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ORIGINAL ARTICLES.

SPLENECTOMY.*

BY COLIN A. CAMPBELL, M.D.

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The following case of excision of the spleen with recovery which I have had the opportunity of studying has suggested the subject of this paper. Dr. J. A. Temple has furnished me with notes of another case.

Case No. I. On Nov. 16, 1899, there was admitted to Toronto General Hospital under the care of 'Dr. Nevitt, Agnes F., aged 29 years, suffering from chronic pain in the abdomen and back, extreme weakness and pallor and recurrent diarrhœa. She said there was a lump in her abdomen. The patient was born in Ontario and with the exception of the ordinary diseases of childhood from which good recoveries were made, she enjoyed good health until 16 years of age. She worked in a woollen mill. At this work she grew pale and began to be troubled with a dragging pain in the back and attacks of pain, in the epigastrium, attributed to dyspepsia. She has had more or less of these pains ever since. She gave no history of malaria. Menstruation began at 14 years of age and has always been painful but otherwise normal. She married at 21 but has had neither children nor miscarriages.

Five years ago, when she had been married two years, she was seized during the night with an attack of smothering, and pain in the epigastrium. No cause was known for the attack; she had not been injured directly or by overlifting. Her physician in examining her discovered, what she herself had never noticed, a lump in the abdomen. Since then pain in the lower part of the abdomen has been almost constant—never very great but aggravated by meturation. During the past summer diarrhœa has been a prominent symptom and she has steadily lost weight, strength and color, especially during the past two months.

At the time of her admission to the hospital her appearance was that of a very much emaciated and anæmic woman. Her sclerotics were clear and pupils active, her tongue clean and temperature normal. Heart and lungs were healthy. In examining the abdomen, which was quite lax

* Read before the Toronto Post Graduate Medical Society, April 2nd, 1900.

a mass was found on the left side extending from the left costal margin almost to the pubes and forwards to the middle line. Resistance was most marked in front near the umbilicus, less so in the loin. The mass was quite moveable. The percussion note was dull over the whole of the left side of the abdomen and left flank. The urine was normal.

A blood count at this time showed 3,800,000 red corpuscles, 12,000 leucocytes and 40 per cent. of haemaglobin.

A differential count showed the different varieties of leucocytes to be in about their normal relative proportions, viz.:

Polymorpho nuclear	65 per cent.
Lymphocytes	17 "
Large mononuclear and transitional	17 "
Eosinophiles	1 "

The pelvic organs were free from disease. The tumor was thought to be renal, and on November 16 Drs. Nevitt and Bingham cut down on it through an incision in the loin. The kidney was examined and found to be healthy while the tumor could be felt within the peritoneal cavity. This was opened by prolonging the incision forward and the tumor was found to be the spleen. It was lying well down in the left iliac fossa, its upper end being opposite the hilum of the left kidney and its notch lying against the anterior superior spine of the ileum. A broad pedicle in which were two large branches of the splenic vein and the splenic artery extended from the hilum to the neighborhood of the hilum of the left kidney. In fact the veins were in the perirenal fat and it was the damage done to these in the necessary manipulations that made it safer to remove than to anchor the wandering organ. The vessels were ligatured without difficulty, the pedicle then tied en masse and the organ which was nowhere adherent removed. About a pint of blood escaped from it. The wound was drained. The operation lasted 1½ hours and there was considerable shock which was combated with saline enemata and strychnia. The same night bone marrow extract ʒii every four hours was begun. Abdominal pain and distention associated with some nausea and constipation, and a rise in temperature and pulse rate were features of the first few days following but were relieved by purgation and enemata. The drainage tube was removed on the fourth day and the stitches by the end of a week, but the discharge, sanguine purulent continued for some time.

A blood count on the ninth day showed 2,990,000 reds and 8,800 leucocytes. Of these 75 per cent. were polymorphonuclears, 12 per cent. lymphocytes, and 12 per cent. large mononuclears and transitional. Eosinophiles formed less than one per cent.

As the bone marrow extract nauseated her very much haemaboloids was substituted on December 9 and has agreed very well.

On Dec. 14th she sat up, and on the 27th was out of bed.

A blood count Dec. 29th showed 3,250,000 reds and 8,000 leucocytes.

Polymorphonuclears formed	67 per cent.
Large mononuclears and transitional formed	17 "
Lymphocytes	14 "
Eosinophiles	2 "

Jan. 10th, the day before she left the hospital and the 55th after the operation her blood showed 4,250,000 reds, 8,000 leucocytes and 50 per cent. of haemoglobin.

Lymphocytes were increased in proportion to 25.5 per cent. Polynuclears formed 66 per cent. and large mononuclears and transitionals 8.5 per cent. A month later she was seen at her own home and a blood count showed 3,900,000 reds, 7,300 leucocytes and 35 per cent. of haemoglobin. The decrease was undoubtedly due to poor nourishment and lack of medicine.

Polynuclears formed	59.5 per cent.
Lymphocytes	27.2 "
Large mononuclears and transitionals	12 "
Eosinophiles	2 "

On Mar. 28th, 4½ mos. after the operation she showed a marked improvement in appearance under renewal of her tonic and attention to digestion.

Red corpuscles numbered 4,325,000, leucocytes 12,000 and haemoglobin 40 per cent.

Polynuclears formed	61 per cent.
Lymphocytes	26 "
Large mononuclears	12 "
Eosinophiles	1 "

No nucleated reds or unnatural forms of leucocytes have ever been noted. The lymphatic glands, at least the superficial sets show no enlargements. The operation has been entirely successful in relieving the distressing symptoms which had reduced her to the condition of an invalid. The spleen shows only a general fibrosis.

Date.	Haemoglobin.	Red Corp.	Leucocytes.	Poly-morph	Lymph.	Large Mono. & transi'al.	Eosino.
	per cent.			per cent	per cent.	per cent.	per cent.
Nov. 15th, 1899.	40	3,800,000	12 000	65	17	17	1
Nov. 23rd, 1899.	2,990,000	8,800	75	12	12	1
Dec. 29th, 1899.	3,250,000	8,000	67	14	17	2
Jan. 10th, 1900.	50	4,250,000	8,000	66	25	8	1
Feb. 15th, 1900.	30	3,900 000	7,300	59	27	12	2
Mar. 28th, 1900.	40	4 325 000	12 000	61	26	12	1

DR. TEMPLE'S CASE OF SPLENECTOMY.—The patient, a married woman, aged 30, was brought to the hospital for operation two years ago, in an extreme condition of anaemia and emaciation. She had been suffering for about six weeks with an acute attack of abdominal pain associated with high fever and marked prostration, which had been treated symptomatically by her physician as an attack of pelvic peritonitis. At the time of entering the hospital her temperature was about 102° and there was marked gastric disturbance. Her abdomen was rigid and somewhat distended, but not excessively tender. Examination under an anæsthetic revealed a lump about the size of two fists well over in the right iliac region, smooth, firm and rounded and not moveable. The

uterus and ovaries were free and normal. A diagnosis of tumor of, or in the neighborhood of the right kidney was made and after rallying the patient by a few days of rectal feeding an exploratory incision was made in the median line. It was then found that the tumor was the spleen slightly enlarged, and adherent to neighboring structures in the right iliac fossa. Its mesentery, in which were enormous vessels, could be traced for several inches upwards. The organ was removed by breaking down adhesions and tying the vessels separately and the wound closed. There was much shock, although the operation did not consume a half hour and there was no haemorrhage, but the patient rallied under stimulants and saline enemata. For three days she went along nicely without a rise of temperature and taking nourishment well; but on the fourth day her pulse rather suddenly became very weak, and she died in a few hours. Examination of the abdominal cavity after death showed that there had been no haemorrhage or peritonitis, so she must have succumbed to heart failure due to extreme anæmia.

There was in this special case of wandering spleen no history to account for its displacement. The patient never had had malarial symptoms, nor could any history of traumatism or sprain from lifting be had. She had had no previous attack of pain, in fact had been a comparatively healthy woman. No blood examination was made. It is almost certain that this acute attack was due to torsion of the long pedicle as the spleen was almost gangrenous and marked everywhere with haemorrhages into its substance. There was a decided perisplenitis.

HISTORY OF OPERATION.—The operation is not by any means a new one, in fact it dates back to the time of Queen Elizabeth. Splenectomy was first done, experimentally, on a dog early in the 17th century by two London surgeons, Gillam and Reid. The dog we are informed grew mangy in 6 weeks.

Later, in 1664, the Hon. Robert Boyle and Dr. Jolive repeated the experiment but with more success. Dr. Boyle tells us the story quaintly thus: "That it might not be pretended the operation was unfaithfully or favorably made, I did part of it myself and held the spleen (which was the largest in proportion to the body that ever I did see), in my own hand while he cut asunder the vessels reaching to it that I might be sure there was not the least part of the spleen unextirpated and yet this puppy in less than a fortnight grew not only well, but as sportive and wanton as before."

The experiment was reported in 1714 by Hüster in Germany and in 1719 in Italy. Numerous experimenters showed that the operation was seldom fatal. Zaccorelli case, 1540, is always quoted as the first instance of its performance on a human being, but his account is boastful and doubtful. Viard, of Paris, is said to have removed an injured spleen in 1581. There are other doubtful cases. E. O'Brien, of Dublin, certainly removed one for injury in 1814 and the patient was well months after. The operation was done by Gullenbauman, 1826, by Küchler and by Volney Dorsay in 1855, by Spencer Wells in 1865, and Bryant in 1866. Since then its successful performance has often been recorded. Experi-

ence has limited the number of cases suitable for operation. Statistics show the removal of the leukaemic spleen to be all but invariably fatal. Spanton reported 25 cases with 24 deaths.

Primary carcinoma or sarcoma of the organ are almost unknown. The same can be said of primary tuberculosis. Moreover, according to Mayo Robson, and other authorities, a wandering spleen can be successfully fixed in position, with a relief to the patient of the dragging pain which is so constant in some cases. In many such cases, however, the organ has undergone a permanent fibrosis and its functions are probably already performed by other glands for its removal is certainly not followed by injury to health and may be much easier than fixation or partial resection. Cysts of the spleen are preferably treated by excision of the whole organ unless very large adherent or inflamed. The mortality under the a sepsis is quite small. Spanton gives it by periods thus :

Between 1866-75	75	per cent.
“ 1876-85	59.25	“
“ 1885-95	16.21	“

Ledderhose reports 14 cases with 12 recoveries, Stanton 9 cases with 9 recoveries.

Dangerous haemorrhage from or severe injury to the spleen, are indications for excision, Nicosbaum reports 26 cases for this purpose with 10 recoveries, Hayden 21 cases, all of whom are said to have done well.

Before leaving this interesting organ of which we know so little I would only say that two results of the removal of the spleen described in many works on physiology, viz. a decrease in the red corpuscles and haemoglobin and an increase in the lymph glands are not present in this case. Contrary to many observers the percentages in leucocytes have not varied to any great extent from the normal.

That the tumor was not diagnosed as spleen in either case suggests the utility of determining the presence or absence of normal splenic dulness in obscure tumor of the abdomen. As to whether the enlargement of the spleen was the cause or effect of the displacement I cannot say. Its relationship to pseudo-leukaemia I leave to your discussion.

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TREPHINING AND NEURECTOMY FOR A CASE OF INFANTILE PALSY.

BY J. T. FOTHERINGHAM, B.A., M.D.,

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G. T. aet 30, Canadian. Family history unimportant. Personal history: Measles, with good recovery at 6 mos.

At 10 mos., when well grown and walking about, he developed an abscess under the left ear (no otitis media) which at the end six weeks after free suppuration slowly healed up. Just about this time a fit occurred one morning as he lay in the cradle—only one—and from which he soon recovered. Mother is positive that there was no paralysis; that he never ceased walking, but in a month or so she saw that the left foot swung outwards when walking, and that soon afterwards the left arm ceased to be used. There is no evidence of atrophy or paralysis in the arm at this date. Then a spasm began to show, and before he was two years of age both leg and arm were spastic and ataxic. From that date to the present they have been growing worse, with no periods of intermission. The face sometimes twitched when arm was very troublesome. He was at school from the 5th to the 15th year of his age, and never learnt any trade. There was no violence of temper, uncleanly habits, cranial irregularities or other evidences of idiocy. As to habits, he has chewed tobacco freely since 12 or 13 years of age. Alcoholic drinks used in moderation. Says that they quiet the hand and leg but make them worse afterward. Present condition. Well nourished and healthy, all body systems normal except the nervous system. Intellect. Normal, though ill-developed. Happy and good tempered. Sensory functions normal. Spasm, if severe, accompanied by much muscular pain, especially in the deltoid trapezius and biceps.

Motor functions. Spasms of the left side, affecting chiefly muscles of the side of the face, sterno mastoid, clavicular portion of pectoralis major, upper part of trapezius, the deltoid and biceps, the flexors and pronators of the forearm and hand: in severe spasm the rectus abdominis: also the left leg shows a mild equino varus, some contraction and spasm of the gastrocnemius. In a severe spasm the head and neck are drawn downwards and to the left and the face somewhat rotated to the right, the left arm thrown up and across the vertex, upon which a callus had developed from continued tapping of the radius; the body slightly bent forward and to the left and the left thigh flexed on the body and the leg on the thigh with the foot in extension. The spasm is clonic, exaggerated by excitement and disappears during sleep. It is accompanied by inco-ordination but never by loss of consciousness and is continuous, never epileptiform.

Diagnosis. Meningeal hemorrhage probably causing the fit at 10 mos., due possibly to thrombosis of a cerebral vein by extension from

lateral or petrosal sinuses and internal jugular vein, where it may have originated from the untreated abscess.

Treatment. Bromides and iodides in massive doses had no apparent effect and on Jan. 24, 1900, Drs. Bingham and Bruce trephined over the motor area involved and found the pia matted down to a dark and apparently sclerotic area of cortex surrounded by a softened area. The cortex of motor areas for face and arm were removed for depth of about one-half inch. The arm remained paralyzed for a few hours after recovery from the operation, but by the third day the spasm had gradually returned and was as bad as ever. On the 13th Feb., 20 days, Dr. Bingham, assisted by [Dr. Bruce, performed neurectomy. An incision was made in the left axilla and parts of the median, musculo cutaneous, musculo spiral and circumflex nerves were excised. As the patient was taking the anæsthetic nicely, it was decided to operate at the same time on the spinal accessory. An incision was made from the mastoid process down the anterior border of the sterno mastoid and after a brief search the nerve was secured and excised.

Feb. 14th, morning, temp. 101°, pulse 100°, resp. 20°.

“ 16th “ “ 99°, “ 90°, “ 20°.

