during the last few years.

Antistreptococci Serum.—Nearly ten years ago the British Medical Association, and the American Gynecological Association, after investigations which could hardly be termed thorough on either "side of the water," decided that the use of anti-streptococci serum in the treatment of septic infection was at least useless. The deliverances of these two bodies had the effect of discouraging the enthusiasm of some earnest workers without accomplishing any good. Some of us believe that in many cases septicemia has been cured by the serum, although the results of its administration are frequently disappointing.

BACTERIAL VACCINES.

We are very much interested in Sir A. E. Wright's investigations. Dr. George Ross, of the Toronto General Hospital, has done some excellent work along Wright's lines, especially by inoculation with bacterial vaccines consisting of devitalized bacteria of the same strain as those responsible for the patient's infection. We are favorably impressed at the time of writing, but are not in a position to express definite opinions.

OTHER REMEDIES AND PROCEDURES.

It is of course generally conceded that rectal and subcutaneous injections of salt solutions are useful in septicemia, and in various forms of autointoxication. Opinions are divided, however, as to the efficacy of certain silver salts such as collargolum, etc. Complete hysterectomy, advised by some a few years ago for infection, is now practically "out of court." It is generally conceded that all pus collections should be opened, thoroughly drained, but I think not irrigated.

ANESTHESIA.

Anesthesia during labor is most important from the standpoint of the accoucheur. Chloroform was, and is now, perhaps, the favorite obstetrical anesthetic in all parts of the world. We know, however, its indiscriminate use has not been devoid of danger. We should gladly welcome any drug, or combination of drugs, which might be administered to women in labor with perfect safety, and general beneficial results. Many of us have used the combination of morphine and hyosine (or scopolamine) with varying results. We do not think that it has yet been demonstrated that such a combination is absolutely safe for either mother or babe—especially in private practice. We believe, however, that the administration of some such combination will in the near future hold an important place in obstetrical therapeutics. We are glad that careful investigations as to this form of anesthesia are now being conducted in various parts of the world. We are especially interested in the work of certain investigators in Winnipeg and Toronto, and also in several cities in the United States.

DISEASES OF PREGNANCY.

These, probably, receive more intelligent consideration now than ever before. The acute infectious diseases generally run an ordinary course during pregnancy; but, in certain cases, are more severe than in non-pregnancy. The dangers to the fetus are greater than to the mother, partly because of the poison of the infection through the mother, and partly because of the high temperature, which alone if long continued causes the death of the former. Little may be said about such diseases as tuberculosis and valvular diseases of the heart. The most important consideration in connection with these diseases, and, in fact, all serious diseases during pregnancy, is the rule now generally accepted that no diseased condition in itself calls for

the induction of abortion or premature labor. If, however, in any such case treatment has no good effect, if the patient grows worse, and especially if life becomes imperiled, the uterus should be emptied. This emptying of the uterus is, however, a serious procedure, and we shall refer to it again.

Appendicitis occurs not uncommonly during pregnancy, and is probably often overlooked. The disease is quite as likely to appear during pregnancy as under ordinary circumstances. In fact we believe it is more apt to occur during pregnancy. What should we do when we have made our diagnosis? Operate at once. What should we do for other serious conditions discovered during pregnancy, such for instance as ovarian tumors? Operate at once. Without going any further into a pretty broad subject, it may be said that pregnancy should not in any case be a bar to any operation urgently required.

Pernicious vomiting of pregnancy is now being carefully studied. We are much indebted to Dr. Whitridge Williams, and his assistants of Baltimore, who have demonstrated, to some extent at least, the nature of the disturbances of metabolism which cause a peculiar toxemia, and, as a result, pernicious vomiting. Chemical examination of the urine in these cases shows a decrease in the amount of nitrogen excreted as urea, and an increase in the amount excreted as ammonia. Without referring to other changes we may accept the fact that this excess of ammonia excreted, or, as it is called, the ammonia coefficient, is a fair indication of the severity of the poisoning. In normal pregnancy it is 4 to 5 per cent., and in cases of toxemia may rise to 10, 20, 40 per cent. or even higher. Dr. Williams has found in his experience that, if this ammonia coefficient exceeds 10 per cent., the patient has serious toxemic poisoning, and the pregnancy should be immediately terminated. He also adopts the following classification: Reflex, neurotic, toxemic. We cannot at present, however, accept either the classification, or the 10 per cent. rule. In all the cases of serious vomiting of pregnancy that we have observed there has invariably been both a toxemia and a neurosis, and both conditions required careful treatment. We have also discovered that the ammonia coefficient may considerably exceed 10 per cent., and the patient may recover without the termination of the pregnancy.

We have stated that the emptying of the uterus is a serious procedure. We desire now to say that, in cases of pernicious vomiting of pregnancy, it is one of the most dangerous operations known to obstetric surgery. We have had three heart-rending tragedies in Toronto within a short time. Three

healthy, happy brides, after short illnesses from pernicious vomiting of pregnancy, died so suddenly after the induction of abortion under chloroform anesthesia, that the sorrowing relatives had not time even to say farewell. In connection with these serious cases, two things should ever be kept in mind: (1) The administration of chloroform is exceedingly dangerous; (2) forcible dilatation of the cervix is also exceedingly dangerous. Therefore the modern operation for emptying the uterus "at one sitting" should not be performed. The very common statement by experts that this "operation is practically free from danger provided perfect asepsis is observed," is woefully incorrect in these cases. The safest and most satisfactory method is the vagino-uterine tamponade or some modification of it. But one may say: "I know the rapid operation, even in serious cases, is often successful and satisfactory in every way." This is true, but it does not alter the fact that the rapid operation is the more dangerous procedure.

OBSTETRICAL OPERATIONS.

No special changes as to procedure have been made in minor operations during the last ten years excepting perhaps in a conservative direction. We have referred to curettage in acute septic infections. We believe the dangers connected therewith are appreciated by the majority. We think also that curettage under any circumstances is now done with greater care and caution than it was a few years ago. Reference has been made to the forcible dilatation of the cervix in cases of pernicious vomiting of pregnancy. It is now considered by many that rapid cervical dilatation is always dangerous, and the Goodell dilator is used less frequently now than formerly. As practitioners are becoming more skilled in their methods of vaginal and uterine tamponade, they carry out these procedures more frequently and more effectively, and as a consequence are getting chary as to rapid cervical dilatation.

Accouchment Forcè.—This naturally leads to a consideration of accouchment forcè which was so common a few years ago. We realize now that this operation is always dangerous when there is a rigid os, and, especially, when there is a rigid cervix which has not been "taken up." We hope also that most obstetricians are learning that this operation is so dangerous in cases of placenta praevia that it should be absolutely proscribed. In a general way it may be stated that accouchment forcè is never justifiable unless the os or cervix can be dilated with comparative ease. We hope it will soon be considered

advisable to delete from our text books the diagrams illustrating such methods as "Harris's manual dilatation of the cervix," and "Edgar's bimanual dilatation of the parturient os."