Examination on Feb. 16th shows:—Sensation is present in the shoulder and arm, also on the inner side of the fore-arm, gradually becoming less as the wrist is approached. Sensation is absent from the wrist to a point about three inches above on the inner side, and if lines be drawn from that point to the ext. condyle of the humerus before and behind, the skin on the outer side of those lines lacks sensation. In the hand sensation can only be elicited over the thenar and hypothenar eminences and on the front of the 5th and half of the 4th fingers. Motion is entirely lost in the arm, fore-arm and hand. The deltoid, trapezius and sterno mastoid are also quite functionless. The clavicular portion of the pectoralis major is still spasmodic and to a less degree the teres major. The temperature varies considerably in various patches on the hand and arm. The tongue is protruded to the left and the left leg is, according to the patient, more spasmodic than before. The wounds in the head and neck have healed, that in the axilla is prevented from closing by the contraction of the pect. maj.

Condition on Feb. 28th:—

The patient has been complaining of great pain which he refers to the hand, and generally to a particular finger. He still says the left leg is worse than before the operation. This is not apparent. Probably, his arm being quiet, his attention is drawn to the leg. On examination no sensation can be elicited below the elbow except along the upper and posterior part of the ulna for about 3 inches. The limb feels cold and marked atrophy has taken place, bringing into prominence the contracting portion of the pect. maj. The left shoulder is raised much higher than the right. The arm forcibly drawn inwards and forwards. The head

inclined forward and to the left. His gait is, if anything, better than before the operation, and strabismus hardly noticeable. General health, fair.

A CASE OF INTESTINAL PERFORATION IN TYPHOID FEVER. OPERATION. DEATH.

BY G. N. FISH, M. D.

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The recent more or less successful results attending the employment of surgical operation in the treatment of this almost invariably fatal complication of typhoid fever make the report of the following case of some interest. W. B., aged 33, was admitted to the medical clinic of Dr. H. B. Anderson, St. Michaels Hospital on the evening of Dec. 8th, 1899, suffering from typhoid fever, having been ill about one week. His temperature was 103, pulse 100, respiration 24; tongue clean, bowels regular: the blood gave a distinct Widal reaction. The case ran an ordinary course, temperature ranging from 101 to 104, pulse from 88 to 98; no delirium, no tympanites or other abdominal symptoms.

The patient was put on ordinary treatment, fluid diet, ac. nitromur. dil., small doses of quinine and strychnia, with baths to control the temperature.

At midnight on December 13th a slight hemorrhage from the bowels occurred, followed by another at 5 a.m. These were treated by the application of ice to the abdomen and the administration of plumbi acetat and opium. The hemorrhage did not recur after this time. Temperature was now 102, pulse 80. At noon on the 13th, patient had a slight chill and the evening temperature rose to 103 $\frac{2}{5}$, pulse 100. At one o'clock on the morning of the 14th 6 days after admission and patient's stool was slightly tinged with blood, and he complained of severe abdominal pain, with tenderness on pressure. Temperature 103 $\frac{1}{5}$, pulse 120. Morphine was administered hypodermically and turpentine stupes were applied to the abdomen. At 12 o'clock on the 14th temperature was 100 $\frac{2}{5}$, pulse 84, respiration 36. The patient began to perspire freely, was breathing superficially, and lying upon the back with knees drawn up. The face had a sharp, pinched, anxious expression, the tongue was narrow and red, the pulse small and thready. The abdomen was distended and tympanitic, the liver dullness having disappeared in front. The abdominal pain and tenderness had become less acute than on the previous day.

The diagnosis of perforation having been made, immediate operation was advised by Drs. Anderson, Dwyer and McPhedran in consultation. This, however, could not be arranged for until 8 o'clock in the evening.

20 hours after the first symptoms of peritonitis had appeared. Patient's temperature was now 101, respiration 30, pulse 102, but very small and weak, and he was evidently sinking rapidly. Dr. Teskey operated, assisted by Dr. C. A. Temple. Chloroform was administered, and a median incision about 3 in. in length was made below the umbilicus. The caecum was sought for as a guide to the ileum, as the usual seat of perforation. This portion of the greatly distended gut was withdrawn, and being grasped in both hands like a pneumatic tire was gone over inch by inch, until gas was found to escape from a very small perforation about 10 inches above the ileo caecal valve. The opening was carefully closed by Lembert sutures. About 3 inches from this perforation a dark, gangrenous looking area the size of a nickle appeared through the peritoneal coat, covered with fibrinous exudation. This portion was invaginated and the edges bordering on the area were brought together over it by sutures. The peritoneal cavity contained a large quantity of sero-fibrinous purulent exudation and the peritoneum, both parietal and visceral was intensely engorged. No faecal matter had escaped, though the gas in the peritoneal cavity had an offensive odor. The peritoneal cavity was thoroughly flushed with normal saline solution and the abdominal wound closed. During the operation, which lasted 40 minutes, the pulse rose to 160, and the patient was much collapsed. After the operation it the pulse fell to 118, and for a short time the general condition improved. Subcutaneous injection of normal saline solution, one quart, was made in the pectoral region, and strychnia and whiskey were administered. During the night, however, the patient became delirious, abdomen became greatly distended, temperature rose to 103 $\frac{4}{5}$, respiration 40, pulse 150. He perspired freely and vomited a considerable quantity of dark brownish material at intervals. He continued to grow worse and died on Saturday at 6.45 o'clock p.m.

An autopsy was made 4 hours post mortem, by Dr. Dwyer. Operation wound had begun to unite. There was no excess of peritoneal fluid and no adhesions. The peritoneum was rather hazy but the vascular injection was much less than at time of operation. (post mortem change) Adhesions had formed between the parts brought into apposition at the time of operation. Examination of the bowel showed several ulcers in the ileum, near the ileo-caecal valve. There were no ulcers in the appendix nor in the large intestine. Other organs presented nothing worthy of special mention. As I believe this is the first case of operative procedure in Typhoid perforation reported before this society, it was deemed advisable to give a resumé of the literature on the subject with a view to elicit discussions as to the value of the mode of treatment.

Perforation of the bowel is the most serious accident that can occur during an attack of typhoid fever. As to its frequency Dreschfeld says it occurs in 2½ to 3 per cent of all cases. It occurred in 5.7 per cent of 2,000 autopsies in Munich on Typhoid cases and in 4,680 fatal cases tabulated by Fitz the mortality from perforation was 6.58 per cent. It occurs oftener in mild than in severe attacks and is particularly liable to occur in the ambulatory form. It may happen as early as the 8th day (Osler) or as late as some weeks after the disappearance of the fever, though it is most likely to occur during the third week of the

disease. The perforation is usually within the last foot of the ileum. In Fitz's table, in 81 per cent the opening was in the ileum, in 12 per cent in the large intestine and a few instances in the jejunum, vermiform appendix or Meckel's diverticulum.

As regards prognosis Murchison placed the mortality in cases of perforation at 90 per cent or after general peritonitis had set in, at 95 per cent. The prognosis appears to be more favorable in children. Thus Montmoullin reports seven cases with three recoveries—as Jacobi says, "a proportion of spontaneous recoveries able to arouse the jealousy of any operator." Taken all in all, however, the mortality in cases treated medically statistics show to be about 90 per cent, so that if the results of operative interference so far reported are reliable, much better results may be expected from resorting to it.

According to Finney operation was first done by Lucke, of Strasburg, in 1887, 12 hours after the onset of symptoms of perforation, but the patient died. In the same year Bonticon, of Troy, N. Y., operated on a case 36 hours after the appearance of symptoms with the same result. Up to March, 1897, Finney had collected reports of 52 cases, of which 17 recovered—32 per cent. Marked symptoms of collapse and shock with weak, rapid pulse were present in 27 of these cases at the time of operation, and in all the patients' condition was described as distinctly unfavorable, except in 5 where it was said to be fair. In 13 of the cases, marked general septic peritonitis with the presence of foul pus was reported. Dr. Weir, of New York, has tabulated 49 cases with 13 recoveries—27 per cent. From Russia we have reports of 71 operations with 17 recoveries—24 per cent. Dr. Westcott has compiled a list of cases complete to Jan., 1898—83, operations with 16 recoveries—19¼ per cent.

Dr. W. W. Keen, Philadelphia Medical Journal, Nov. 4th, 1890, discusses the surgical treatment of perforation of the bowel in typhoid fever from four standpoints which may be taken to represent the latest views upon the subject from the position of the surgeon. These are summarized in the Columbus Medical Journal as follows:—

First. Shall we operate at all cases of typhoid perforation. He answers the question in the affirmative. Of 150 cases reported by various surgeons the recovery rate is 22.7 per cent. The recovery rate in unoperated cases, according to Murchison, is only 5 per cent. The writer is lead to believe that if physicians were alive to the good results of operation, and called the surgeon promptly the recovery rate would be 30 per cent., or possibly one in three.

Second. In what cases shall we operate? To this question the writer says that he would operate in every case of perforation unless the condition was such that recovery was evidently hopeless.

Third. When shall we operate? This discussed at some length. From the statistics given the best results follow operations made from eight to twenty-four hours after the perforation. To quote from the author: "It is possible that larger statistics will change my views to

some extent, but I doubt if operations done during the presence of severe shock will ever prove as successful as those undertaken as quickly as possible after primary shock has passed away."

Fourth. How shall we operate? The author regards the most important advance in the technique as the use of cocain instead of the general anesthetic. He quotes Cushing as stating: "I think local anaesthesia is a great step in advance. I shall never give general anaesthetics again in typhoid."

The incision is best made in the right linea semilunaris or through the rectus muscle. The perforation should be sought first, in the ileum; secondly, in the adjacent caecum and appendix, and, third, in the sigmoid, where it occasionally occurs.

The cleansing of the peritoneal cavity is an important step. This may be done either by flushing or wiping according to the judgment of the operator at the time. The conclusions of the author are as follows:

1. The surgeon should be called in consultation the moment that any abdominal symptoms indicative of possible perforation are observed.
2. If it be possible to determine the existence of the preperforative stage, exploratory operation should be done under cocain-anaesthesia before perforation shock, and sepsis have occurred.
3. After perforation has occurred, operation should be done at the earliest possible moment, provided:
4. That we wait till the primary shock, if any be present, has subsided.
5. In a case of suspected but doubtful perforation, a small exploratory opening should be made under cocain to determine the existence of a perforation, and if hospital facilities for a blood count and for immediate bacteriological observation exist, their aid should be invoked.
6. The operation should be done quickly, but thoroughly, and in accordance with the technic already indicated.
7. The profession at large must be aroused to the possibility of a cure in nearly, if not quite, one-third of the cases of perforation, provided speedy surgical aid is invoked."

From the results obtained there can be little doubt that the proper treatment in cases of perforation where the diagnosis is clear is early surgical operation. The suggestion of exploratory incision in doubtful cases and in the so called preperforative stage, however, I do not think will commend itself to many physicians. There are as yet no symptoms or signs by which impending perforation can be diagnosed and the adoption of this line of treatment might lead to many unnecessary and harmful operations and so bring discredit on a method of treatment of undoubted advantage in suitable cases.

TINEA VERSICOLOR.

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Tinea versicolor, or as it is else termed "Trichophytosis," is not a rare cutaneous disease. But the uncertainty of its recognition, the oscillation and ineffectiveness of its treatment, render it a source of annoyance to both the physician and patient. The latter convinced of the futility of the treatment, very often drifts into the hands of the charlatand; the former at a loss to make a creditable diagnosis and incognizant of the means to abate the disease, thus considerably embarrassed, he finally becomes negligent and indifferent towards the treatment.

It has been my sole labor for the past year, to gather all the literature possible on this subject, which—together with cases of *tinea versicolor*, occurring both in the clinic and my private practice—enables me to draw the clinical picture of the disease, to accurately as possible dwell upon the diagnosis and to outline the method of treatment as advocated by modern dermatologists. The symptomatology and diagnosis of this variety of *tinea* will be illustrated at the conclusion of the article by cases, witnessed in the dermatological clinic, where I act as an assistant.

Tinea versicolor is a cutaneous affection due to a vegetable parasite—the microsporon furfur, invariably present in the epidermis, and is characterized by the gradual appearance of yellowish, brownish or opalescent patches of various shapes and sizes, and situated superficially in the stratum corneum.

Etiology.—The direct cause is the vegetable parasite, mentioned above. Eichstadt was the first to demonstrate the parasitic nature of this disease. In 1856 the microsporon was isolated and examined microscopically. *Tinea versicolor* is but mildly contagious. The manner of invasion of the integument by the parasite, is a matter of supposition. The air is most probably the abode of the parasite and its spore, which cling to the clothing and skin. Kaposi claims that the spores are contained in the water in which the clothing is washed tenaciously adhering to them and are thus finally conveyed to the cutaneous surface of men. The relation of *tinea versicolor* to tuberculosis is not known; as a fact, however, it is frequently met with in the consumptives. Both sexes are equally attacked by this parasite, but in my clinic the female sex was predominating. Anæmic individuals and those whose general condition is below par, furnish a good soil to the parasite and its spore; but even robust people are by no means exempt. The age most prevalent to this affection is from 20-30, although cases have been observed in extreme youth and adolescence. A girl aged 12 presented herself in the clinic with the eruption well out.

Symptoms.—As mentioned above, the microsporon invades the epidermis but superficially, the hairs and nails being exempt from it. Its first appearance can be noticed by the development of furfuraceous macules, of a yellowish or brownish hue, at times even assuming an

opalescent tint, the size and shape of which are extremely irregular and variable. It may develop in the above described manner, or else be preceded by the eruption of pea-sized, oval, erythematous macules, somewhat raised above the surface. The macules are usually situated on the neck, shoulders and upper part of the chest, but in rare instances may also be seen on the abdomen, the back, arms, thighs and legs. As a rule, however, they spare the extremities and seldom, if ever, appear upon the face. The patches are either isolated, not exceeding eight or ten in number, or else so numerous and confluent, as to almost cover the entire upper part of the chest. In size they vary from a small pea to a 25 cent piece. They exhibit a tendency to extend at the periphery, to coalesce with each other and form large, irregular patches. Owing to the indefinite fawn-colored tint the lesions manifest, the French adequately term it "café au lait" (coffee and milk color). *Tinea versicolor* never produces any constitutional disturbances; even the lesions by themselves are unattended by any subjective symptoms. The integument in the immediate vicinity rarely exhibits any inflammatory symptoms, but seems on the whole to be tolerably healthy. Later in the disease the macules become covered with thin, furfuraceous scales, which are adherent, fine and branny and can be removed by rubbing the lesions. They may be either very abundant or scanty, loose or closely adherent. After bathing the patches, the scales become less numerous. In unclean subjects they are very significant and of a dirty iridescent color. In individuals perspiring freely, the scales undergo maceration and form pasty masses or rolls, oftentimes becoming embedded in the folds of the integument. In plethoric persons and those suffering from Hyperidrosis, especially in the summer, the lesions give rise to a great deal of annoyance by manifesting subjective symptoms as itching and burning. The latter, however, as a rule is never present in an ordinary case of *tinea versicolor* unaccompanied by the above mentioned conditions. The disease has been frequently observed in tuberculous individuals, and the question, if *tinea versicolor* were really not a tubercular affection of the skin—a variety of Lupus, could easily be promulgated, provided the existence of the specific microsporon *furfur* could be denied.