Vaginal caesarean section is thought by many to be an excellent substitute for accouchment force. After it was first proposed by Dührssen thirteen years ago, many surgeons both in Europe and America performed his operation, or some modification of it, and it was supposed that before now it would come into general favor. This is not the case, however, perhaps because, as a certain German writer expresses it: "It is too bloody an operation for the general practitioner." We can probably say now that the operation is indicated in a limited proportion of cases, such for instance as abnormal conditions of the cervix, from carcinoma, rigidity, stenosis, etc., grave eclampsia, threatened rupture of the uterus, etc. We may also say that the operation is not so suitable, after pregnancy has advanced six months or more, as the operation by the abdominal route. In any event it seems already to have been demonstrated that this operation will remain in the hands of experts, *i.e.*, it will very seldom be done by the general practitioner. Perhaps the most important consideration in connection with these operative procedures is that the urgency of immediate and rapid delivery in certain emergencies has been grossly exaggerated in the past. Such exaggerations gave a tremendous impetus to accouchment force, with most deplorable results. The tide has turned, however, and we now find that very rapid emptying of the uterus is seldom considered necessary. Or, in other words, forced delivery is going out of fashion, and vaginal caesarean section is not becoming very popular. Bossis's dilator is becoming obsolete. Dilating bags are becoming less popular. The old-fashioned Krause method, with efficient vaginal tamponade, is probably the favorite method of inducing labor at the present time.

Symphiseotomy has a fair status, and is generally recognized as a suitable operation in a very limited proportion of pelvic deformities. Hebotomy, or pubiotomy, an operation suggested in Italy about 100 years ago, and recently adopted by Gigli, in cases formerly considered suitable for symphyseotomy, does not appear to be making much headway.

Caesarean section is the oldest major operation known in obstetric practice, and to-day it is the most popular operation in its class. For centuries it was well known, and much discussed, and occasionally performed, but the mortality rates were frightfully high. That, however, has been changed to a

wonderful degree since Lister taught us antiseptis, and Sanger taught us improvements in technique. The mortality rates are now very low. In properly selected cases conservative caesarean section, done at the proper time, with reasonable care and skill, is one of the safest and best operations now known to surgery.—*The Medical Standard.*

THE NEEDS OF THE UNIVERSITY OF TORONTO.

BY R. A. FALCONER, D.LITT., LL.D., TORONTO.

The Faculty of Medicine of the University of Toronto is now one of the largest on the continent and its rapid growth has occasioned difficulties similar to those in other departments of the University. There are difficulties in the way of accommodation and of instruction. During the past year the pressure was greater than usual because it was the last in which students could register for a four years' course, and the first year in particular was very large. Contrary to general expectation the attendance in the first year of the five years' course has not fallen off much from the average of the past few years.

Thus far the wave has been borne in upon the primary subjects, Biology and Anatomy, but it will soon rise into all the departments. With the appointment in June, 1907, of Professor McMurrich to the chair of Anatomy this subject received for the first time the full services of a professor, and since then necessities, which even before that time had been evident, became more apparent. Naturally one cause leading to this was the large incoming year to which reference has already been made. Not only larger space, but more rooms for specific departments of Anatomy are required, for it must be recognized that no great school of medicine can be built on anything less than a sure foundation of its basal sciences.

In addition, the demands of this and other primary subjects will before long bring changes in the methods of instruction. At present the professor has no one of the grade of associate-professor or lecturer to assist him; no one who gives his whole attention to the subject and who for the time at least is pursuing this science as his single purpose. The supervision of students is somewhat intermittent and less effective than it would

be under a permanent staff. Not that the work done by the demonstrators has not been satisfactory as far as it has gone, but their attention has necessarily been divided, though their labors for the University have often far exceeded what might have been expected, considering the trifling remuneration which they receive.

In the department of Pathology similar conditions prevail. This large and fundamental subject is with difficulty dealt with by one professor and the sessional help that is given. Fully manned departments of Pathology and Bacteriology are so essential, not only to the University but to the Hospital, that in them expansion must come before long. Already the University authorities have decided to institute a chair of Chemical Pathology, and have set aside an amount for the erection of a temporary laboratory in the General Hospital, but so far the choice of the occupant of this chair has not been made. It is confidently hoped that, if a man of ability and independent power is found for this position, the clinical departments of the Hospital and consequently the University clinical instruction will be greatly developed.

This leads to the question of the local expansion of the Medical Faculty. Changes were made last summer in the present building to meet the needs of the Physiological and Pharmacological departments. Professor Brodie and Dr. Henderson both needed more room. When developments in Pathology and Bacteriology become imminent we shall be confronted with the fact that these might be most satisfactorily effected in closer relation with the Hospital. So intimately are these subjects related to clinical work that probably we should look for laboratories in the Hospital grounds.

Here we are on the threshold of that question of perennial difficulty,—what is to be the connection between the University and especially the General Hospital but also the other hospitals of the city? Both by past practice and by the grant of \$300,000 made to the Toronto General Hospital on behalf of the University its connection with the University is bound to be very intimate. At present some of the necessary work of the Hospital is done by the University staff, in Pathology for example, and it is difficult to know just where to draw the line. Clinical laboratories are also being more and more required, and while it would seem that they ought to be erected by the Hospital authorities, the students of the University will in the long run suffer, should such facilities not be provided for the professors of clinical medicine and surgery.

The connection between the Hospital and the University is bound to be vital in the clinical departments. Students of the University use the Hospital with the purpose of learning the art and practice of their profession. Clinical instruction is no secondary matter for them, coming in incidentally after a physician or surgeon has done his primary duty of attending to the sick patients. If those in charge of services in any hospital treat their work with the students in a perfunctory way, merely as a useful and profitable adjunct to the practice of their own profession, the value of these clinical instructors to the University is so small that the sooner they can be removed from the University staff the better.

Moreover the teaching of students reacts most favorably upon the practical work of the surgeons or physicians in their treatment of patients. They require to understand their work if they are to explain it to a group of critical students. They themselves are being tested, and they will soon show whether they are repeating by rote old themes and outgrown methods, or are abreast of the most scientific practice of the day. Theoretically, therefore, there should be no difficulty between Trustees of a Hospital Board and University authorities. The former seek to get the most efficient and wide-awake men as heads of their services, men who privately are pursuing their art with eagerness, and who perform their hospital work with all their heart and soul and mind. It is also just men of this type that the University requires for its clinical teachers. But unfortunately the experience is not confined to any one place that such boards do not always see eye to eye. Men differ in their judgments as to the qualifications of individuals, and there is much scope for disagreement. So a University with a great Medical Faculty requires to be able to determine the character of the teaching that its students are to receive. It should be able to recommend men of the proper medical ideals and practice for the instruction of its students. Again we are confronted by the hoary question, how can this be done without money? If we could erect our own hospital, the University would have at least the opportunity of manning it itself with a staff (for which it would take the responsibility) at once skilful in treatment and competent and earnest in instruction. Possibly there might be very little obvious change in the personnel, but the policy of the University might be shaped without the chance of its frustration by another responsible body. And yet it does not seem to be beyond hope that the generous benefactors of the Toronto General Hospital and the city may

be willing to co-operate with the University, and recognizing that skilful treatment of the highest possible order on the part of their clinical teachers is essential for University teaching, they may deem it safe to entrust the University with the appointments to such positions as are essential for clinical instruction.

St. Michael's Hospital and the Sick Children's Hospital are most cordial in their relation with the University, which, though it has no prescriptive rights in them, as it has in the Toronto General Hospital, has the use of their clinical material under instructors of our own staff.

The University is extremely fortunate in being likely to secure the fullest use of the Psychiatric Hospital which the Government is soon to build in the neighborhood of the University. The Hospital, which is under the direction of our new Dean, Dr. C. K. Clarke, will afford opportunities of great promise to our students and will be watched with interest by the profession not only in Ontario but on this Continent.