The disease shows a tendency to reappear if once removed. Thus we often see the lesions disappear under treatment more readily in the winter months than in the summer or autumn, so that at times we fancy the patient to be completely cured, when insidiously the lesions return at about the same time the next winter. There is a patient in my clinic, who has had four recurrent attack of this disease in the manner described above. We rarely see *Trychophytosis* in persons past the age of fifty. As regards the course of the affection, it must be admitted, that it is progressive and steady when left alone; under judicious treatment however the rapidity of its extension can be lessened and the lesions finally made to disappear. It seems to me, that brunnettes are more prone to the disease than blondes. A rough, harsh skin is a favorable medium for the invasion of the microsporon. If *tinea versicolor* has first manifested itself in the first or second decade, it as a rule persists with slight modification until the thirtieth or fore :

when it gradually disappears, leaving behind a vitiligo, corresponding to the size and shape of the primary lesions. It need not be mentioned, that in the fair sex this disease is a source of great annoyance and anxiety, especially to those who move in the better circles of society. The rich in palaces, among excellent hygienic surroundings, and the poor in the hut, rarely partaking of baths are equally affected with it. Those predisposed to cutaneous disorders, in the so-called "cutaneous diathesis," in the scrofulous and eczematous, tinea versicolor is more likely to appear, then in individuals with a sound integument.

Diagnosis.—The diagnosis is by no means so easy as it has been supposed heretofore. There are a legion of affections simulating tinea versicolor. Therefore the principle features of the disease must clearly be brought forth, at the expense of minor points, unnecessary and burdensome to the general practitioner. As a rule the lesions are situated on the neck, shoulders and chest and rarely on those parts exposed to light. The color of the lesions is very suggestive, consisting of a mixture or rather a variety of hues, a fawn, which can appropriately be termed opalescent, or as the French calls it a "café au lait" tint. The spots or macoles are usually elevated above the surface; when they are exposed to heat, they exhibit an erythemations tendency. Lastly the delquamative nature of the lesions should form the most important diagnostic feature of the disease. Finally the microscopic examination and the detection of the microsporon furfur, leaves no doubt as to the real character of the disease. The absence of subjective symptoms as burning and itching should be taken into consideration in making a diagnosis. In excessive perspiration it is true these lesions may undergo maceration with subsequent inflammation and might be mistaken for eczema, yet the subjective symptoms are as a rule insignificant to warrant a diagnosis of eczema, and furthermore eczema never appears on the parts usually involved in tinea versicolor. Chloasma may at times be mistaken for tinea versicolor. If we however bear in mind, that it is the rete mucosum, which is excessively pigmented in chloasma, while tinea versicolor is an affection of the corneous layer, we will never be at a loss to differentiate between these two diseases. The patches in chloasma—furthermore—are smooth and not elevated, while the macules of tinea versicolor are raised above the surface and covered with fine furfuraceous scales. The parts involved in these two diseases are also different, chloasma occurring more frequently on the face, a region, seldom, if ever attacked by tinea versicolor. Vitilligo can hardly be mistaken for tinea versicolor. Although a sequel to the latter, it presents features distinctive from the former disease. The patches of vitilligo are white, while the borders pigmented; they are never elevated, nor do they exhibit the furfuraceous scaling. Lentigo invades the exposed portions of the body, is not attended by scaling and does not present the hue, peculiar to tinea versicolor. As a rule, the microsporon furfur is not known to thrive on parts exposed. Macular syphilide may give rise to considerable perplexity in the diagnosis; its color however is not so intensely yellow, as that in tinea versicolor; neither do the macules show any tendency towards elevation or desquamation. They are rather of a

coppery tint, and the history of the case will finally clear up the diagnosis and disperse any doubts present. Syphilitic macules on the other hand may occur upon any portion of the cutaneous surface, while tinea is limited to the regions described above. Other manifestations of syphilis are usually concomitant and may thus aid in establishing the diagnosis. Desquamation in macular syphilide is not altogether frequent and the microsporon furfur cannot be detected microscopically. In all doubtful instances the microscope should decide as to the real nature of the lesions.

Pathology.—The lesions of tinea versicolor contain the spores and mycelium of the microsporon furfur. The parasite extends to and penetrates the stratum corneum, but never attacks the rete mucosum and the hairs and nails. Each mycelial thread seems to be intricately interwoven with the epidermic scales. The spores aggregate into clusters. If a portion of the scales be removed from the macule and moistened with a drop of a solution of potassic hydrate and then examined under a microscope having the power of 500 diameters, the mycelium threads will be seen to form intricate branchlets; straight or looped, braided or twisted, crossed or curved, vermiform or roseate. The threads are about .0020-.0040 m.m. in diameter and terminate in oval, round or club-shaped spores, either single or in clusters, which vary from .0030-.0090 m.m. in diameter. The spores possess one or more nuclei, which are highly refractive. Some writers claim, that the bacillus tuberculosis is merely a microorganic form of the fungus-microsporon furfur ?

Some French writers regard tinea versicolor as a tubercular affection of the skin. Its frequent occurrence in conjunction with phthisis pulmonalis has led many to believe that tinea versicolor is but as local symptom of pulmonary tuberculosis.

Prognosis.—Tinea versicolor, although a mild and trivial affection is nevertheless a source of great annoyance to the patient, especially if the latter is one of the fair sex, moving in the better circles of society, where etiquette oftentimes demands an exposure of the upper part of the bust. The disease yields very readily to treatment, provided the latter be faithfully carried out and persistently obeyed to. Relapses are very common, if the parasite is not thoroughly destroyed. Two to three months suffice to eradicate all the traces of the affection.

Treatment.—The treatment has been unsatisfactorily so far, not on account of ignorance in this special form of therapeutics, but of the uncertainty with which a diagnosis is usually made and the variety of skin affections with which tinea versicolor is confounded; hence the consequence has been either a complete or partial failure in the cure of this disease.

French dermatologists advocate sulphur as the remedy par excellence, either in the form of ointments or baths. Mercurial ointments, especially unguent. hydrarg. nitratis is lauded by many to affect a cure. That the above remedies are anti-parasitics there is no doubt, and they have often brought about favorable results. Corrosive chloride of mercury and mercurial baths have been used with the same happy effect.

Other anti-parasitics, as iodine and carbolic acid have been tried in different strengths and various forms. In spite of all measures, this affection seems to resist all efforts. The Germans advise "cleanliness" as the only curative agent, frequent changes of underwear, daily ablutions with soap and water are imperative therapeutic measures with the Germans. They recommend the application of *sapo viridis* to the site of the lesions, which is left in situ for 24 hours, after which the affected region is washed with an alkaline water. A 5 per cent. solution of sod. hyposulphite is then applied. Oftentimes sod. hyposulphite baths seem to be very efficacious. A 25 per cent. chrysarobin ointment has proved to be an excellent remedy. Sulphurous acid ζ to the oz. of water or else in ointment has also been used and doubtless is a very effective parasiticide. The ointment of hydrarg. ammoniat has in many obstinate cases been followed by good results. I frequently use the following formula:

R Natr. bborat.
 Natr. hyposulphites āā $\bar{\text{v}}$ iv.
 Aq. rosae ad $\bar{\text{z}}$ iv.

Sig. Apply with camel's hair brush three times a day followed by the application of *sapo viridis* and subsequent washing with an alkaline water, after which the skin is thoroughly rubbed.

Prof. Shoemaker advocates the copper oleate, either diluted with oleic acid or made into an ointment of the strength of 10-20 per cent. Before applying the above, however, he uses a wash composed of menthol, glycerine and alcohol, which has the advantage of both dissolving the sebum and softening the epidermis as well as acting as a mild parasiticide. He claims that the copper oleate not only acts superficially but it also penetrates the epidermic cells and this arrests the development of the parasite. Other authors confirm the above and regard the oleate of copper as the remedy par excellence. One patient in my clinic was permanently cured by the application of an ointment of the oleate of copper, in the short period of three weeks. Only a small quantity of the ointment should be applied to the diseased surface as the oleate is very penetrating and spreads with rapidity to other parts surrounding the affected area. In conjunction with the above I use an anti-parasitic lotion, preferably the sod. hyposulphite in a 5-10 per cent. solution. I also apply the latter beyond the diseased area, in order to prevent the spreading of the parasite.

This treatment should be used until the color and scaling have totally disappeared and a new, healthy epidermis is formed. Some Russian physicians employ a plaster of *Pix liquida*, which they allow to remain in situ on the parts affected for a week, after which time it is removed, and the skin underneath is then noticed to exhibit a healthy appearance.

Among other remedies which have been used with more or less success may be mentioned alcohol, beta-naphthol and boric acid in ointment form; carbolic acid in the form of a lotion or ointment; a 10 per cent. ointment of resorcine and 1 per cent. ointment of picrotoxin, solutions of chloral hydrate $\bar{\text{z}}$ i to the ounce. In the anaemic, iron in full doses should be administered, and in young people with a scrofulous diathesis cod-liver oil and the syrup ferri iodidi. I have seen cases of tinea

versicolor disappear after the abstraction of a quantity of blood from the affected regions by wet cuppings. Applications of sod. hyposulphite in the form of an ointment, of about the strength of \bar{z} ii to the ounce of lanoline, has been warmly recommended by Prof. Wm. A. Hackett. Listerine and borolyptol, either in full strength or diluted, may be employed as an antiparasitic in conjunction with the oleate of copper.

CASE I.—E. B., aged 15, schoolgirl, Russian by nationality. Family history reveals a tendency to repeated attacks of sore throat. Past history, negative. Status presens: She is anæmic and delicately built, brunette, of sedentary habits; menstruation irregular and painful; suffering considerably from headaches; appetite poor and bowels constipated. Brownish and yellowish macules, renal shaped, from the size of a bean to that of a 25 cent piece, situated on the anterior part of the neck and upper portion of the chest; several patches are irregularly distributed over the mammae. The lesions are covered with fine scales, which are readily detachable. The macules are somewhat elevated above the surface. No subjective symptoms present. Duration of the affection, about two months. Appeared first as erythematous spots, according to the description of the patient. These spots were gradually extending from the periphery.

Diagnosis.—Tinea versicolor.

Treatment.—She was put on the elixir of iron, quinine and strychnine phosphates, thrice daily, and recommended to considerably partake of albuminous foods, with small rations of fats and starches; outdoor exercise and frequent bathing to which a small quantity say an ounce of sulphur was added. An ointment composed of the following was prescribed:

℞ Ichthyolis, \bar{z} i.
Natr hyposulphis, gr. xxv.
Lanolini, ad \bar{z} i; ft. nug.

Sig.: Apply twice a day. In the morning the patches were washed with green soap and hot water. The treatment was continued for about four weeks. After this time the lesions grew fainter in color, and two weeks later the disease was brought to a conclusion. Her general condition also improved perceptibly.

CASE II.—Ch. M., 28 years of age, merchant, Russian by nationality, married.

Family History.—Negative.

Past History.—When a child he was suffering from some sort of skin disease.

Status presens.—Patient is of a robust stature, of a decidedly sanguine temperament and of a dark complexion. He is a sufferer from habitual constipation. The lesions came on insidiously, being noticed by him only after the detachment of a few scales. He was frightened to the utmost lest it might prove dangerous. The lesions consists of furfuraceous, brawny and scaly patches, situated on the anterior inferior portion

of the neck and varying in size and shape unaccompanied by any subjective symptoms. The patches are considerably elevated above the surface and the contiguous skin harsh and rough.

Diagnosis.—Tinea versicolor.

Treatment.—In order to obviate the habitual constipation I advised him to abstain from a too liquid diet for some time and try oatmeal for his breakfast dish. Pickles and salted meats were forbidden, as well as tea and coffee, which patient was in the habit of using freely. I put him on the fl. extr. of cascara sagrada 20 min., thrice daily. For the cutaneous lesions I prescribed the following :

℞ Cupri oleatis gr. xL.
Petrolati ad ʒi; ft. nug. sig.

Sig. : Apply morning and evening with a camel's hair brush, followed by briskly rubbing the patches every morning after washing them with green soap and water. Under this treatment the lesions grew fainter and finally totally disappeared in less than five weeks. It should not be forgotten that coincident conditions, as those mentioned above, demand appropriate treatment. As a general rule the carbohydrates should be avoided not only in tinea versicolor, but in all forms of skin diseases. Of course there are exceptions even to the above.



Night-Terrors, Symptomatic and Idiopathic, with Associated Disorders in Children

Guthrie (*Clinical Journal*, June 7, 1899) concludes a paper on the above subjects as follows :

1. Night-terrors are always to be regarded as evidence of ill-health.
2. They may be divided into symptomatic and idiopathic night-terrors, according to their origin.
3. Hallucinations of vision are mostly caused by a febrile disturbance.
4. In some cases the content of the dream may throw light on its cause.
5. The character of the dreamer is of more importance than that of the dream.
6. In simple cases simple treatment based on the cause is sufficient ; but in idiopathic cases the environment and nature of the patient have also to be considered.

Sedatives are very useful in all kinds of night-terrors : they should be given at bed-time for a few nights. In symptomatic cases paraldehyde in doses of fifteen to twenty minims (for a child of five years) is very effectual. Ammonium bromide may be given in combination with other drugs, such as iron, bismuth, rhubarb, castor oil, gentian and so on, as the case may be. Cardiac stimulants, or bitter or other tonics, may be combined with bromides. Quinine does not agree with highly neurotic children ; it should always be combined with hydrobromic acid.—*Canada Med. Record.*

SELECTED ARTICLES

INCONTINENCE OF URINE IN CHILDREN.*

BY FRANCIS HUBER, M.D., NEW YORK.

Few morbid conditions in children are more annoying, or present greater difficulties in treatment, than those grouped under the head of incontinence of urine.

In a measure, this is due to the fact that the causes are numerous and often complex; secondly, relapses are frequent, unless the patients are kept under treatment for some time after apparent cure. The importance of prolonged continuous treatment, even though the patients are under direct control, is well illustrated by the experience of Kerley referred to by Holt. We must not forget that the affection, at times, shows periods of improvement, particularly in summer, to relapse, or become aggravated, when the cold weather appears; the general health deteriorates and sometimes without apparent known cause. In some cases incontinence occurs during the day only, in the greater number at night, in others it is present both day and night.

The diagnosis of the condition is easy; the recognition of the cause, a point essential to correct treatment, is a more difficult problem. In studying the question, the work may be facilitated, bearing in mind the associated neurotic element, by a consideration of the condition of the sphincter, the state of the bladder, and finally the innervation.

Up to the age of eighteen months to two years, depending upon the early training and care in the management of the child, urine and fæces escape involuntarily.

The anal sphincter is the first to gain sufficient power, and usually by the second year the vesical sphincter attains control over the bladder. In some cases the power is never acquired, in others, once gained, it may be lost, for the time being, during illness or lowered vitality. Fortunately, spontaneous cures occur in many rebellious cases about the time of puberty, attending the rapid development of the whole genito-urinary tract. In practice we observe cases in the weak, as well as in those whose muscles are well developed. Debility and anæmia, it will be found, are frequently associated as contributing causes.

A study of the literature, and of a large number of cases, which have come under personal observation, show that the condition is met with in many varied states, but underlying all there is one common factor—a neurotic condition or family history. Too much importance cannot be attached to the neurotic element, often more pronounced because of the associated anæmia. Many of the cases, therefore, must be viewed as a neurosis, pure and simple; in others, one or more additional factors keep up the annoyance and must be removed before improvement takes place.

Frequently, notwithstanding the most careful search, the predisposing cause cannot be detected, and we are then compelled to resort to empirical remedies.

* Read by title before the American Pediatric Society, Deer Park, June 27, 1899.

In all cases, however, a careful search should be instituted for a possible cause; if one is found, we are in a position to act intelligently, and with greater prospects of success.

Those caused by organic disease of the brain or spinal cord, and malformations of the urethra or bladder, may be referred to incidentally, but do not properly belong to the class under consideration.

Local conditions as small meatus, preputial adhesions, adhesions about the clitoris, irritation and inflammation of the prepuce and glans, inflammation of the urethra, bladder, or rectum, stone in the bladder, constipation, hardened fæces in the rectum, rectal polypi, anal fissure, and pin worms are easily recognized.

The condition of the sphincter must be investigated, the bladder and its contents carefully studied, and finally the state of innervation ascertained. Frequently the sphincter is at fault. Incontinence then may be the result of a weak sphincter, or a part of the general weakness and muscular incompetency, due to a defect in its muscular tone. In the latter instance the patient may be anæmic and poorly developed, or the muscles may be normal, the sphincter alone being involved. No rule can be formulated; the feeble, anæmic, poorly developed may or may not have strong sphincters—apparently robust children, on the contrary, may be affected.

Children who pass urine involuntarily while intent in their play or study, are heedless or suffer from debility of the sphincter and want of mental concord.

When the urine is passed with force some other factor than deficient power in the sphincter must be looked for. Masturbation frequently gives rise to incontinence; the explanation is found in the presence of a chronic inflammation of the prostatic portion of the urethra and neck of the bladder, with increased irritability and sensitiveness of the parts to the presence of urine.

Nocturnal and diurnal incontinence ordinarily suggests a lack of tone in the sphincter and defective innervation. When due to organic disease in the brain or spinal cord, incontinence of fæces is also found, and such cases are usually beyond remedial agents. If due to compression in Pott's disease, recovery takes place when the cause is removed, or disappears as the result of treatment directed to the morbid state in the vertebræ.

In this connection we may profitably discuss the large number of cases occurring in children suffering from lymphoid hypertrophies in the naso-pharynx. A careful study of this part of the subject is important. Many of the patients make the rounds of the dispensaries, and consult various practitioners without permanent relief, until finally the remote cause of the trouble is recognized and removed. To digress for a moment. The question now comes up—what relationship exists between the incontinence and the adenoids? Certainly not reflex. A more logical and intelligent explanation is afforded by a consideration of the *pathological conditions* induced by (a) the obstruction of the lymph and blood circulation in the brain; (b) the retention of the morbid products of cerebral tissue metamorphosis, and finally (c) the changes in the blood from deficient

aeration—all secondary to, and the direct consequence of, the growth of the hypertrophied structures of the lymphoid tissues at the vault of the pharynx.

The valuable anatomical investigation of Axel Key and Retzius has demonstrated beyond question the connection between the sub-dural and sub arachnoid lymph spaces, and the lymph vessels of the nasal mucous membrane.

The hypertrophy of the lymphoid structures of the naso-pharynx and the presence of large adenoids interfere with the lymph circulation. In consequence, the products of cerebral tissue metabolism accumulate in the brain and induce brain fatigue or "retention exhaustion."

Secondly, the general circulation is primarily affected and the cerebral necessarily involved because of the excess of CO₂ and the deficiency of O, the result of defective aeration. Thirdly, the swelling and infiltration obstruct the circulation in both the blood and lymph vessels, particularly the latter. As a result of the impediment at the base, the neighboring portions of the brain are involved, producing effusion and exudation. The meninges and encephalon participate in the morbid process, and induce the mental state so characteristic of the trouble. In some cases, fortunately rare, the changes may be permanent. Guyer of Amsterdam has applied the term "aproxexia" to the mental condition. Such patients are pale, dull, stupid-looking and backward. It is impossible for them to fix their attention, they are usually listless, forget readily, and cannot study without discomfort, the suffering increased by headaches, more or less severe and annoying.

It is not at all surprising that under such circumstances a lack of will power is found with loss of control over the vesical sphincter, the latter further weakened by the existing anæmia, causing diurnal and nocturnal incontinence.

In a number the predisposition appears to be inherited, for it is a common experience to find the children of neurotic parents afflicted in this manner. In one instance all the children of a mother with hystero-epilepsy were affected. In dispensary service such cases are by no means infrequent. In chorea a want of co-ordination between the sphincter and the detrusors is assumed. Occurring as a complication of epilepsy, the underlying cerebral disturbance must be regarded as the factor in the etiology.

Digestive disturbances, late suppers, heavy meals, and the ingestion of large amounts of fluids act as exciting causes. Drinking large amounts of water, particularly at night, immoderate indulgence in weak tea, coffee, and in some instances alcoholic beverages are frequent incidental factors in the etiology. Moderation in this respect is often followed by a disappearance of the disorder.

A short time ago a rachitic child of two and one-half years of age was presented because of the anæmic, flabby state and incontinence. In taking the history it was elicited that the child's diet was chiefly milk, as much as three quarts being taken daily. The amount of milk was reduced and solid food ordered; and advised strychn. sulph. and syr. hyp. c. fer. The beneficial effects were soon evident, for the urinary difficulty quickly disappeared.

Independent of the quantity, the character of the urine may excite the bladder, and lead to premature contractions. Large meals, particularly an excess of nitrogenous materials with inadequate assimilation, give rise to increased amounts of urates and phosphates. Excess of urates, phosphates, oxalates or uric acid, highly concentrated urine, and hyperacidity, act in a similar way.

The small bladder found in many occurs as a congenital anomaly or an acquired defect. In the latter case, though not the primary cause, it tends to keep up the habit. The organ becomes contracted, and when the incontinence has persisted for a while, its capacity becomes less and less, and eventually may not exceed two or three ounces.

The frequency of urination establishes a practice which gradually degenerates into a habit; as a natural sequence, the viscus becomes accustomed to contract when only partly filled. The cause of the incontinence having been removed, the bladder gradually regains the power to hold larger and larger amounts, or the organ may be distended by a boric acid solution, etc., larger quantities being employed each time, twice or three times a week.

PROGNOSIS.—In cases of organic disease of the brain or spinal cord and in malformations, unless amenable to surgical means, the prognosis as to cure is poor. In the larger proportion of cases generally occurring in practice, if the cause can be discovered, the prospects of speedy cure are good. Those due to neuroses usually yield to continued treatment. Many otherwise rebellious cases fortunately get well about the period of puberty. In a small number the functional trouble persists beyond this time, and in a number of girls does not disappear until after marriage. The disorder is most frequent between the third and tenth year. The majority of those affected from the age of ten to fourteen years and over belong to the male sex.

TREATMENT.—It is very evident then that the treatment will vary with the nature of the underlying cause or causes. In the majority of cases general rules must guide us in the management, for no one remedy or plan can be depended upon to secure a favorable result under such conditions.

To quote a recent writer, "A very superficial survey of the pathology of enuresis will demonstrate the futility of any one drug in all cases. We can hardly conceive of a single remedy alike applicable to oversensitiveness of the bladder, to weakness of the sphincter, to hyperacidity of the urine and to a riotous nerve system."

The general health demands our first consideration and the nutrition should be improved. Roborant treatment massage, sponging (local and general) and out-door exercise, gymnastics, etc., are advocated. The anæmia must be treated with iron and other tonics, the bowels are to be kept open, the digestive functions regulated and the urine examined for abnormal products (or too large amounts of any one or more of its constituents). A light, easily-digested evening meal, with but little water afterwards, should be insisted upon, no tea, coffee, or alcoholic beverages allowed. The little patient ought to pass urine before retiring and the bowels be encouraged to move at the same time. As such children wet

the bed once or twice during the night at a fairly regular hour, they should be aroused before the accident happens, and made to pass water. Sleeping upon the back, or too much covering should be avoided. Raising the foot of the bed in some cases will prevent the urine reaching the sensitive trigone and neck of bladder and prevent the nocturnal incontinence.

Strychnia in full doses is indicated as a general tonic; when the sphincter is weak, in rebellious cases the remedy may be employed subcutaneously in the perineum. Ergot has been recommended in irritability of the spinal centres due to congestion. Electricity has been advised and good results are claimed.

Cases of irritable bladder due to masturbation are intractable, the evil practice must be conquered, and the congested and irritable posterior urethra, treated by local application of silver nitrate, etc. Reflex irritation of whatever nature and inflammatory conditions must not be lost sight of, whether situated in the urethra, vagina or rectum, prepuce or glans, bladder or kidneys.

In a great many instances, as no cause can be discovered, the condition must be regarded as a neurosis. Under such circumstances and in the majority of cases where predisposing factors have been removed, belladonna or its alkaloid must be given. Belladonna and strychnia, single or in combination, are tolerated in much larger doses by children in proportion to the age.

A single dose of belladonna or atropine at night gives relief; it should be given to produce the physiological effect, a transient flushing of the face. In case the want of control of the sphincter is due to the "aprosexia" incidental to adenoids, the patency of the naso pharynx must be restored and then only can we expect a cure.

As a routine plan, the following will yield encouraging results in quite a large proportion of cases. Fluids are to be restricted, particularly in the evening; a light early supper, several hours before retiring, is given; the bowels are to be evacuated and water passed before going to bed; one full dose of tr. belladonna at bed time. A tonic of strychnia and iron three times daily for some time on general principles. In addition the patient is to be aroused once or twice during the night to pass urine.

Such patients are not to be punished, scolded or held up to ridicule; on the contrary, harsh measures tend to keep up the annoyance. Patience, kindness, with strict adherence to the measures referred to yield excellent results, if conscientiously persisted in for a time.

In the accompanying table an attempt has been made to classify the causes of incontinence. This, as will be readily conceded, is a difficult task

In many instances several factors are more or less intimately concerned in the etiology. Moreover, in a large number of the cases there is an essential neurotic state or neuroses:

Varieties: Nocturna (common)—Diurna—Continua.

Three factors: Condition of sphincter, (b) bladder, (c) innervation.

- | | | |
|-------------------|---|---|
| (1) MALFORMATIONS | { | Small meatus, small bladder (natural or acquired).
Hypospadias (perineal).
Exstrophy of bladder. Epispadia. |
|-------------------|---|---|

(2) ORGANIC DISEASE OF NERVOUS SYSTEM	{	Idiocy, cerebral palsy, meningitis, ch. hydrocephalus, myelitis, injuries of cord, and Pott's disease, with compression or inflammation of cord.
(3) FUNCTIONAL (?) DISORDERS	{	Epilepsy, chorea, diabetes (mellitus and inspidus). Hysteria, neurasthenia, anæmia resulting in poor innervation and muscular development.
(4) WEAK SPHINCTER	{	a. Infantile condition persisting. b. General muscular incompetency, or c. Result of exhausting diseases, lowered vitality, general anæmia. Neurotic state.
(5) IRRITABILITY OF BLADDER	{	a. Inflammatory processes { Urethritis, balano-postitis, vulvo-vaginitis, cystitis, nephritis, pyelitis, rectal catarrh, ch. inflam. of prostatic portion and neck of bladder due to masturbation.
		b. Local { Stone, polypoid excrescences at neck of bladder, hyper-acid urine, excess of urates, oxalate uric acid, concentrated urine, excess of phosphates due to digestive disturbances and imperfect assimilation. Bacteriuria.
		c. External (Reflex) { Periurethral and perivesical inflam. Phimosis, preputial adhesions and balano-postitis, urethral inflam., vaginal catarrh, rectal catarrh, irritation due to pin-worms, constipation, hardened feces in rectum, fissure, and polypoid of rectum.
		d. Distended Bladder { Excessive secretion of the urine due to large amounts of fluids ingested; diuresis due to drugs, alcohol, tea, coffee, etc.
(6) DEFICIENT INNERVATION	{	Emotional { Mental excitement—eager play. Fear of darkness or cold room. Wilfulness. Bad habits.
		Auto-suggestion { The child having wet the bed, and having been scolded or punished, the habit continues through fear. Dreams.
		Undue excitability of sphincter { Neurotic state. Masturbation. Sleeping on back. Enfeeblement of will { Anæmia, hysteria, neurasthenia. Lymphotism (adenoids).

THE PATHOLOGY AND TREATMENT OF APPENDICITIS.

Although the subject of the pathology and treatment of appendicitis has been under discussion for many years past we are still far from a complete knowledge of this curious lesion. It is now recognised on all hands that appendicitis is always of infective origin, and this observation applies as well to a mild form, such as mere appendicular colic, as to the graver forms associated with perforation, gangrene, and peritonitis. This is a very important point, because it establishes once and for all the pathological identity of all forms of the disease, and it explains why it is impossible to forecast in a given case the ultimate result. As was clearly pointed out in the course of the discussion on the subject which took place last week at the Medical Society of London, the so-called catarrhal

appendicitis of to-day may be the fulminating appendicitis of to-morrow, in fact, as physicians know but too well, the difficulty of distinguishing *ab initio* between mild and serious cases is more or less insurmountable. Physicians and surgeons still differ greatly in opinion as to the necessity for operation, and as to the precise moment at which such operation is best undertaken, but order is gradually being evolved out of chaos, and this difference of opinion now only obtains in regard to first attacks. There is a general consensus of opinion as to the desirability of operating in the chronic recurrent cases, and in the cases with severe initial onset. Although no hard and fast rule can be laid down for the guidance of physicians in determining the necessity for surgical intervention it is beginning to be recognised that grave responsibility is incurred by the practitioner, called to a case in the early stage, that is to say, at a stage when it is impossible to draw a sound conclusion as to its probable course, who refuses to advise operation. Great stress was laid on rapidity of the pulse as an indication for surgical intervention and this symptom is unquestionably far more significant than the temperature. Another interesting point is that the absence of swelling or tumour over the region of the appendix is not *per se* a contra-indication for operation; indeed, such cases not unfrequently prove to be of the graver kind. The presence or absence of this sign depends upon the anatomical position of the appendix, and this, as is well known, varies very greatly. A sudden onset, with a rapid pulse and tenderness over the appendix, with or without the formation of a tumour, suggests the desirability of operation. A more gradual onset, with a steady pulse and early formation of a tumour, justifies delay, though this must be qualified by the absolute necessity of watching the patient closely taking the pulse rate every hour or two, the better to appreciate any sudden change in the condition. Surgeons in general are agreed in discountenancing the administration of opium and no doubt its routine employment in large doses serves only to mask the symptoms and to induce a sense of security not justified by the condition of the patient. Nevertheless, this drug is capable of rendering great service if administered with one or two provisos. First of all no opium should be given until the practitioner has made up his mind as to the sort of case he is dealing with, especially in view of the necessity for operation. Even then it should not be given continuously or in doses which would determine a condition of narcosis. Subject to these conditions opium calms the restless irritability of the patient, and while contributing to the relief of his suffering it does not hinder diagnosis nor prejudice an operation should this subsequently be decided upon. The fact that a very large proportion of the cases which are described as ending in recovery, relapse after a variable interval and are ultimately operated upon, renders it incumbent upon us to accept the term "recovery" with some reserve. One precaution imposes itself, viz., that a patient whose symptoms, after a first or second attack, have subsided, ought to be kept under observation in order to determine by periodical inspection whether the lesion has completely cleared up. In many cases it will be found that some induration or tenderness over the region of the appendix persists even after apparent recovery, and such a patient must be regarded as the

possessor of an explosive focus which may at any moment place his life in jeopardy. The statistics of the so-called recoveries are still incomplete, but if it can be shown that sooner or later the majority recur a strong case will have been made out for operative treatment as a routine measure in dealing with this affection.—*Medical Press and Circular*.