It must not be forgotten, in the midst of these clamant needs of the University, that a university and a hospital exist not only for training the average student to practise his profession in this country, and to heal the sick folk, but that these fundamental functions themselves will not be performed in the best way unless there is a nucleus of men engaged in their own or the public laboratories in seeking to trace the causes of disease, in endeavoring to discover new remedies, in patiently driving back those physical or mental foes which wage constant warfare with our delicately constituted human organism. These men add to the glory of our Canadian inheritance by proving that we too have the skill, the training and the self-sacrifice wherewith here as in older lands science is crowned as a benefactress of humanity. This scientific investigation costs money as well as effort of spirit and intelligence, and the cost is sometimes difficult to justify inasmuch as the results are uncertain or come about imperceptibly.

It is sometimes thought that the medical staff of the University of Toronto is very large, but that is not so. There is need of increase both on the primary and final sides. When the number of students is so large as it is at present, efficient individual instruction in laboratories and in the hospital is only possible with a large staff both in the more purely scientific and in the clinical departments.—*The University Monthly*.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, F. A. CLARKSON, AND BREFNEY O'REILLY.

Atrophic Cirrhosis of the Liver.

The value of the Talma-Drummond operation for cirrhosis of the liver remains a somewhat undecided question. The present status of it is probably well expressed in the following conservative conclusions by Liehlein, which are based upon his own as well as the recorded cases.

In spite of the gratifying results obtained in isolated cases, the results in general have not fulfilled the hopes that were at first entertained. The effects, however, are not of such a nature as to lead one to discard the operation. The results to be obtained in any case must not be over-estimated. Atrophic cirrhosis is a disease that, in not an inconsiderable proportion of cases, can be either cured or, at least, kept for some years in abeyance. Especially in regard to the late results of the operation are statistics very few, and it is possible that our views will change a number of times within the years to come. Up to the present time, at least, the results have not been encouraging enough to induce internists to refer their cases for surgical treatment in the very early stages. On the other hand, it would be exceedingly profitable to be able to determine, upon the basis of a large number of cases, how satisfactory the results are when the operation is performed when the disease is in the early stages, and especially as at this time the operation is one of little severity. Not infrequently patients are referred to the surgeons when the general condition has become so bad that, despite the correction of the local defects, little improvement in the patient's state of health can be looked for.—*Progressive Medicine*, Dec., 1908.

Action of Arsenic on Red Blood Cells.

In the *B. M. J.* of July 18th, James A. Gunn discusses the action of arsenic on the red blood cells. He just shows that the administration of certain metals produce only a change in the narrow cells of the leucoplastic type, possibly an attempt to

deal with the primary toxine, or no effect on the red elements. From certain original experiments, Gunn proves that solutions of arsenic will, if added to drawn blood, greatly retard the hemolysis produced by hypotomic solutions; also that the action of the drug is directed to the cells, the serum taking no part in the reaction. He also concludes that the arsenic is both rapidly and firmly fixed to the red corpuscle, and suggests that its beneficial effect in pernicious anemia may be due to its protective action on the formed cell, and not as the etiological factor. In a similar manner he alludes to the action of arsenic in malaria.

The author finally deals with the theories of the etiology of pernicious anemia, he just remarks on the fact that iron is useless as a therapeutic agent, and cites the well-known fact of the abundance in which it is found in certain organs. This tends to show that the defect does not lie in the hemoglobin, which in many cases is present in each individual cell in excess of that found in erythrocytes of normal blood.

Gunn suggests the strance of the red cell as the pathological factor in the disease, and its possible deficiency in lecithin or cholestrin as the lesion. This benefit following the use of arsenic he ascribes to its protective influence over the cell body, and that with the use of bone marrow to the proper materials being supplied from an external source, finally lecithin itself may prove of therapeutic value, increasing, as has been shown experimentally, the total number of red blood corpuscles.

Grocco's Paravertebral.

At the meeting of the Italian Congress of Medicine, held in Rome in 1902, Grocco drew attention to a sign of pleural effusion which he believed to be new. This is an area of relative dullness extending along the vertebral column on the side opposed to the pleurisy; it is triangular in shape, with its apex near the upper level of the exudation, and its base at the lower limits of the thoracic resonance. It varies in width from 2 to 5 cm. After the publication of Grocco's observations Rauchfuss affirmed that he had observed it repeatedly in children since 1896, and Korányi pointed out that he had described it as long ago as 1897. Numerous papers have been published on the subject, including one by Dr. W. Ewart, who found it to be present in a case of lumbar abscess. Other observers have met with it in pneumonia (Hamburger), in subphrenic abscess (Beall), and in association with an ovarian cyst (Smithies). The explanations suggested are either bulging of the mediastinum towards the sound side or damping of the resonance of the thorax in the

neighborhood of the effusion. Roch and Dufour, working in the wards of Professor Bard at Geneva, have confirmed the existence of this sign in pleurisy, but found it present also in pneumonia, and observed that it did not disappear when the fluid had been removed by paracentesis. They then looked for it in normal chests, and state that such a band of relative dullness is constantly present, of course, on both sides of the vertebral column, and assert that it is due to, and coincides exactly with, the gradually increasing thickness of the mass of muscles which lies alongside the spine. If this simple explanation be accepted, Grocco's sign can have no diagnostic value, but these critics make a reservation in respect to children, as they have not yet studied the question in them, and they have too much respect for the careful observations of Rauchfuss to wish to discredit them without going over the same ground; moreover, they admit that in children the muscles in this situation are relatively so thin and the thorax so elastic and yielding that the explanation they suggest may not hold good. They point out also that it is possible that in them the pathological dullness may be propagated to some extent towards the sound side.—From *British Medical Journal*, 1908.

OPHTHALMOLOGY AND OTOTOLOGY.

IN CHARGE OF J. T. DUNCAN.

Ocular Symptoms of Brain Tumors.

In the *Long Island Journal (Medical)*, for August, is an excellent article by Ohly. Almost every form of tumor has been found in the brain. The various growths have various sites of predilection. The cerebrum is most frequently affected, the cerebellum next and the pons, the central ganglia, corpus quadrigemina and other parts in the order mentioned.

Cerebral tumors, by causing increased intra-cranial symptoms which do not belong to other brain lesions. These symptoms are:

I. The *diffuse* or *general symptoms*, and indicate the presence of a growth, but nothing more.

II. Tumor, as also other focal cerebral diseases which do not increase the intra-cranial pressure, are, as a rule, attended by

symptoms called *direct or localizing symptoms*; that is, symptoms which indicate the site of the lesion. These localizing symptoms are either irritative or paralytic, depending upon the part affected.

III. Finally, there are a group of symptoms called *distant symptoms*, not resulting from local disorganization, but due to pressure effects, inhibited circulation, toxic absorption and the like.

The *diffuse or general ocular* symptoms of brain tumor are, (a) double sided optic neuritis; (b) sudden complete blindness, and (c) transitory blindness.

(a) Optic neuritis and choked disc.

Before taking into consideration the origin of this symptom and its clinical picture, let it be understood that the term optic neuritis and choked disc are both the same condition, only that the choked disc is a more advanced stage of the optic neuritis, with more swelling and some involvement of the adjacent retina.

Optic neuritis may, and often does, exist with comparatively good central vision in its early stages, and therefore the patient may not complain of his sight until the choked disc is well developed. Wherefore the advisability of repeated early examination of the fundus of the eye.

The ophthalmoscopic picture shows in a choked disc the nerve head markedly swollen, projecting somewhat into the vitreous at least $\frac{3}{4}$ mm. (as measured by the ophthalmoscope).

Optic neuritis is usually the first or one of the first symptoms of brain tumor, however its appearance may be retarded until a late stage. It is present clinically in 80-90 per cent. of all cases.

(b) A not infrequent symptom which may call our attention to the presence of a brain tumor is *sudden complete blindness*, involving one, but generally both eyes. This may occur without, but generally with the presence of optic neuritis.