MARK TWAIN ON CHRISTIAN SCIENCE.

This last summer, when I was on my way back to Vienna from the Appetite-Cure in the mountains, I fell over a cliff in the twilight and broke some arms, and legs, and one thing or another, and by good luck was found by some peasants who had lost an ass, and they carried me to the nearest habitation, which was one of those large, low, thatched-roofed farm-houses, with apartments in the garret for the family, and a cunning little porch under the deep gable decorated with boxes of brightly-colored flowers and cats; on the ground floor a large and light sitting-room, separated from the milch-cattle apartment by a partition; and in the front yard rose stately and fine the wealth and pride of the house, the manure-pile.

There was a village a mile away, and a horse doctor lived there, but there was no surgeon. It seemed a bad outlook; mine was distinctly a surgery case. Then it was remembered that a lady from Boston was summering in that village, and she was a Christian Science doctor, and could cure anything. So she was sent for. It was night by this time and she could not conveniently come, but sent word that it was no matter, there was no hurry; she would give me "absent treatment" now, and come in the morning; meantime she begged me to make myself tranquil and comfortable, and remember that there was nothing the matter with me.

It was a night of anguish, of course—at least, I supposed it was, for it had all the symptoms of it—but it passed at last, and the Christian Scientist came and I was glad. She was middle-aged, and large and bony, and erect, and had an austere face, a resolute jaw and a Roman beak, and was a widow in the third degree and her name was Fuller. I was eager to get to business and find relief, but she was distressingly deliberate. She unpinned and unhooked, and uncoupled her upholsteries one by one, abolished the wrinkles with a flirt of her hand, and hung the articles up; peeled off her gloves and disposed of them, got a book out of her hand-bag, then drew a chair to the bed-side, descended into it without hurry, and I hung out my tongue. She said, with pain, but without passion:

"Return it to its receptacle. We deal with the mind only, not with its dumb servants."

I could not offer my pulse, because the connection was broken; but she detected the apology before I could word it, and indicated by a negative tilt of her head that the pulse was another dumb servant that she had no use for. Then I thought I would tell her my symptoms and how I felt, so that she would understand the case; but that was another in-

consequence. She did not need to know those things; moreover, my remark about how I felt was an abuse of language a misapplication of terms—

“One does not *feel*,” she explained; “there is no such thing as feeling; therefore, to speak of a non-existent thing as existing is a contradiction. Matter has no existence; nothing exists but mind; the mind cannot feel pain, it can only imagine it.”

“I am full of imaginary tortures,” I said, “but I do not think I could be any more uncomfortable if they were real ones. What must I do to get rid of them?”

“There is no occasion to get rid of them, since they do not exist. They are illusions propagated by matter, and matter has no existence; there is no such thing as matter.” . . . In her compassion she almost smiled. She would have smiled if there were any such thing as a smile.

“It is quite simple,” she said; “the fundamental principles of Christian Science explain it, and they are summarized in the four following self-evident propositions: 1. God is All in all. 2. God is good. God is mind. 3. God, Spirit, being all, nothing is matter. 4. Life, God, omnipotent Good, deny death, evil, sin, disease. There—now you see.”

It seemed nebulous; it did not seem to say anything about the difficulty in hand—how non-existent matter can propagate illusions. I said with some hesitancy:

“Does—does it explain?”

“*Doesn't* it? Even if read backward it will do it.”

With a budding hope, I asked her to do it backward.

“Very well. Disease sin evil death deny Good omnipotent God life matter is nothing all being Spirit God mind is God good is God all in All is God. There—do you understand now?”

It—it—well, it is plainer than it was before; still?”

“Well?”

“Could you try it some more ways?”

“As many as you like; it always means the same. Interchanged in any way you please it cannot be made to mean anything different from what it means when you put it in any other way. Because it is perfect. You can jumble it all up and it makes no difference; it always comes out the way it was before. It was a marvellous mind that produced it. As a mental *tour de force* it is without a mate; it defies alike the simple, the concrete and the occult.”

Under the powerful influence of the near treatment and the absent treatment together, my bones were gradually retreating inward and disappearing from view. The good work took a brisk start now, and went on quite swiftly. My body was diligently straining and stretching, this way and that, to accommodate the processes of restoration, and every minute or two I heard a dull click inside, and knew that the two ends of a fracture had been successfully joined. This muffled clicking, and gritting, and grinding, and rasping continued during the next three hours, and then stopped—the connections had all been made. All except dislocations: there were only seven of these: hips, shoulders, knees and

neck ; so that was soon over ; one after another they slipped into their sockets with a sound like pulling a distant cork, and I jumped up as good as new, as to frame-work, and sent for the horse-doctor.

I was obliged to do this because I had a stomachache and a cold in the head, and I was not willing to trust these things any longer in the hands of a woman whom I did not know, and in whose ability to successfully treat mere disease I had lost all confidence. My position was justified by the fact that the cold and the ache had been in her charge from the first, along with the fractures, but had experienced not a shade of relief ; and, indeed, the ache was even growing worse and worse, and more and more bitter now, probably on account of the protracted abstinence from food and drink.

The Christian Scientist was not able to cure my stomachache and my cold ; but the horse doctor did it. This convinces me that Christian Science claims too much. In my opinion it ought to leave disease alone and confine itself to surgery. There it would have everything its own way. The horse-doctor charged me thirty kreutzers, and I paid him ; I fact, I doubled it and gave him a shilling. Mrs. Fuller brought in an itemized bill for a crate of broken bones mended in two hundred and thirty-four places—one dollar per fracture.

“ Nothing exists but mind ? ”

“ Nothing,” she answered. “ All else is substanceless, all else is imaginary.”

I gave her an imaginary check, and now she is suing me for substantial dollars. It looks inconsistent.—*Mark Twain in October Cosmopolitan.*



Lord Methuen's Health.

The papers have lately been full of ominous rumours as to the health of General Lord Methuen, and much has been said as to his possible supersession by General Macdonald. These disquieting rumours are supported by the result of inquiries that we have made. It appears that, when he was wounded, Lord Methuen's charger reared violently, throwing its rider heavily to the ground. Severe spinal and other injuries are said to have supervened, and to this fact is presumably attributable, at least in part, the present inactivity of the Western Division. Such an accident, coupled with the tremendous anxiety and trouble attendant upon such a disaster, are sufficient in themselves to account for a physical collapse, without seeking for any extraneous cause, or antecedent psychical reason for the most unfortunate disposition of the troops at Magersfontein. However this may be, we earnestly hope that there will be no attempt made to judge our Generals in the field by either expert or amateur strategists comfortably ensconced in their arm chairs at home. Our soldiers are evidently faced by the gravest difficulties both in the topography of the field of operations and in lack of sufficient cavalry and artillery. They may be trusted to do their very best with the materials at their disposal, and deserve the whole-hearted support of their fellow ntrymen at home.—*The Medical Times and Hospital Gazette.*

SOCIETY REPORTS.

TORONTO CLINICAL SOCIETY.

Stated meeting, April 4th, 1900.

The president Dr. Bingham occupied the chair.

Fellows present: Aikins, Anderson, Fenton, Hamilton, Badgerow, King, Rudolf, McIlwraith, Small, Trow, Bruce, Cameron, Parsons, Pepler, Dwyer, Orr, Elliott.

Visitors: Spence and Dean of the T. G. H.

Nomination for fellowship: Dr. J. H. McConnell by Drs. Bingham and Elliott.

Nomination of Officers: President, W. H. B. Aikins; Vice-President, Dr. George A. Peters; Corresponding Secretary, Dr. A. A. Small; Recording Secretary, Dr. George Elliott; Treasurer, Dr. W. H. Pepler; Executive Committee, Drs. Hamilton, Parsons, King, Bruce, Rudolf, McIlwraith, Dwyer, Anderson, Badgerow, Fotheringham, Fenton, Silverthorn and Trow, five of these to be elected at the meeting in May.

CANCER OF RECTUM AND PROSTATE.—Dr. E. E. King presented a patient a man of 59 years upon whom he had operated for carcinoma of the rectum. Patient had always been healthy. In 1897, two years before seen by the surgeon, he noticed a condition or irritation around the anus, with the passage of slimy material and some blood. Had a severe haemorrhage in August 1899; on the following day he had another severe haemorrhage. Patient came under Dr. King's care Sept. 26th, 1899; and on the 11th of October he excised the tumor presented. The mass extended from the sphincter, which it involved, upwards three and one half inches, involving the whole of the circumference of the bowel, and there were enlarged inguinal glands, an interesting fact, because it is exceedingly rare that these glands are involved. Only five months have elapsed since the operation, and he has gained about 20 lbs. The operation performed was a modified Kraske. An incision was made, over the coccyx which was removed; and the surgeon was thus able to get above the mass, and draw down the gut without opening the peritoneum.

Dr. King reported a second case aged 56 years at the time of operation. Bowel movements had been slimy and contaminated with blood for one and a half years prior to the time of entering the Toronto General Hospital in 1894. Had been operated on then by a confrere, and presumably a portion of the growth excised. This did not unite, and there was an ulcerated condition in December of 1894, when he came under Dr. King's care. Suspecting syphilis, he was placed on iodide and watched carefully for a month, the ulcerated surface being cauterized. This treatment proved futile. Colotomy was then performed, the growth excised, and there was recurrence at the edge. In 1895 had third excision of the recurrence done. . . Six months another recurrence took place at the junction of the skin and mucous membrane. This was the last recurrence. About June of 1898 it was decided to close up the colotomy, He has gained since that operation about 40 lbs. and has comparatively

good health. He has fair control over his movements and has 15 to 20 minutes notification that the bowels are about to evacuate. He can also retain the ordinary solid movements for ten minutes or so.

The third case reported by Dr. King showed that the family history was entirely free except that the mother had had a tumor in her neck, which was said to have been removed by a plaster, the patient subsequently living until she was seventy-five years of age. In 1895, this patient had a very severe pain over the iliac region and lower part of the spine and left side generally. She went into the General Hospital and operation was performed which was said to be the removal of the growth. It recurred within a year, and when seen by Dr. King, she had very severe cancer of the rectum. In this case the peritoneum was opened and the growth taken away very freely. Recurrence took place and this patient is now dying.

Case No. 4 was practically unique. Patient was 28 years of age. Mother and father living, healthy; brothers and sisters, healthy. Maternal grandfather had a cancer of the lip removed some years before his death by plaster. At seven years of age she was injured by being hit in the hip with a large stone. Severe pain developed in 48 hours, and between that time and the next ten or twelve years, she was in bed and out of bed at intervals of six months, and developed a severe form of hip disease. Photographs of the case were here presented. The abscess formations and the fistulæ closed, until she was taken down with an attack of typhoid fever, when these broke out again, and she came to St. Michaels' Hospital in 1894. At that time she had a large mass involving the left side of the anus, perineum and the labia majora, extending into the buttock, almost as far as the trochanter. Its extent was about seven or eight inches long by six inches wide. It was impossible to pass the finger above the diseased area. The mass was cut through into perfectly healthy tissue and dissected up through the fat and down to the muscles, exposing the greater and lesser notches, opening the peritoneum and removing about two-thirds of the area. The bowel was brought down and stretched and covered about three-fourths of the whole surface. Dr. King did four operations on this patient, and so far as the removal of the cancer is concerned, feels that one is not saying too much when he claims it to be a successful removal of the growth. The patient almost succumbed during the operation as she is suffering from chronic Bright's disease. She has gained 18 to 20 lbs. Dr. King then dealt with the statistics on this subject.

Dr. Bingham stated in discussing the paper that the original Kraske operation was intended for conditions where the mass was high up in the bowel; it was then able to continue the functions of the sphincter. Of course if there was any involvement of the sphincter, it should be removed. He further spoke of twisting of the bowel in these cases to effect a final cure.

BULLET WOUND OF ORBIT.—Dr. H. A. Bruce stated he was unable to present the patient, as he did not care to tax his strength in coming from the hospital. A boy of fifteen years of age had been practising with a 22-calibre revolver at a target. Two shots had been discharg-

ed, when he examined the revolver, holding it in both hands, looking down at the muzzle pointed towards him. That is all he remembers. On regaining consciousness he walked two miles to town to consult a doctor. An unsuccessful attempt having been made to locate the bullet, the lad came to the city. The bullet had passed through the eyelashes of the lower lid near the external canthus. The X-Ray apparatus at the General Hospital was pressed into service, but it was quite impossible to outline clearly the bones of the skull, although the bones of the extremities could be seen clearly. Chloroform was administered, and with a probe through the opening in the lower lid, entering the orbit and passing along the outer wall of the orbit (the bone being quite bare of periosteum) the bullet was located about one and a half inches in and could be easily moved by the probe. The external opening was slightly increased. With a pair of artery forceps, the bullet was gotten hold of easily and extracted. It was lying just behind the eyeball about the middle of the orbit, probably against the optic nerve. It had grazed the orbital surface of the malar bone and the orbital surface of the greater wing of the sphenoid. There are one or two points of interest as regards the symptoms. The boy could move his eyes except downwards when he had pain. The inferior rectus was pressed upon during contraction and caused the pain. He could see to right of the middle line but could not see to the left of the middle line. The bullet having been removed, it does not now cause him pain to look down. The bullet was considerably deformed.

Dr. Fenton spoke of a similar case of bullet wound, shot from a small calibre rifle at short range. This bullet entered the nose, there being no external wound, passed through the lachrymal bone, entered the orbit, through the great wing of the sphenoid, then through the temporo-sphenoidal lobe, finally lodging in the occipital fossa.

A CASE OF ADDISON'S DISEASE.—Dr. R. J. Dwyer read at considerable length notes of a case of this disease, which presented all the classical features of the disease. It occurred in a man aged 38 years, born in England, a machinist by trade, but on the sea for a good deal of his life. He was admitted in St. Michael's Hospital, December 22nd, 1899. As regards his family history, she father is living but the mother is dead. She was sick six years with spinal trouble before her death, which suggests tubercular disease. In reference to personal history, he weighed 146 lbs. on admission, but used to weigh 160 lbs. Five years ago he was in Australia; malaria on return to England; in bed 9 weeks. Was always subject to headaches. Drank heavily for several years; also smoked. Present illness began with nausea and vomiting in the morning. He would feel better during the day. Headache principally in the morning, which would disappear when out in the open air. Breathlessness and fluttering of the heart appeared. Shortly after Christmas, 1898, his wife first noticed any change in color. Skin became dark principally the face and hands. This contrasted with the body which was quite white. He continued at his work until June when he had to give up on account of weakness which increased. After he discontinued work was able to go about for two months before coming into the hospital in December.

Sometimes he would have attacks of diarrhoea alternating with constipation. He was very languid and drowsy during the day and restless at night. Temperature sub-normal. Pulse varied from 72 to 100. The yellowish-brown color was very marked on the neck. The conjunctivæ presented marked contrast being comparatively pale. The discoloration was mostly marked on the face, back of the neck, perineal sulcus, scrotum and penis, which was quite black. The mouth presented an interesting condition. The presence of very black pigmentation on the inner surface of the gum, and also and still more striking on the under surface of the tongue, was an interesting feature. The whole under surface of the tongue was absolutely black. Respirations ran at twenty. The patient died on the 29th of December, apparently from syncope. At the post mortem examination, tubercular areas were found in the lungs, liver, and a solitary tubercular ulcer in the small intestine situate about three or four feet from the ileo-caecal valve. There was some enlargement of the spleen. The right supra-renewal capsule was very hard and dense and the appearance of the normal gland was destroyed. It was apparently converted into a hard fibrous mass. The left one was increased in size. Sections of each were made and caseous deposits found abundantly. Dr. Parsons who made the sections stated there was most extensive tuberculosis present.

GEORGE ELLIOTT,

Recording Secretary.

TORONTO CLINICAL SOCIETY.

Stated meeting March 7th, 1900.

Fellows present:—Aikins, Peters, Bingham, King, Primrose, Small, Trow, Lehmann, Oldright, Thistle, Fotheringham, Rudolf, Silverthorn, Pepler, Fenton, McCollum, Dwyer, Boyd, Hamilton and Elliott.

Visitors:—Dr. Clarence Starr and Dr. Spence.

Nominations:—Dr. C. B. Shuttleworth and Dr. A. Y. Scott were proposed by Drs. Fenton and Pepler.

CASES ILLUSTRATING OPERATIVE PROCEDURE IN TUBERCULOSIS.

DISEASE OF KNEE.—Dr. A. Primrose presented two patients, one a young man of nineteen years and the other a boy of eight, showing different methods, the first one, complete excision and the second a case of erosion. The first patient came under his care in July, 1894. Three years prior thereto, great swelling occurred in the knee joint and patient was treated at that time by rest and the application of a Thomas' splint. Became apparently well under this treatment until February, 1894, when the trouble again appeared. Under somewhat similar treatment he became gradually worse, and at the time he came under Dr. Primrose's

care, there was very advanced disease of the knee joint. At that time the knee was flexed at an angle of 100 degrees, with little or no pain unless on manipulation, when there was a slight amount of pain; there was also marked atrophy in the muscles of the thigh and leg—very pronounced symptoms of extensive tuberculosis of the knee joint. He was treated by rest and the Thomas' splint; improved for a time, but during the next two months improvement did not continue and abscesses formed. He again came under the surgeon's care in February, 1899, and at that time he had sinuses in connection with the knee joint. One sinus existed in the popliteal space and one to the outer side of the joint, both discharging pus, and there was a great deal of thickening about the synovial sac of the joint. The operation was an extensive one. In the first place the surgeon concluded that the best thing to do, was where one found the joint stiff, to attempt with a certain degree of force to break down the ankylosis; because ankylosis which occurs during the course of the disease of the knee is usually not firm and readily yields. This was done above and below the joint. The surgeon here exhibited the specimen of bone removed, which consisted of the lower end of femur and upper end of tibia, each about an inch in length and the posterior part of the patella. When broken down it fractured obliquely, exhibiting a carious cavity showing tuberculosis material. The operation was commenced with a U-shaped incision, the large flap being turned up, the joint exposed and the mass of diseased bone removed. Excavations were scooped out in both tibia and femur until healthy bone was reached. Then the operation was concluded by dissecting away all the tuberculosis tissue about the joint. There was considerable bleeding after the operation, and the general condition of the patient was anything but satisfactory. The anterior wound healed up well. In order to secure union and osseous ankylosis, wiring was performed on one side alone, because of the lowness of the patient under the anesthetic. There is just the amount of flexion one would wish to have in these cases. There is firm ankylosis so that he can put the foot firmly upon the ground. In December last, he had a sinus in the popliteal space and the surgeon determined to enlarge it. A small cavity in the bone was found which was curette. The anatomical relations were fairly confused of course, the external popliteal nerve being somewhere near. The sinus was stretched forcibly and the nerve was implicated and an extreme neuritis was set up, with great pain on touching the sinus, and complete paralysis of parts supplied by this nerve. Subsequently this returned. He had re-action for faradic electricity. Whilst at first it took thirty-five milleampieres to cause any contraction, the muscles now re-act to less than twelve, and from Dr. Dickson's experience that gradually decreases in the strength of the stimulus. This necessarily gives an extremely favorable prognosis, and in all probability he will recover in time most of the functions of the external popliteal nerve. When he stands up you can see how firmly he can come down upon the foot; he has firm bony ankylosis; and the case illustrates how much can be accomplished in tuberculosis trouble in the knee joint; he will have a good useful limb. Sensation has returned but he cannot extend the toes.

The second case exhibited was that of a boy about eight years of age, and was one of those cases where there is tuberculosis of the synovial membrane, and apparently confined to the membrane; no disease in the joint itself. This had become progressively worse, and he had been under treatment for considerable time,—rest extension &c., but did not improve. In May, 1898 the surgeon performed the operation of erosion, as described by Mr. Cheyne, viz.,—an H-incision—two vertical, an outer and an inner incision and a cross incision. The patella was sawn across and two flaps turned up and down, thus exposing the whole of the joint without any difficulty. The synovial membrane was pulpy and very much thickened, to the extent that it was impossible to make a clean dissection of the anterior part of it. The specimen was shown to the Fellows. The lateral ligaments were examined and tuberculous disease found there and the greater part of the crucial ligaments were also destroyed. The joint was thoroughly cleaned out, as regards the tuberculosis disease. Then the wound was stitched up and plaster of paris splints put on. The first dressing was done six weeks after, the splints removed and the stitches taken out; the wound had healed by first intention. It was kept in plaster for considerable time, and now the boy is going about having a good use of the joint. Dr. Primrose had expected ankylosis, but the boy has a good degree of movement. He can walk wonderfully well which is an interesting feature in the case. The limb on the affected side is half an inch longer than that on the sound side. This the surgeon thought to be due to irritation at the line of the epiphysis, causing increased growth not going on to disease or destruction. This is an extremely interesting point in the case. Speaking again on the first case, Dr. Primrose stated there never were any reactions to galvanic electricity. It reacted to faradic electricity readily.

DISCUSSION.

Dr. Bingham thought that Dr. Primrose ought to be congratulated on both results. In the first case he would have been tempted to perform an amputation at once. The fact of having secured such an excellent result by incision should be encouraging. He had come across more than once lengthening in these cases and thought the version given by Dr. Primrose the correct one.

Dr. Clarence Starr stated he had followed the case from the beginning, speaking of the latter one, and his angle of extension is now 165 degrees. It is a question whether that is not increasing until it goes on and gets in the neighborhood of a right angle. He should be watched carefully to see if such occur, and if so he should be put on an apparatus to get the angle extended again. Excision in a child of that age is not to be desired if it can be avoided. He has seen all the way to 11 inches of shortening follow, and in a case like that it would have been better to have performed an amputation. He thought the final result in this case excellent.

Dr. Fotheringham spoke regarding the lengthening of the leg in the second case and said it could be proved from other cases that the length-

ening occurred in those in which the disease occurs in synovial membrane. If it occurred in the bone in the neighborhood of the epiphyseal line, you would inevitably have shortening.

Dr. W. H. B. Aikins asked whether the patient in the first case would not have been better with the leg off. Is it better to have a stiff leg than a good artificial one.

Dr. Rudolf asked in regard to the electrical reaction in the first case did the galvanic current cause no contractions.

Dr. Primrose: It will react to galvanic, but did not cease to react to Faradic electricity. If the nerves are paralyzed, it reacts to galvanic, whilst if the nerves are present, it will react both to Faradic and galvanic.

Dr. Primrose, in reply: With regard to Dr. Aikins' question, he would prefer to have a limb which was attached permanently, than one which would be constantly wearing out and giving trouble through misfit and such like things. A firm, stiff, stable limb—firm ankylosis, he considered better than an artificial limb.

SERIOUS WOUND OF SKULL AND ACROMION.—Dr. William Oldright presented a boy of twelve years, who had been attacked in September last with a knife, the blade of which was about 13 inches in length, having a handle of five inches in length. He had a triangular piece of bone cut in the vertex about $1\frac{1}{2} \times 1\frac{3}{4} \times 1\frac{3}{4}$ inches and a number of other cuts, nine in all, mostly in the occipital region. There was also a large wound through the acromion process. The strength of the shoulder joint is not impaired in any way.

APPENDICEAL ABSCESS.—Dr. Oldright also exhibited this specimen removed after 11 successive attacks of pain and colic.

SYMPOSIUM ON HYSTERIA.—Dr. J. T. Fotheringham read notes of a case of hysteria occurring in a young woman of 18 years. The family history is insignificant. The eldest child of the family is living—an imbecile—aged 23 or 24 years. The others died young of tuberculous meningitis. Two months before the attack of hysteria, the patient had suffered from rheumatism with swelling in front of the ankle, then in the other ankle, and then in other parts of the body and also in the shoulder joints. Her present condition appears to have developed gradually. As regards the respiratory system, the breathing was occasionally stertorous on inspiration. Dr. Fotheringham asked the Fellows in regard to the type of respiration in these cases. Circulatory system, normal, as was also the genito-urinary system. As regards the nervous system, ankle clonus was especially marked in the right leg, an unusual symptom, because it is not usually seen in hysterical cases. Peculiar postures were adopted while in bed; and all speech was conducted in whispers, jerky in character as if sometimes at a loss for a word. As regards the special senses, she apparently suffered from severe photophobia. When the windows were darkened, she would be noticed watching from under the bed-covering. Hearing was abnormally acute. The treatment consisted in

removal from home to a private hospital; hyoscine, and valerianates of iron, quinine and zinc; plenty of good food. She has been well for some months and now works in a shop. Points noticed in this case: the absence of the hysterical fit; no serious moral perversion; and third, no delusions.

Dr. W. H. Pepler reads notes of a case of what he considered to be hystero-catalepsy in a child five years old. There was nothing especially interesting in the family history, except that the father appeared to be decidedly neurotic. The child was a full-term child; walked at 10 months; talked at 9 months. An attack of measles noticed at two years of age, no complications; no sequelæ. Never suffered from indigestion nor constipation to any extent. About a year ago the child was taken suddenly with an attack of stiffening of the limbs, both arms and legs, and blueness of the face. She is far advanced for her age, intellectually. More like a child of 15 years. Present attack came on about 6.30 p.m. one day immediately after being refused some article at the tea-table. She fell forwards with her head on the table. On the doctor's arrival, she gave the appearance of a healthy child apparently asleep, eyes closed, muscles all relaxed, eye-balls turned up in the natural position of sleep; pupils slightly dilated, but equal, responding slightly to light. The pulse was regular at 80; respiration at 17. The mouth was opened quite easily; tongue clean. There was no urine passed during this condition. On raising the arm it would be kept in that position from 20 to 30 seconds, then it gradually fell. An anæmia was given and the child ordered to be kept quiet. Two hours afterwards it awoke.

Dr. W. B. Thistle said he had been impressed with the presence of ankle clonus in the case of Dr. Fotheringham, as many authorities seem to think that that is not consistent with the diagnosis. He recited the history of several cases and dwelt on the difficulty of diagnosis.

Dr. Rudolf confined his remarks to prognosis and stated it was necessary to be careful in diagnosis to eliminate the presence of organic disease. He recited several cases illustrating this, which also had a bearing on the prognosis. As regards death intervening, the prognosis was nearly always favorable. Recovery was not so good.

Dr. Dwyer emphasized the importance of eliminating organic disease and gave several apt illustrations proving the necessity of employing great care in excluding the organic factor. He was inclined to think also that the reports of a rise of temperature was not substantiated with solid and accurate facts.

Dr. Fotheringham referring to the question of age, hysteria coming on after puberty is not recovered from to the same extent as that occurring before that age. The medicinal treatment was not of much use; the suggestive treatment was the best. Hypnotism especially in children was of no service. He closed the discussion with an allusion to the diagnosis.

GEORGE ELLIOTT, *Recording Secretary.*

The Canada Lancet

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EDITORIAL.

THE PROVINCIAL UNIVERSITY AND MEDICAL EDUCATION.

The peace or state of armed neutrality that has obtained for the past ten years or more in medical teaching circles in Toronto has been broken in upon, and the apple of discord has been cast upon the table once more. This time it is in the shape of a Bill introduced into the local Legislature by Dr. McKay, at the instance of the Corporation of Trinity Medical College, who have felt that their relations with the Provincial University are unsatisfactory. Among those who for some years past have held strongly partisan views, a good deal of bitterness has been developed, if we may judge from interviews and letters appearing in the public press, and a frame of mind displayed which cannot be conducive to a clear and judicial conception of the best interests of medical education in the Province. There is no evidence in the situation, however, that the memory of past feuds or present misconceptions of each other's intentions and desires need cause an impassible chasm between institutions whose interests are really identical. We believe too that on all sides, in both the schools chiefly con-

cerned, there exists a genuine desire for the advancement of medical learning, even though they have not always seen eye to eye as to details. Evolution has been silently at work, and in the past fifteen years conditions have so radically changed, especially by the developments in chemistry, physiology, bacteriology and pathology, that schools which formerly did work as advanced as any of the time find it now difficult from the ordinary sources of revenue to provide the laboratory facilities necessary to maintain their high relative standard. It has thus been found in all parts of the world that subjects pertaining to the science as distinguished from the art of medicine can be most satisfactorily taught only with the facilities offered by large private endowments or by state aid. A review of the condition of affairs in Germany, Britain, the United States, or any part of the world, confirms this position. In addition, the idea of consolidation, unification, combination, is abroad as never before, in the Empire, in commerce, in the church, in education. In fact Toronto University, since the adoption of the principle of federation some years ago has taken a principal share in the education of public opinion in Ontario in this direction.

The latest phase in the evolutionary process above referred to is the federation of Trinity University with Toronto, soon we believe to be accomplished, and from this as an immediate corollary arose the necessity for action on the part of Trinity Medical College. As to what that action might best have been there may be room for a difference of opinion. That Trinity Medical College has vested rights and interests that have suffered as the result of the legislation of 1887, by which the present medical faculty of the university was constituted no reasonable person will be disposed to deny, rights which the government at that time promised should be safeguarded. But we do not believe there is any disposition on the part of either the Senate of Toronto University or the Legislature to deal unjustly or to act unfairly in the matter. So while we admit the righteousness of many points in the position taken by Trinity we do not find ourselves in accord with the diplomacy of the measures proposed to remedy the trouble.