(c) *Transitory blindness*: This symptom is often overlooked and according to Hirschberg is a most valuable diagnostic sign in brain tumors. He states: "It takes much care to establish this very transient and rapid symptom. In an individual who is still able to read the smallest print, who has a good field of vision, suddenly a complete blindness develops without any other ocular symptoms. It lasts one to two minutes or less and recurs six to eight times a day and even more often.

Gowers believes this symptom occurs more often in tumors in the occipital lobe and is due to the direct pressure of the

growth on the optical centers. If this be so, this symptom would be valuable in the localization of the lesion.

In speaking of the *localizing symptoms*, the author takes up the different lobes, speaking first of lesions of the *occipital lobe*. There are no pathognomonic signs of tumor in the occipital lobe, but a growth anywhere between the visual cortex and the optic chiasm may produce homonymous lateral hemianopia (hemianopia, half defect of the field of vision of each eye).

Parietal lobe tumors may cause mind blindness.

Temporal lobe tumors show sensory aphasia.

Frontal lobe tumors may show no symptoms for a long time. In these three latter cases, ocular symptoms are only produced by extension of the tumors.

Tumors of the cerebellum: Intense optic neuritis with much swelling, with involvement of the surrounding retina coming on quickly, almost as a first symptom, suggests the cerebellum, and one-sided optic neuritis, or marked difference in the intensity of the neuritis on the two sides suggests the cerebellum, and is, on the whole, in favor of the tumor being on the same side as the excess of neuritis, where there are no other reasons for localizing the tumor in the front of the cerebrum.

Conclusions: In 80-90 per cent. of brain tumors, optic neuritis or choked disc is present. This is not a localizing symptom.

Tumors of the occipital lobe, cerebellum, pons and medulla, generally produce an intense double-sided choked disc, which is an early symptom. Transitory blindness is not infrequent in the early stages of tumors. Permanent blindness in one or both eyes may be an early or late sign, and is not dependent upon local optic nerve involvement.

Tumors of any portion of the optic tract may produce hemianopsia if situated more centrally than the chiasm.

The ocular symptoms may often change from time to time, due to varied pressure and increased tissue-involvement from the growth.

Our first aim is to diagnose the presence of the tumor, and here the ocular symptoms are of utmost importance; having done so it must be our endeavor to locate the site of the lesion, for this the ocular symptoms are also very valuable, especially so when the growth affects the optical tract.

In the Royal London Ophthalmic Hospital (Moorfields), Dr. James Taylor, a physician, attends in order to give his opinion on cases that may be referred to him by the attending surgeons.

In a clinical lecture (*Medical Press*), at the Hospital, he spoke of the cases referred to him:

“ I think I ought, perhaps, to explain why I, a physician, am lecturing at this hospital. I have to see here cases which are referred to me by the surgeons, that is, patients who have come here on account of some surgical ailment, and of whom I am asked to say whether there is anything in their general condition which I can associate with their eye defect.

“ The cases which I see here fall into two large groups: (1) Cases which seek advice on account of some ocular defect, such as diplopia; and (2) those who come because of some visual defect. The first are those in which patients seek advice on account of ocular defects, leading to diplopia. And this leads one to inquire what are the chief causes of diplopia. It is only another way of saying that the causes of diplopia are defects in the ocular muscles, and those defects are usually dependent upon some fault in the nerves supplying them. One of the causes of diplopia is paralysis of the sixth nerve. That may arise as the result of cold or of brain tumor.

“ In many cases of brain tumor, whatever the situation, there is some defect of the sixth nerve or nerves. So we have to consider such paralyzes in brain tumor from two points of view. There may be either paralysis from direct involvement by the tumor of certain nerves, or pressure upon them; or there may be indirect paralyzes—*i.e.*, from general intracranial pressure affecting nerves. In the last form the sixth nerve suffers most frequently. Its course is across the whole surface of the pons, and considering what an exceedingly fine filament the nerve is, it is not surprising that when there is great distension of the lateral ventricles there should be an affection of the sixth nerve. And, seeing the long course of that nerve, its paralysis does not afford any exact localizing sign. An affection of the third nerve also may occur from either direct or indirect pressure. Where the pressure is indirect the paralysis is generally partial, but the direct pressure of a tumor causes, nearly always, complete palsy.

“ The second great class of cases are those in which advice is sought for visual, as contrasted with ocular defects. A certain number of cases referred to me here have tobacco amblyopia. And these cases should be investigated from the point of view of the condition of the urine. I have seen here at least two cases of failure of vision with a central scotoma for colors in which tobacco has not been used for 20 years, and occurring in

patients who are teetotallers. In both of them I found sugar in the urine. And that points a moral which has been well recognized for a considerable time, *i.e.*, that a very small quantity of tobacco is effective in causing amblyopia in cases in which sugar is present. That is to say, a diabetic patient will get tobacco amblyopia from using a very small quantity of tobacco.

"A large class of cases which I see here are those of optic atrophy occurring in tabes. I do not think a week passes without my seeing at least one such case, and they are among the saddest one has to deal with, either in hospital or private practice, because the prognosis is usually exceedingly bad. They may come at a comparatively early stage, when perhaps the vision of one eye has failed a good deal more than that of the other, and the other eye is just becoming affected. In certain cases, no doubt, there is a certain tendency toward arrest; but I regret to say that in the vast majority the tendency is for the optic atrophy to become progressively worse, and lead to complete blindness. Frequently no other symptoms are present, and treatment is not of any great efficacy. As a rule, the knee-jerks are absent in those cases. In some, the knee-jerks are present, and even excessive, but in those cases one always has to think of the case possibly becoming one of general paralysis. As a rule, no ataxy is present, but in a certain proportion it is present, and I have known even very advanced ataxy associated with optic atrophy.

"Another class of optic atrophy, of which I see very few at Moorfields, is that associated with disseminated sclerosis. That is because the so-called optic atrophy of disseminated sclerosis so rarely leads to visual defect.

"Another large class of cases in which visual defect is common is that of albuminuric retinitis, of which I have shown you instances. They have certain retinal changes, albumen in the urine, and usually cardiac hypertrophy. In some cases there is no albumen, but the urine is of low specific gravity, and in the latter class there is usually cardiac hypertrophy. Where there are no changes such as I have mentioned, one supposes that cases with retinal hemorrhages are cases of idiopathic arterio-sclerosis. Some of these, with retinal thrombosis, I have shown you to-day. There is usually a history of sudden failure of vision in one eye, and hemorrhages in the eye may be very abundant, showing obvious blocking of one large vein or artery."

Improved Yellow Oxide of Mercury Ointment.

Since anything about the value of Y. O. ointment as an eye remedy immediately attracts the attention of physicians practising in and about Cincinnati, owing to the fact that one of Cincinnati's distinguished oculists, Dr. W. W. Seeley, first introduced it, it is interesting for us to note that at a meeting of the Ophthalmological Section of the New York Academy of Medicine, held January 20, 1908, Dr. T. R. Chambers read a paper on "Improved Yellow Oxide of Mercury Ointment" (*Knapp's Archives*, May, 1908). He states: "This ointment has been, and will continue to be, a most universally employed medicative the world over. It is recommended in all works on diseases of the eye." He states that it has, however, one great drawback, so serious that some individuals have preferred the disease to the remedy. The drawback in question is the careless way in which it is dispensed by the average druggist, who mixes the crystals in a little oil and then vaseline, leaving pure crystals unpulverized to act like a fiery caustic when put in the conjunctival sac. He recommends the following mode of preparation:

Mercuric chlor. corros.	25 grammes
Sodium hydrate	10 grammes
Distilled water, q. s.	