While there is much abstract justice in what is asked, the end sought in the McKay Bill would not, in our opinion, be that most devoutly to be wished, but would be justifiable only after a failure, by fair mutual concessions, to arrive at a more satisfactory settlement. The only possible alternatives that present themselves to overcome the difficulties are three,—either affiliation, effective in spirit as well as in letter, federation or amalgamation.

First, as to affiliation, the quarrel between the correspondents is

mainly meant to prove on the one hand that Trinity Medical College already enjoys affiliation, and on the other to prove that it was nullified by subsequent legislation which erected the old Toronto School of Medicine into the Medical Faculty of the University. The proposed legislation would seem to indicate that in the minds of its promoters the first of these three alternatives was to be preferred. This implies an equalization of the status of the teaching bodies concerned in relation to the Provincial University, which would necessarily mean the disestablishment of the medical faculty of the University. Such action would not in our opinion best subserve the interests of medical education, and would be contrary to accepted views as to the increasing scope of the rights and duties of the state with regard to the public health and all that concerns it. The main thing in favor of affiliation is that it would place all the medical faculties concerned on a footing of equality with reference to the Provincial University—certainly a most just and reasonable contention on the part of Trinity—but can this object not be attained quite as fully and as readily on a basis more in keeping with the best interests of medical education, viz., by a fair amalgamation of the teaching bodies concerned as the medical faculty of the University?

Affiliation could only be, as it has been in the past, a temporary expedient, liable at any time to be thrown out of gear by changing conditions in either of the contracting institutions, and would only tend to perpetuate rivalries and jealousies that have formed so unfortunate a line of cleavage in the profession in this city and province.

As to federation, it would not seem technically possible for an institution not in possession of degree-conferring powers to resign them, and we believe the relations of Trinity Medical College to Trinity University are not such as to make federation in arts imply federation in medicine.

As to the third alternative, amalgamation, we do not hesitate to say that it is in our own opinion the best solution of the existing difficulty; and more than that, that is the one thing needed to firmly establish the teaching of medicine in Ontario on a permanent and satisfactory basis. There can be little difficulty in the way if the question is approached by both parties to the scheme in the broad and statesmanlike temper displayed by Professor A. H. Wright in the statement of his views recently made in the public press. The institutions concerned would profit by the concentration of energy and the lessening of expense which would follow. The beneficial effects of rivalry with other institutions would still be felt in their relations with colleges outside the city, while the divisions that have lain beneath the surface and spoiled the bloom of the friendship that

should exist, and have existed, in hospitals, medical societies and general practice, would cease.

The undoubted advantages of Toronto as a centre for medical teaching could then be realized to the fullest extent, with an institution supported by a united profession and under the control of, and fostered by, the provincial University. The postgraduate courses for which so many have at present to expatriate themselves would become possible at home.

We look upon the present period as a crisis in educational matters, one of the gravest that has occurred in the province in many years, big with possibilities for either good or evil to the profession, to the public, and to the progress of medicine. It is the duty of all concerned to lay aside self interest, personal animus and partisan views and approach the question in the broadest spirit of conciliation, fairness, goodwill, and mutual respect, looking only to the main point, a permanent settlement of the question of medical education in Toronto and in the Province.

H. B. A., J T. F.

CANADA SHOULD SEND A FIELD HOSPITAL TO SOUTH AFRICA.

At the conclusion of the lecture delivered by Surgeon-Major Nattress before a largely attended meeting of the Canadian Military Institute on March 26th, it was moved by Lieut.-Col. Mason, seconded by Lieut. Col. C. Denison, and unanimously carried that the desirability of immediately equipping and forwarding a Field Hospital for service in South Africa be urged upon the Dominion Government.

This is a somewhat belated move in the right direction, and one which we believe will meet with general approval. Other branches of the Canadian Militia service are represented at the seat of war—infantry, mounted troops and artillery—about three thousand in all, or the number to which, according to the establishment, one Field Hospital should be detailed. Had the proposed re-organization of the medical service of the Canadian Militia been completed before the unfortunate circumstances leading to the departure of Major-Gen. Hutton occurred, it is probable that a Field Hospital would have been sent with the other Canadian contingents; but, in the chaotic condition of the medical department, though all recognized the desirability of action being taken no one took the initiative.

The personnel of a Field Hospital consists of five officers and forty non-commissioned officers and men, and the equipment required is forty tents, with six waggons for transport, etc. The expense of fitting out and

maintaining a Field Hospital would, therefore, be trifling as compared to the outlay made for other branches of the service represented, and we have no fear but that its officers and men would render as valuable and acceptable service to the Empire as their brother Canadians in the combatant ranks.

The experience gained by the officers and men in active service would be of inestimable value to the militia medical service by giving practical training to so many of their number.

The great importance of the medical department in time of war should impress those in authority with the necessity of taking this means of stimulating the public interest in, and increasing the efficiency of a branch of the service that has been sadly neglected, and which, in case of being required for active service we fear would be found entirely unprepared for the duties required of it.

ONTARIO MEDICAL ASSOCIATION.

The next annual meeting of the Ontario Medical Association to be held on June 6th and 7th in the Normal School buildings, Toronto, promises to be one of unusual interest. The acting President, Dr. A. H. Wright, the secretary, Dr. H. C. Parsons and the various committees are working hard to insure the success of the meeting. We are pleased to notice that the subject of Interprovincial Registration is down for discussion at one of the general sessions. As this is a matter of vital interest to the profession, not only in Ontario, but in the whole Dominion, it is particularly desirable that a full and free interchange of opinion be had in reference to it. As the Ontario Medical Association will be taken to voice the feeling of the doctors in this province regarding the scheme, any pronouncement they may make will have much weight in

- determining the character and scope of the proposed legislation. The subject will be introduced by Dr. J. A. Williams, of Ingersoll, and Dr. Roddick, of Montreal, and others, who have been actively interested in the proposed formation of a Dominion Council will take part in the discussion.

Dr. Luke Teskey, of Toronto, will open the discussion in surgery, and Dr. Llewellys Barker, of Baltimore, in medicine.

Those who intend to present papers are requested to notify the secretary at an early date.

EDITORIAL NOTES

In *The American Journal of Obstetrics and Gynæcology* Edward D. Davis, Professor of Obstetrics in Jefferson Medical College, furnishes an article this month on the following subject:—"When shall the uterus be douched, and how shall it be done?"

He points out the two dangers liable to follow this practice to be 1. the danger of sepsis. 2. the danger of hæmorrhage. Yet these two conditions are the very indications for its use. If a uterus be large or flabby or if the patient be nervous, intra-uterine manipulation may cause hæmorrhage. He points out the value of intra uterine douching in post partum hæmorrhage. He speaks of the old treatment of washing out all the clots with hot sterile water as best, this to be followed by an intra-uterine tampon of iodoform or sterile gauze. Sepsis is produced by the use generally of non-sterile instruments or hands. He points out the difficulty of obtaining perfect asepsis in obstetric practice. When the septic condition exists he advocates curetting, and douching with sterile water or saline solution, followed by the use of the intra-uterine iodoform tampon.

The danger of hæmorrhage and sepsis together in cases of incomplete abortion would indicate as little manipulation as possible.—D. G. G.

Mrs. Mary Baker Eddy, the head of the Christian Science cult, has, it is announced, given her son a cheque for \$10,000 and a house worth \$15,000 as a Christmas present.

TRINITY MEDICAL ALUMNI ASSOCIATION.—Theses in competition for the gold medal offered by the above named association should be signed by a pseudonym and forwarded to the secretary, Dr. George Elliott, 129 John St., Toronto, before May 1st, 1900.

ANOTHER GIFT TO MCGILL.—It is stated that Sir Wm. McDonald has made a donation of \$200,000 to the mining and chemical departments of McGill University. The splendid munificence and public spirit shown by the millionaires of our sister city in the support of their educational and charitable institutions has forced the admiration of everyone having these interests at heart, and sets an example worthy of the emulation of the wealthy men in our own city.

MEDICAL DINNER.—The Toronto Clinical Society hold their annual dinner on April 18th at the Albany Club. The president, Dr. G. A. Bingham, takes the chair at 8 p.m.

BINIODIDE OF MERCURY.—In Dr. Goldsmith's article in the last number of the LANCET, page 377, owing to a typographical error bisulphide of mercury—1 in 2,000 is recommended in suppurating middle ear. This should read "biniodide of mercury."

VERATRUM VIRIDE.—We are in receipt of a pamphlet from the Lyman Bro's Co'y, Ltd., agents for Canada, written by W. C. Norwood, M.D., of Cokesbury, L. E., to extol the virtues of *veratrum viride*, and of his preparation in particular, Norwood's Tincture as it is called in the United States. Nothing that he says changes our opinion of the virtues of the drug, as we look upon it as one of very great value in the right sort of cases. He claims too much for it, for instance in puerperal convulsions, where it is almost certain to do harm, and in which its use is based on purely symptomatic grounds, and not on intelligent pathology. We are bound to say, too, that his evidence is but little to be relied on if his knowledge of the drug is not better than his knowledge of Holy Scripture, for he speaks of the remedy as standing "like Saul of *Tarsus* a head and shoulders above its fellows."

He is Half Right.

A remarkable editorial in the Interstate Medical Journal reads as follows:—

"Medical men the world over should view with pride the excellent record which is being made by the medical department of the British army in the South African campaign. No matter how much light the future reports of the military state of affairs may be shed on the attitude of the British commanders in this campaign, no matter how much aspersion may be shown by pro-Boer sympathizers for the blundering English in their quagmire of mistakes in the military conduct of matters of vital importance during this South African campaign, a bright effulgence will ever be cast upon the noble work of the medical men concerned in the care of the injured, the sick, and the dying on the field and in the hospitals of South Africa. It is the very same thing over again, just as it was at Majuba Hill: 'tis the medical corps which alone deserves credit. This is true of the present campaign, that the attention given to the sick by their protectors, the medical men, is far better than that given to the well men by their protectors, their commanding officers. This should not be. Look to it, English generals, that your men are not led into death-traps time and again; have a care that the laments of thousands of grief-stricken wives, mothers and daughters shall not ring through Albion for years to come, and see to it that posterity shall not curse your names instead of venerating them, as you would have them do. The whole fabric of the English army shows evidences of decay, with the exception of the intact medical corps, which is doing good work, has always done good work, and will always do good work, handiapped though they may be by the blunders of the other departments."

This critic like so many others in the present war in South Africa has come to grief through having unburdened his prophetic soul too soon. Possibly recent events will tempt him to revise his criticism of British officers and soldiers and so save his reputation as a seer. We would humbly suggest that he then turn his faticidal genius to the military operations in the Philippines and with the nearer and clearer view he might be expected to have of affairs at home re-establish his lost fame. In the meantime we must congratulate him on his appreciation of the Royal Army Medical Corps. His ominous warning to the British, however, is almost sufficient to curdle ones' blood.

A Brilliant Scheme.

For impertinence and brazen effrontery we commend the following scheme for securing patronage for a private hospital in Michigan, an appointment to the "staff" of which was offered to a surgeon in this city. The surgeon was to act as an agent for the hospital to secure patients, and fees were to be divided between him and the hospital.

As a further inducement the hospital authorities offered to write as follows to such persons as the doctor might wish :—

"DEAR SIR OR MADAM,—We beg respectfully to call your personal attention to the fact that we have just recently elected and appointed Dr. _____ of your place to be a Visiting and Consulting Physician and Surgeon on the Medical Staff of our Hospital, on account of his excellent medical qualifications and professional standing. We have no hesitation in recommending him to you, and should you, any member of your family, friends or acquaintances become sick and desire medical treatment, we wish to highly endorse The Doctor and recommend you to patronize him. Should you at any time desire the services of our Hospital for yourself, friends or acquaintances, The Doctor will make arrangements with you so that you can come here for treatment.

We have a first-class, up-to-date surgical Hospital, with every home comfort and a Medical Staff of eminent Physicians and Surgeons, and our charges are less than anywhere else you may go. Trusting that you will bear these facts in mind, believe us to remain."

If the doctor were not sufficiently dishonorable to submit to this, provision was made for his qualms of conscience by the following note appended to the letter :

"The above is a type-written copy of a letter we send out upon our regular business letter-heads (twelve to each certificate-holder) recommending and endorsing those members only *who have paid for their certificates of membership*. Should any member want more than twelve of these letters sent out in their behalf, they must send us postage stamps covering same. Of course, it is optional for each member to say whether

or not they wish any of these letters of endorsement sent out in their behalf, as some will claim it is against the unwritten laws of medical ethics."

In addition to dividing the spoils and giving him such a flattering recommendation, this accommodating corporation grants a lithographed certificate of membership to the doctor 17x22 inches and of such quality as he may wish to pay for—\$5, \$7.50 or \$10.00—the proceeds from which "are devoted to the maintenance of the hospital for the benefit of us all."

PERSONAL.

Dr. D. Campbell Meyers, of Toronto, Superintendent of the Deer Park Hospital for Nervous Diseases, and one of our associate editors, was recently married to Miss Burson, daughter of the late Rev. George Burson, of St. Catharines. Dr. and Mrs. Meyers spent their honeymoon in Atlantic City.

Dr. B. J. Hazelwood, of Pittsburg, Kansas, was married on March 1st to Miss Lulu B. Rehder, of Paris, Ont. Dr. Hazelwood was gold medalist at Trinity Medical College in 1899.

THE LANCET offers its congratulations.

Dr. Llewellys Barker (Tor. '90), who has made an enviable reputation for himself at Johns Hopkins, has been appointed Professor of Anatomy in Chicago University.

Dr. H. E. M. Douglass, of Kingston, Jamaica, a graduate of Queens University in 1897, was mentioned in despatches by Lord Methuen for an act of bravery at the battle of Magersfontein which should entitle him to recommendation for the Victoria Cross. He was surgeon to the Black Watch, and at the famous battle learned that Capt. Gordon, of the Gordon Highlanders, on the advanced firing line, had been badly wounded. He decided to attempt to succor him. He secured a stretcher, and crawling along the ground dragging the stretcher behind him, reached the captain, and dressed his wounds. Several others lying near were also cared for, and the doctor made his way to the rear without injury, but just then a bursting shell fell near him and a piece struck his face, smashing his jaw. The doctor spent some time in a hospital, but is now in England, having been invalided home.

Dr. Jabez Elliott, late of Gravenhurst Sanitarium, who has been in Britain and elsewhere at post graduate work, has gone, under the auspices of the Liverpool School for the Study of Tropical Diseases, to spend six months, with two other medical officers, in one of the most poisonous districts of West Africa in the study of malaria and other such disorders. This is a most important part of Great Britain's work as the great coloniz-

ing power of the world, and the colonies have in Dr. Elliott a most worthy representative in such an expedition.