Instructions.—Dissolve the mercuric chloride in 250 c.c. warm distilled water, and filter. Dissolve the sodium hydrate in 250 c.c. cold water. Pour the mercuric chloride solution slowly in the sodium hydrate solution. Allow this mixture to stand one hour at a temperature of 30 deg. C. and agitate frequently. Decant the supernatant liquid from the precipitate, wash the precipitate with distilled water until *free from caustic soda*. The resulting magma must be thoroughly dried before being mixed with vaseline.

Druggists should thus make up the concentrated stock, of which four grains represents one grain of yellow oxide of mercury, and from this they can quickly reduce to any strength by the addition of vaseline according to the order given on the prescription.

This ointment will be smooth, uniform, elegant, effective and unirritating.

Stricture of the Nasal Duct—Its Treatment.

Ophthalmologists have been divided for years about the surgical treatment of stricture of the nasal duct. Some advo-

cate the use of small probes, up to Bowman's No. 6, or 8, claiming that they get a thorough dilatation of the canal. On the other hand, some swear by the use of large probes, saying that a full dilatation of the canal can only be established by the use of a probe with a diameter of 3.5 to 4 millimetres. Among the latter we find the name of Theobald. He says it is absurd, with a probe of 1.5 millimetre diameter, to try and restore to its normal dimensions an occluded canal, which in health has an average diameter of 4 millimetres.

With such an array of talent on both sides upholding either the use of small or large probes in the treatment of stricture of the nasal duct, a beginner is at a loss to know which method to adopt.

After several years experience I would recommend the use of large probes. If the teachings of Theobald are carried out, the oculist will meet with very few failures to cure lachrymal stricture with its sequela, dacrocystitis.

In treating a case of lachrymal stricture, after first slitting the lower canaliculus with a Bowman's knife, a No. 5 Theobald probe is passed through the nasal duct. Occasionally it will be found that we have to start with a smaller size, but this is rare. I increase the size of the probe to the next higher, at each visit of the patient, every alternate day, until No. 14 or 16 is reached. Then I request the patient to report at first twice a week, then once a week. After the stricture is fully dilated I have my patient, if she lives in the country, or any distance away, pass a No. 12 Theobald probe at least once a week for a year, or more, to prevent any return of the stricture. Some may say this is unnecessary, but the patient can learn to pass the probe with little or no inconvenience, and is not so apt to have any recurrent dacrocystitis. The probes are allowed to remain *in situ* for from 20 to 30 minutes. The lachrymal probes must be passed down through the nasal end of the duct, for if the stricture is seated in this region all the dilating above does no good.

The interior of the nose, such as sinus trouble, and atrophic rhinitis, etc., must receive proper treatment. The best authorities recognize the fact that nasal trouble causes the great majority of cases of stricture of the nasal duct.

In conclusion, I think that many patients would be spared the ordeal of such operations as extirpation of the lachrymal sac and gland for stubborn epiphora, if the lachrymal canal were thoroughly dilated with Theobald's probes Nos. 14 to 16.

PEDIATRICS.

 IN CHARGE OF ALLEN BAINES AND W. J. GREIG.

Case of Renal Calculus in a Child. By R. G. DUN. (*Medical Press*, June 10, 1908.)

Child, aged six years, ailing with stomach pains and hematuria. The urine was described as dark red sometimes. This had been going on for two years. Examination showed nothing abnormal in the kidney region, nor did the examination of the urine reveal anything. X-ray photo, however, showed a very definite shadow in the right kidney region, and on operation a stone was found.

The case is recorded on account of the rarity of this condition in children. This supposed rarity is due, the author thinks, to the difficulty of diagnosis and suggests the importance of radiography as an aid. Henry Morris says that, of 379 cases of stone in the kidney referred to by him, only one was in a child under ten years.

A study of the few reported cases shows that practically all of them come under the surgeon's care for hydro- or pyonephrosis. This suggests that the early signs of stone in the kidney had been overlooked.

Experiences with the Conjunctival and Cutaneous Tuberculin Tests. By HENRY L. SHIVELY (Pediatric Department of the *Journal of Obstet.*, Aug., 1908).

Twelve cases were submitted to the Calmette test. Seven gave positive reaction and of these three were undoubtedly tubercular. In three others, clinically the cases were not tubercular, and in one there was doubt.

Five cases re-acted negatively, and of these, three were clinically non-tubercular. Two were clinically tubercular, but subsequently cleared up, thus confirming the Calmette reaction.

In the cutaneous test (Von Pirquet's) the arm was carefully cleansed and abraded over three small areas. The tuberculin solution was rubbed into two of the areas, and the third area was used as a control. The test consisted of a 25 per cent. solution of Koch's old tuberculin, with sterile normal salt solution.

Forty-one cases were tested, and of these 29 reacted positively. In 20 of these a clinical diagnosis of tuberculosis had been made.

In the 12 negative cases, in 6 tubercle was undoubtedly

present, in one of them the bacillus was found in the sputum; in 5, tubercle was not present, and in one there was doubt.

Conclusions.—In the employment of these tests, there are sources of error which cannot be explained, and these errors are frequent enough to allow little dependence to be put on the tests in doubtful cases. It is as reliable, however, as the old tuberculin test.

The cases are too few to warrant any general conclusion being drawn, but so far as they go it would appear that both the conjunctival and cutaneous test would be misleading if depended on for diagnosis in a doubtful case of tuberculosis.

Modern Laboratory Feeding and the Wide Range of Resources which it Provides. BY THOMAS MORGAN ROTCH (*Archives*, Sept., 1908).

The object of the paper is to show the profession how unnecessary it is to use any of the patent or proprietary foods, because, knowing what each food contains of value, this constituent can be added in the milk prescription at the laboratory. In the course of the paper the author describes in a practical way all the important points in infant diet. He begins with the fats. He says that the cream from the Holstein breed is more desirable than that from the Jersey. He claims that the successful use of fats depends on the knowledge by the physician of the requirements of the individual case. He discusses fully the different carbohydrates, lactose, dextrose, sucrose and maltose.

Pure starch is to be used for two purposes: First, to render the precipitated casein finer by mechanical means; second, for purposes of nutrition.

Table I. shows the kind of fermentation and the relative rapidity of conversion which the sugars undergo. Table II. gives the possible amount of sugar assimilated in twenty-four hours without overflow. Table III. shows the changes which the carbohydrates undergo before their assimilation in the form of dextrose.

He approves of the principle of dividing the proteids into whey and caseinogen (he prefers to use the term casein instead of caseinogen). One way of obviating the difficulties of casein digestion is to peptonize. He approves of citrate of sodium because it gives a flocculent curd, but only does what can be done by other means. The use of lime water and soda bicarbonate is considered, and he shows what a different effect they have when used in different proportions. He winds up by giving

a new prescription card for use by the laboratories, the striking feature of which is the options which are given.

Altogether this article is very valuable, not on account of the positive statements contained, but for its suggestiveness and the stimulus it gives to further study. It should be read in full.

Henoch's Purpura and Intussusception. By MR. HUGH LETT
(*British Journal of Children's Diseases*, Aug., 1908).

This paper reports one case and refers to several other cases of Henoch's purpura associated with intussusception.

The object of the paper is to discuss Henoch's purpura from a surgical point of view, and secondly the diagnosis from intussusception occurring during an attack of Henoch's purpura. The importance of the question is shown by the fact that cases of Henoch's purpura have been operated on for intussusception and none found, and again cases of intussusception have been found post-mortem in Henoch's purpura where none was suspected.

If vomiting occurs early it is against intussusception. If bile be present on the napkins it is against it. In the early stages of an intussusception the abdomen is neither distended nor tender at first, but will become so later on; while in purpura the abdomen is distended and resistant from the first. The crucial test, however, is finding a tumor, which the writer thinks can generally be done, if an anesthetic is given. Hemorrhage into the mesentery and great thickening of the lower end of the ileum have been mistaken for the tumor of an intussusception.

The presence or absence of a tumor is the important point of differential diagnosis, and affords also the surgical indication.

W. J. G.

Editorials.

THE ONTARIO MEDICAL ASSOCIATION.

Are the members of the profession of this Province taking as much interest in the Ontario Medical Association as they should? The large attendance and the great success of the meeting in Hamilton last year would seem to indicate that they do. We hope the general practitioners throughout Ontario will work for the next meeting, which will be held in Toronto, June 1, 2, 3, 1909. The successful general practitioner is, of course, a busy man, and in a large proportion of cases has neither the time nor the inclination to prepare a long scientific paper.

We all recognize the fact, however, that at large meetings of medical societies nothing creates more interest, or produces more discussion, than the short relation of interesting cases in practice, with brief comments on the same. Will the physicians and surgeons outside of Toronto kindly bear this in mind. The members of the various committees in charge of sections are very anxious to get papers and reports of cases from practitioners in all parts of Ontario.

As the Committee on Papers and Business is anxious to arrange a programme as soon as possible, those who are willing to contribute in any way are earnestly requested to correspond at once with the General Secretary, Dr. E. Stanley Ryerson, 243 College St., Toronto, or either of the Assistant Secretaries, Dr. Samuel Johnston, 169 Carlton St., Toronto, and Dr. J. E. Davey, 145 King St., Hamilton; or to any of the following secretaries of sections: Dr. Arthur B. Wright, 329 Church St., Toronto, Secretary of Section in Surgery; Dr. F. Arnold Clarkson, 471 College St., Toronto, Secretary of Section in Medicine; Dr. Colin Campbell, 93 Bloor St. W., Toronto, Secretary of Section in Eye, Ear, Throat, Nose; Dr. J. A. Kinneary, 177 Carlton St., Toronto, Secretary of Section in

Gynecology, Obstetrics and Diseases of Children; or Dr. Chas. A. Hodgetts, corner Avenue Rd. and Eglinton Ave., Toronto, Secretary of Section in Preventive Medicine.

DEATH ON THE OPERATING TABLE.

Nothing in surgery is more tragic or more heart-breaking for a surgeon than a death on the operating-table. The surgeon who, under such circumstances, leaves the operating-room and announces the result to the relatives, goes through a terrible ordeal.

Dr. George W. Crile, Professor of Clinical Surgery in the Western Reserve University, Cleveland, in a recent lecture on "Surgical Pathology," delivered before the College of Physicians of Philadelphia, Dec. 11th, described his method of resuscitating individuals apparently dead. The particulars of this method are described in the *New York Medical Journal* of January 2nd. From this we summarize as follows: "Patient in prone posture, rapid rhythmical pressure made on lower portion of chest, producing artificial respiration and, to some extent, artificial circulation. Canula rapidly inserted in any artery and directed towards the heart; a rubber tube and funnel attached to this canula, and sterile salt solution is poured into the artery. When about a quart of fluid has passed into the blood vessels, 15 to 30 minims of a 1 to 1000 adrenalin solution is injected into the vessel by inserting the handle of the hypodermic syringe through the rubber tube nearest to the canula; synchronously with this injection the rhythmical pressure on the chest is brought to its maximum, so that the adrenalin solution shall reach the heart promptly.

"Such a technique must be applied promptly, and the operating staff should be so trained that the materials and instruments may be produced within two minutes after the cessation of respiration, or of the heart-beat."

This method of procedure requires considerable skill, and a certain special apparatus ready at hand as herein described.

It can be carried out only in hospital practice. However, Dr. Crile's methods are, we think, worthy of careful study, and it is quite possible in the future they can be so simplified as to be made available for surgeons, obstetricians and physicians in general practice. Dr. Crile thinks, however, that direct transfusion of blood is the best remedy in hemorrhage and shock.

PHYSICAL THERAPEUTICS.

It usually takes a newly-fledged medico one year in active practice to learn that drugs will not do all that is claimed for them in the text-book. He then casts about for some other method of treatment, and in Ontario, at any rate, finds none, because at college he has learned nothing of the many physical agencies which may be adopted. The result is that he either falls an easy victim to the nostrum vendor, or he becomes, as far as therapeutics is concerned, a nihilist, and the various fakirs who follow at the heels of the profession fatten on his dissatisfied patients.

But we may point a moral to adorn this all-too-common tale. In Germany, where they have the reputation for doing things thoroughly, 17 out of the total 20 medical schools give courses of instruction in therapeutic methods other than those of the materia medica, and practically every hospital in the Empire is thoroughly equipped to do the work. On this side of the water, Boston has taken up the subject, and the general hospital there has established a non-commercial hydrotherapeutic department, where students are trained, and to which the practitioners of the city may and do refer patients. No one is, however, treated without a doctor's prescription. We believe Philadelphia followed the example a few months ago. In both these places skilled operators are ready to do the bidding of a physician, and to use scientifically whatever physical means may be considered necessary for the patient's good. At the

same time a generation of medical students is being trained which will make such a thing as osteopathy impossible.

The question naturally arises, "Why can't Toronto do the same thing?" We have one of the largest medical colleges on the continent, and we are about to build a hospital that is to be second to none. The trustees of the proposed institution have now an opportunity to win immortal fame if they will follow Boston's lead and establish a physico-therapeutical department such as exists in that city.

HOSPITAL CHARITIES OF LONDON.

The late Henry Isaac Barnato left a very handsome bequest, in the shape of \$1,250,000, to found a hospital or other charitable institution in memory of his brother and nephew. The trustees have absolute control over the fund, and complete powers as to the management of the institution. It is thought that the money will be used in building a large Jewish hospital, which will make special provision for poor Jewish patients.

The trustees of the King's Hospital Fund held their annual meeting December 14th, under the chairmanship of the President, the Prince of Wales. His Royal Highness referred especially to the valuable work which is being done in improving the administration of hospitals and convalescent homes, and co-ordinating them so as to equalize the accommodation and equipment in the different districts of the city.

This year the amount available for distribution among the various hospitals of London amounts to about \$700,000, an amount larger by \$100,000 than that available last year. In their distribution the trustees are giving greater attention to convalescent homes and to country sanitariums for tuberculous patients. Among the largest grants are \$60,000 to London Hospital; \$65,000 to King's College Hospital for the new building now being erected on Denmark Hill; \$10,000 to the Ealing Cottage Hospital, and other similar sums to special hospitals and convalescent homes.

INTERNATIONAL MEDICAL CONGRESS.

As previously announced, the International Medical Congress will be held at Budapest, Hungary, August 29th to September 4th, 1909.

/ We understand that arrangements have been made for a number of physicians of the United States to attend the Congress, the arrangements for transportation being in the hands of Messrs. Thos. Cook & Sons. It is expected that there will be a very fair representation from Canada. Special rates will be given by some of the steamship lines—these will be announced at an early date.

The last Congress was held in Lisbon, in 1906. It is thought by many that the intervals between the meetings are too short. At the Lisbon meeting, Professors Waldeyer and Pösner, of Berlin, brought forward on behalf of the German Imperial Committee a proposal that the interval between Congresses should be extended. The suggestion fell through because of the opposition from Portugal. The matter has been revived by the Hungarian Committee, which proposes that the interval should be five years.

We learn from the *British Medical Journal* that the question has been discussed by the British Committee, and Sir Felix Semon has suggested that the interval between Congresses should be four years. This would prevent clashing with special Congresses. If the special Congresses met every two years and joined the International Congress, as sections, every four years, the scientific results would probably be more satisfactory than they have been in the past.

The *Journal* also expresses the opinion that it is important from the point of view of medical science that those who work in the narrower fields should have opportunities of bringing the fruits of their work before the judgment of the whole profession.

THE NEW CITY MORGUE.

Dr. Arthur Jukes Johnson, Chief Coroner for the City, gives the following description of the new morgue in the *Canadian Journal of Medicine and Surgery*:

The new Morgue is undoubtedly the finest building of its character, and the most perfectly equipped for the purposes for which it was built, that there is on this continent. It is a large square stone and brick building situated on the north side of Lombard Street, on a lot which extends from No. 34 to No. 96. The main door, in the middle of the building, is reached by a set of stone steps, and on entering the building the first room on the east side is a general office for the purposes of the Morgue, and a place where messages can be taken for the ambulance of the Medical Health Department. During the day in this room there is a stenographer, with a telephone beside her; she leaves at 5 p.m., and her place is taken by a caretaker, who is on duty all night. Besides these two, the driver of the infectious diseases ambulance is about the Morgue when not occupied in moving patients to the Isolation Hospital, the stables of his ambulance being at the back of the Morgue.

The west side of the building on this floor is devoted in front to an identification room, and at the back to a post-mortem room; between these two rooms there is a cold storage plant, with receptacles that may be pulled out into either of these two rooms. A body arriving at the Morgue is taken into the post-mortem room, one of the receptacles is pulled out into this room and the body laid upon it, the receptacle being pushed back into the cold storage portion. If anyone wishes to see a body for the purposes of identification he goes into the front of the building and the body is drawn out of the opposite end of the cold storage plant and is shown to him in the identification room. In this way all bodies going to the Morgue will be preserved in cold air, and the public will be prevented from satisfying their morbid curiosity, as in the identification room all they can see, unless they have an order to see a certain body, is what looks like one tremendous filing system.

The coroner's court room is upstairs, and is a large and handsome room, very well lit, with a dais at the east end and a private room off it for the coroner's use. There are also rooms for witnesses, jurors and counsel.

The whole building is finished in quarter-cut oak, well heated by hot water system, and well lit by large windows for the day time, and gas and electric light at night.

NOTES.

The Fifth Pan-American Medical Congress was held in Guatemala City, Central America, from the 5th to the 10th of August, 1908. Seventeen countries were represented by delegates, besides Guatemala. There were eight representatives from the United States.

The members of the profession of Toronto were much pleased at the result of the voting for the Toronto Hospital by-laws, at the recent municipal election on New Year's Day. The large majority in favor of the by-laws means that all classes of citizens are desirous of providing better accommodation for the sick poor of Toronto and outlying districts. The result of the vote will be that St. Michael's Hospital, Grace Hospital, Western Hospital and the Hospital for Incurables will receive each \$50,000.

The friends of all these hospitals have had what may be called a bitter, uphill fight, but they are winning out, and we are glad to say are doing great work in the interests of suffering humanity.

Personals.

Dr. A. Wilson, formerly of Fenelon Falls, Ont., is now located at 1032 Bathurst Street, Toronto.

Dr. W. A. Young spent the greater part of January at Atlantic City, recuperating after his serious illness.

Dr. Geo. McDonagh, of Toronto, left on a trip to South Africa, January 16th. He expects to return about April 1st.

Dr. W. T. Hamilton, of High River, Alta., visited Toronto in December, and was engaged in post-graduate work for about six weeks.

Dr. John Caven sailed from New York for Naples, January 22nd, with the intention of visiting Rome and other cities in Italy. The catastrophe to the vessel on which he sailed, the *Republic*, necessitated his return to Toronto.

The Controllers, in connection with our Medical Health Officer, after much arduous work in the past, still find it difficult to agree in details as to the best available and most economical filtration plant.

Dr. Chas. A. Page (Trin., '98), who practised for some years in Kingsville, and recently returned from a trip abroad, where he did post-graduate work for a year and a half, has recently settled at 105 Bloor Street West.

Dr. Wm. B. Hopkins (Vic., '86), who practised in Marshville from 1886 to 1907, and who removed to Hamilton in the latter year, was at the recent election returned, near the head of the poll, as an alderman for Ward 6 in that city.

We congratulate the citizens of Toronto on the re-election of Controller Harrison. His work in the past in connection with sewage, purification of water supply, and other important sanitary matters, has been in all respects admirable, and in the interests of the inhabitants of this city.

The Rev. T. C. Street-Macklem, D.D., has forwarded his resignation as Provost of Trinity College. The announcement of this fact caused much regret among Trinity College's many friends, and at the time of writing efforts are being made to induce Dr. Macklem to withdraw his resignation.

In commemoration of his 60th birthday, several of the pupils of Dr. Edward L. Trudor, of Saranac Lake, N.Y., gave a dinner to him on September 19th, 1908, and presented him with two handsomely-bound volumes of their reprinted articles, entitled collectively, "Studies in Tuberculosis."

The following officers of the Winnipeg Clinical Society were elected for the present year: Dr. W. R. Nicholls, President; Dr. Chas. Hunter, Vice-President; Dr. J. G. Munro, Secretary; and Dr. J. E. Lehmann, Treasurer. Executive Committee: Doctors R. W. Kenny, J. H. Bond, and R. Rorke.

At a recent meeting of the Winnipeg Medical and Chirurgical Society, the following officers were elected: Dr. W. J. McLean, President; Dr. J. O. Todd, Vice-President; and Dr. C. H. Vrooman, Sec.-Treasurer. Executive Committee: Doctors Harvey Smith, Hunter, Galloway and Halpenny.

Dr. Chas. Sheard, Medical Health Officer of Toronto, and Controller Dr. W. S. Harrison, went to New York, January 12th, to secure further information about septic tanks, and consulted Mr. Rudolf Herring, one of the most eminent ex-

perts on sewage disposal on the continent, and also Mr. Allen Hazen, the distinguished filtration expert.

Dr. Peter Macdonald, of Wingham, Ont., has been appointed Postmaster of the city of London in the place of the late John Cameron. He graduated from Trinity University in 1872, and shortly afterwards settled in Wingham. He soon became widely known and very popular. He has been an active politician and for many years was Member for East Huron in the House of Commons, and occupied the position of Deputy Speaker from 1900 until 1904.

Obituary.

DONALD MARTIN FRASER, M.D.

Dr. D. M. Fraser, one of the best known physicians of Stratford, died after a short illness, December 8, 1908, aged 62. He received his medical education in Montreal, and graduated from McGill in 1869.

ALEXANDER R. STEPHENS, M.B.

Dr. Stephens, of Collingwood, one of the oldest practitioners in Ontario, died December 20, 1908. He was in active practice something like fifty-five years, having received his license in 1851, after passing an examination before the Medical Board of Upper Canada.

ALEX. THOS. STEELE, M.B.

Dr. A. T. Steele (Tor., '00), who practised for some years in Shelburne, died at the residence of his father in Orangeville, December 28th, 1908, aged 30 years.

RICHARD A. F. PENROSE, M.D., LL.D.

Dr. Penrose, who was for many years one of the best practitioners and teachers of the diseases of women and children in Philadelphia, died December 26th, 1908, aged 82.

Correspondence.

TORONTO GENERAL HOSPITAL.

Editor of CANADIAN PRACTITIONER AND REVIEW:

SIR,—In the year of grace 1907 it was announced with a flourish of trumpets that the Toronto General Hospital, which had been carefully and conservatively managed by a Board of Trustees for fifty years, was altogether out of date and, by implication, the then Trustees were antiquated, their methods archaic, and that the time had come for a new hospital and a new regime which was to shed lustre on the City of Toronto, and incidentally on the new board of governors. An Act was passed by the Legislature creating a new Board and giving power to build a new hospital on a new site. It was further stated that the new hospital would be used for clinical purposes only and would be therefore allied with the University of Toronto. The Government of Ontario was asked to vote \$300,000 in the interests of medical education and they voted the money. The City of Toronto was asked to give \$200,000 for the benefit of the sick poor, and the Council voted the money. The citizens were appealed to for subscriptions, and they subscribed liberally. In all some \$1,100,000 was voted or was promised by individuals. A large Board of Governors, composed of leading citizens, was appointed, but the real power was left in the hands of a small executive committee who proceeded to run things. It was found that the medical men who had given their services gratis for so many years were inefficient, notwithstanding the fact that they comprised most of the leading physicians and surgeons of the city. At first it was proposed that there should be one medical and one surgical service, but it was found that such a plan would not meet with support, and three medical and three surgical services were established with heads for the special departments. Men who were not on the University Faculty were ruthlessly ejected on the ground that all medical men in attendance must be teachers in the Faculty. Then it was found that certain former professors of Trinity Medical College were much too old, from forty upwards. So the 55-year rule having got rid of most of them, others were offered inferior positions, which they naturally declined. Others were willy nilly kicked upstairs on to the

consulting staff. Some preferred to resign rather than be elevated. Thus the way was cleared for the entry of the staff of all the talents. But it was found that there were some men who were obnoxious to a certain section of the University Faculty, who were too young to be oslerised, but the reigning dynasty decreed their decapitation. The influence of large subscribers is said to have been used to save them; men comparatively obscure suddenly became great lights, and last but not least, men who were and are in no way connected with the Faculty were appointed. How were they chosen? Echo answers, How? in the face of the declaration that the hospital was to be used by the Faculty for clinical purposes only! We ask what has been accomplished by all this turmoil, by all this upsetting and undoing? Is the service better? We trow not. Has the confidence of the profession in the hospital been increased? We have not heard of it. What then has been the result of the bloody revolution? *Some men have gotten greater prominence.* Surely that is worth while. Surely that is worth the cost of the heartburnings, sorrow, disappointments and injustice! Four or five men of the 500 practitioners in Toronto have better places, from the sham reorganization. Is the hospital any better off financially under the new administration? Is it not true that instead of having a surplus or of being able to make ends meet there have been large deficits? What has become of the \$1,100,000? Is it not true that \$650,000 has been spent on the new site, and where is the money to come from to build the new hospital? We are informed that the new plans are very fine, but the tenders amount to \$1,000,000, without extras. And what about the accommodations for patients? Where are the dear poor whom we have always with us, and for whom primarily the hospital exists? Up in the attic. Prices have been raised, things have been speeded up, the hospital has been commercialized. Modern principles of business have been made applicable to charity (save the word.) You pay your price, you take your choice, attic to private ward. If you have nothing and no friends, God help you. We think that the time has come for an investigation by the largest contributor to the hospital, the Government. To our mind, reorganization has been a poor farce and the new administration a failure.

GENERAL PRACTITIONER.

Book Reviews.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia; assisted by H. R. M. Landis, M.D., Assistant Physician to the Out-door Medical Department of the Jefferson Medical College Hospital. December 1, 1908. Lea & Febiger, Philadelphia and New York. Six dollars per annum.

Volume IV. deals with diseases of the digestive tract, by Edsall; of the kidneys, by Bradford; surgery of the extremities, tumors, infections, etc., by Bloodgood; and with diseases of the genito-urinary tract, by Belfield. To this Dr. Landis adds a valuable therapeutic referendum, one of the most useful we have ever seen, in which psychotherapeutics and the Emmanuel movement of Boston are put in their proper places. This number is excellent and perhaps the best of the year.

INTERNATIONAL CLINICS. A quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otolaryngology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world. Edited by W. T. Longcope, M.D., Philadelphia, U.S.A. Volume IV. Eighteenth series. 1908. Philadelphia and London: J. B. Lippincott Company. 1908.

The last number of the year is full of very interesting material. Dr. Pratt's article on "The Advance of Physical Therapeutics" has already set some thinking, and some hospitals that are now being planned will be the better for it. Palmer has fifteen pages on psychotherapeutics, which are well worth reading.

All the other articles in this volume are up to the high standard set by the publishers, and will be found very valuable by any one who is not already familiar with the "Clinics."

MODERN MEDICINE, its Theory and Practice, in original contributions by American and foreign authors. Edited by William Osler, Regius Professor of Medicine in Oxford University, England; assisted by Thos. McCrea, Associate Professor of Medicine and Clinical Therapeutics in the Johns Hopkins University, Baltimore. Volume V. Diseases of the Alimentary Tract. Illustrated. Philadelphia and New York: Lea & Febiger. 1908.

Canadians have a great interest in this new system of medicine, for it is edited by Canadians, and some of our ablest colleagues have contributed important articles to it. In this volume, just come to hand, for example, one of the best monographs we find is that on "Diseases of the Esophagus," by Dr. John McCrea, of Montreal.

The whole tone of this volume is excellent. Those who fear that medicine is drifting towards nihilism will be greatly comforted when they glance at the amount of space devoted to treatment, which is always sane and rational.

We must single out for approbation the contribution by Opie, on the "Diseases of the Pancreas," in which is embodied a great deal of his well-known research work. It is quite the most modern article on this subject.

Miscellaneous.

Glyco-Thymoline.

DESCRIPTION: Glyco-Thymoline is a deep claret colored fluid with the taste and odor of thymol and eucalyptol.

FORMULA: This preparation contains benzo-salicylate of soda, methyl salicylate from *Betula Lenta*, eucalyptol, thymol, pini pumilionis, glycerine and solvents. The alcoholic content is 4 per cent.

ACTION: A solution composed of Glyco-Thymoline one part, water three parts, approximates the alkalinity and salinity of the human blood, thus harmonizing with the secretions of tissues treated. When applied slightly warmed to the mucous membranes of the nose and throat it is soothing, solvent, mildly antiseptic, exosmotic and anesthetic. It promotes aseptic conditions and favors the restoration of normal functions of the mucous membrane. Internally Glyco-Thymoline is antacid, carminative, and anti-fermentative.

USES: This preparation is recommended in the treatment of all catarrhal diseases of the mucous membrane, particularly of the upper respiratory, utero-vaginal and rectal tracts, as a solvent, soothing, antiseptic and alkaline wash. Internally it has been successfully employed to overcome gastric hyperacidity, gastro-intestinal fermentation, summer diarrhea of infants, etc. In obstetrical and gynecologic practice it has also proven useful. Its mild, non-irritating properties will suggest its use whenever and wherever an alkaline antiseptic solution is desired. In dentistry it has also been extensively employed.

DOSAGE: *Externally*—Glyco-Thymoline may be used in solutions ranging from 10 per cent. to full strength. *Internally*—It may be used one-fourth to two teaspoonfuls in water as indicated.

MANUFACTURERS: The Kress & Owen Co., New York City. —*American Medicine*, November, 1908. New Series, Vol. III, No. 11.

Functional Neurotic Disorders.

The various vital functions of the organism are so intimately associated and correlated that it is impossible to definitely attribute any chronic nervous illness to disease or derangement of *but one* of the great bodily systems, *i.e.*, circulatory, respiratory,