Dr. J. L. Turnbull, formerly of Clinton, has taken up practice in Goderich. Dr. Turnbull has recently returned from Europe, where he had spent about a year and a half doing post graduate work.

We are pleased to learn that Dr. C. H. Brereton of Chesley, a former house surgeon in the Toronto General Hospital, has recovered from his recent severe illness. Dr. Brereton had an attack of appendicitis, requiring operation.

Dr. D. Gibb Wishart has been appointed representative of Trinity Medical College on the Senate of Toronto University.

Dr. Harry Morell (Trin. '92), who has been practising some years at Slayton, Minn., has secured an appointment as assistant surgeon in the American army at Manila.

Dr. Thomas Bradford Richardson, Demonstrator of Anatomy, Trinity Medical College, was married on April 3rd to Miss Anna Coad Butland, of Toronto. The LANCET tenders congratulations.

OBITUARY.

Dr. Richard King, of Peterboro, one of the oldest and most prominent physicians in Eastern Ontario, died on March 27th, after an illness lasting some months. The deceased, who was 58 years of age, was born in Longford, Ireland, and was the son of John King, L.L. D., at one time principal of the Peterborough Grammar School.

Dr. King graduated at McGill College in 1867 and began practice at Baillieboro, Ont., removing to Peterboro in 1879 where he followed the duties of his profession until the time of his death.

His health began to fail about a year ago, when he developed diabetes with later tuberculous infection of the lungs, so that for some months past his condition has been regarded as hopeless.

In the death of Dr. King Peterborough loses one of her best citizens and our profession in this Province one of its brightest ornaments. He possessed the respect, confidence and affection of the community to a degree seldom attained except by the most successful members of our profession. He was held in the highest esteem by his brother physicians so that his early death is deeply deplored by all.

Dr. King leaves a widow, three sons and one daughter. The eldest son Dr. D. C. King graduated at Trinity University last year and practices at Fairgrove, Mich. Another son, Mr. Lionel King, a fourth year student at Trinity Medical College is the popular vice-president of the Ontario Hockey Association.

A sad circumstance in connection with Dr. Kings' death was the death of Mrs. Kings' father, also a physician, on the same day.

The deepest sympathy is felt for the family.

Dr. Alex. N. Barker, of Fenwick, Ont., one of the most successful practitioners in the district, was instantly killed on March 25th. He was returning from Rosedene when his horses ran away and on crossing the railway track the buggy was struck by a C. P. R. express. The deceased, who was 29 years of age, was a native of Scotland and a graduate of Glasgow University. Seven years ago he married Miss Sheldon of Dundas.

We regret to announce the death of Dr. G. E. Coultehard, one of the most prominent practitioners of Frederickton, N. B.

Much sympathy is felt for Dr. H. C. Burritt, of Toronto, in the death of his son, Mr. Alan S. Burritt, at Kimberley, South Africa. Mr. Burritt was serving with the 12th Lancers, and in his last letter dated Jan. 27th was quite well. He was an ardent military man and had formerly been for five years in the North West Mounted Police, and later a Lieutenant in the Prince of Wales Dragoons of Peterboro'.

CORRESPONDENCE.

ONTARIO MEDICAL LIBRARY ASSOCIATION.

Editor "CANADA LANCET":

April, 1900.

DEAR SIR,—A short time ago, by request of the Board of Directors of The Ontario Medical Library Association, I mailed a circular letter to a large number of physicians in this city and throughout the Province, asking if they approved of application being made to the Legislature for an annual grant to the Library Association to enable them to "purchase, circulate and preserve the latest medical works." In answer to this letter over 1,000 practitioners have appended their signatures, expressing their approval of the petition. A large number have asked for information in reference to the library, which time will not permit me to give by personal letter. If you will kindly grant me space in your journal, I will endeavor to give the profession as much information upon library matters as possible in a short letter. I hope that those who wrote me will not consider me discourteous for not replying to their individual letters.

In April, 1887, at the regular meeting of the Toronto Medical Society, a committee consisting of the late Dr. Graham, Drs. McPhedran, Powell, O'Reilly and Wishart, was appointed to take steps necessary for the formation of a medical library for the use of the medical profession. This committee, after a great deal of hard work, succeeded in securing the necessary information, and formed a joint stock company, called The Ontario Medical Library Association, and, under this name, were incorporated by the Ontario Legislature under the Act respecting Libraries. The late Dr. J. E. Graham was the first president, and was most untiring in his efforts to promote the success of the library. He was ably supported by Drs. Wishart, Powell, McPhedran, Nevitt, and the late Dr. J. H. Burns, of Toronto, and by Drs. Arnott and Henderson, of London, Drs. Roseburgh and Mullin, of Hamilton. In a short time a large amount of stock was subscribed, and the nucleus of our present library was

formed. The Toronto Medical Society and the Ontario Medical Association at that time, and since that time, have granted such aid as their finances would allow, and the Board of Directors tender their gratitude for the same.

The council of The College of Physicians and Surgeons of Ontario provided the Association with library accommodation at a rental for some years. As the library developed, and its usefulness became recognized, it was considered wise to open its doors to the whole profession in Ontario. At the present time any physician in the Province is privileged and invited to visit the library rooms in the College building, and to use the books there during his stay in the city. The library is no longer simply a reference library, but a circulating library, and any registered practitioner in the Province may have any book or journal upon application and upon payment of express or postage, and returning the book within two weeks.

A number of physicians have asked for copies of the regulations, catalogue of books and conditions of membership. There are no printed regulations, but, from the Minute Book, I will endeavor to give the information in reference to regulations regarding the use of the library by the profession, and explain to them terms upon which they may become members of the Association. There is also no catalogue, for the simple reason that in order to have a complete list of books in the library in catalogue form, a new catalogue must necessarily be issued each year. Funds of the Association would not permit of this. Members of the profession in the city become members of the Association on paying for a minimum stock of \$15, in five annual payments, and by paying the annual fee of \$2.00 a year. Non-resident physicians may become members on the payment of minimum stock \$15, in five annual payments, and the annual fee of \$1.00 per year. However, as stated above, non-resident physicians may have any book in the library upon application for the same, without being a member of the Association, upon the payment of express charges or postage, and returning the books within two weeks.

It is far from the intention of the Association to make the library of use only to the members of the profession in the city, but their earnest desire that the profession throughout the Province will avail themselves of the privileges we are enabled to concede to them. We are anxious to disabuse the minds of a great many of the prevailing idea that the Library Association is under control of, or is in any way connected with the Council of the College of Physicians and Surgeons. As stated above, the Library Association is a distinct organization and incorporated by the Ontario Legislature. When a petitioner, non-resident in a city desires a book, we would esteem it a favor if he would make application to the librarian of the Medical Library Association, addressing the same to Medical Council Building. Should we have the book in the library it will be forwarded at once, according to the above regulations.

We regret that some should think they are deprived of privileges which are extended to members of the profession in the city. The facts of the case will be understood when they know that the books are the

property of the stockholders, who have paid stock varying from a minimum of \$15 to a maximum of \$500 per member. In this way, nearly \$15,000 worth of books and journals have been accumulated during the last thirteen years. It is now practically impossible to continue to add new books and journals to the library from the subscriptions of new members, most of those who are able and desirous of subscribing having already done so. With the object in view of keeping the library up to date, and providing the profession with the latest medical literature, we have thought wise to petition the Government of Ontario for an annual grant, which will enable us to make the usefulness of the library more widespread than it has been in the past.

Again, in answer to the charge that we are building up a library for the use of the city practitioner to the exclusion of those in the country, I will simply draw attention to the following notice which is hung up in many conspicuous places in the library rooms:—

“This Library is free to all Non-resident”

“Physicians.”

“All City Practitioners are required”

“To pay the Annual Fee.”

I think the necessity for approaching the Government in this matter can easily be understood by all. We are all aware of the fact that the average income of the medical practitioner is not large. I am well acquainted with the conditions which obtain in the country. I am safe in saying that the average physician's income in the country is not more than \$1,500 a year, with truth it can be said that the average income of the city practitioner is not greater. It is practically impossible under such circumstances for the less fortunate to provide himself with everything new which is published. He does well if he is able to provide himself with the necessary books, much less the journals, a comparatively full but still incomplete list of which would cost not less than \$100 a year. It is impossible for those with the largest incomes, even, to properly provide themselves with literature.

We hope that all misunderstanding will be cleared up, and that the profession both in the city and throughout the Province will join hands with members of the Association in endeavoring to place as much medical literature as possible within the reach of all.

I might add that this library, through the kindness of Dr. J. F. W. Ross, the President, in depositing \$100 in the Surgeon General Library at Washington, is able to secure any works in that library for any member of this Association. This is well known as the largest medical library in the world.

Every member of the profession in the Province can help us to secure a grant from the Government by explaining the necessity for such to his local representative in the Legislature.

I am, yours sincerely,

H. J. HAMILTON,
Secretary.

329 Church St., Toronto.

BOOK REVIEWS.

A MANUAL OF SURGICAL TREATMENT.

By **W. Watson Cheyne, M.B., F.R.C.S., F.R.S.,** Professor of Surgery in King's College, London; Surgeon to King's College Hospital, etc., and **F. F. Burghard, M.D. and M.S. (London) F.R.C.S.,** Teacher of Practical Surgery in King's College, London; Surgeon to King's College Hospital and the Children's Hospital, Paddington Green, etc. In six parts. Longman, Green & Co., London and Bombay.

Part I of the manual is now before us. It deals with "the treatment of general surgical divisions including inflammation, suffocation, ulceration, gangrene, wounds and their complications, infectious diseases and tumors, the administration of anaesthetics."

The high standing of the authors entitles us to anticipate a work of more than ordinary excellence and as we examine the arrangement and matter of the first volume we are not disappointed.

This is essentially a book for the practitioner. In their preface the authors make clear that their object is to furnish precise data as to the treatment and especially the after treatment of surgical cases." We have assumed that the reader is familiar with the nature and diagnosis of the disease and we only refer to the pathology and symptoms in so far as it is necessary to render intelligible the principles on which the treatment is based, and the various stages of the disease to which each particular method is applicable." The first four chapters deal with inflammation, acute suppuration, ulceration and gangrene. The classification of ulcers and gangrene appeal to one as being at once comprehensive and simple and special care is devoted to the most modern treatment in all cases.

Chapter V is one of the most interesting and important in the book being a careful treatise on anaesthetics by Dr. Silk. This subject, for some reason omitted in certain recent works on surgery, is exhaustively treated from the preparation of the patient to the choice of anaesthetic, the difficulties and dangers of administration and the after treatment of the patient. The following six chapters treat of the varieties of wounds and their treatment with the affections to which cicatrices are liable. Syphilis is discussed in a chapter of nine pages; in treatment nothing specially new is offered.

Chancroid and tuberculosis are briefly but interestingly dealt with and the book concludes with an excellent chapter of over thirty pages on tumors. Here, as elsewhere the practitioner is pleased to notice the

unusual amount of space devoted to treatment and as a very large and varied surgical experience is drawn upon the methods suggested must command our respect.

The work of the publishers is entirely satisfactory and the size of the volume renders it very convenient from the reader's standpoint.

G. A. B.

THE PRINCIPLES OF TREATMENT AND THEIR APPLICATIONS IN PRACTICAL MEDICINE.

By J. Mitchell Bruce, M.A., M.D., F.R.C.P., Physician and Lecturer on the Principles and Practice of Medicine, Charing Cross Hospital; Consulting Physician to the Hospital for Consumption, Brompton; Examiner in Medicine, University of Cambridge. Adapted to the United States Pharmacopoeia by E. Quin Thornton, M.D., Demonstrator of Therapeutics, Pharmacy, and Materia Medica, Jefferson Medical College, Philadelphia. Lea Brothers & Co., Philadelphia and New York, 1900.

The work is divided into two parts. The first deals with general principles of treatment and contains chapters on the principles of treatment founded on aetiology, on pathology, on the clinical characters of disease, on the clinical course of disease, the proper relation of treatment to disease, means of treatment and the art of treatment. The various subjects are dealt with in a clear, concise and readable style.

The second part of the work contains 23 chapters, illustrating the principles of treatment laid down in part I, exemplified by descriptions of the management of many of the commoner pathological conditions as well as the use of various remedial agents.

The high reputation and wide experience of the author has caused the profession to anticipate with unusual interest the publication of a work by him on the principles of treatment in the hope of having placed before it a scientific though practical guide to the subject. In this expectation a perusal of the book before us will cause no disappointment.

The author strikes the proper note for a scientific treatise by saying that a "knowledge of the causes of disease lies at the foundation of rational treatment" and this idea is kept in view throughout. He shows due appreciation of natural methods of cure by stating as a cardinal conclusion in connection with the first principles of treatment, "that the body as a whole and in each of its constituent parts, possesses and employs, with or without success, certain provisions for dealing with the causes of disease, so as to prevent, arrest or counteract them."

From Dr. Mitchell Bruce we expected something good and we have got it. We know of no work that will give greater pleasure and satis-

faction to the thoughtful practitioner or student whose faith in therapeutics is so often sorely tried owing to the want of a rational explanation for the action of the remedies used. This treatise forms a welcome sequel on scientific treatment to the great advancement made in pathology during the past few years.

H. B. A.

A MANUAL OF PATHOLOGY.

By Joseph Coats, M.D., late Professor of Pathology in the University of Glasgow. Fourth edition revised throughout by Lewis R. Sutherland, M.B., Professor of Pathology in the University of St. Andrews. Longmans, Green & Co., London, New York and Bombay, 1900.

The preface, written by S. W. T. Gairdner, is a fitting tribute to the late Dr. Coats whose patient and conscientious work in scientific observation and research has left a lasting imprint in the minds of those who knew him personally or through his writings.

This edition had the counsel and support of the author almost to the close of his life, and was published under the direction of his chief assistant with the alterations that the advance in the subject has demanded.

Some new illustrations have been introduced and former ones replaced but the general outline of the work remains unchanged. The section on monstrosities has been enlarged and some new illustrations added.

In the introductory remarks to the section on diseases of the blood we find the name myelocyte applied to the ordinary large mononuclear leucocyte with byaline cell body—this is misleading. There is much in this, as in Dr. Coats former volumes, that appeals to one. There seems to be in the writer's mind a constant comparison between healthy and diseased conditions—almost invariably there is some reference to the physiological before the pathological is discussed—a good guide to the student.

Certain conditions in pathology are of fundamental importance, they are constantly before us in one form or another, and no organ or tissue may be considered immune. Such are the vascular changes, inflammation, the degeneration and regeneration. The writer takes up these points in a practical and pleasing manner, gives the points of the case clearly, and introduces experimental work sufficient to give a reality and support to the theories advanced or the facts laid down. Where opinions differ on a point there is a pleasing absence of bias, and the case is fairly argued.

The writer's personal experience was great and there are few discussions to which he cannot add some useful suggestions arising from the study of his own abundant material.

The diseases of special organs are well classified and abundant reference to literature is given at the end of each section.

Throughout, the explanations are clearly and simply given, the illustrations usually good, the argument convincing, all of which make the work most useful to student and physician alike.

H. C. P.

A POCKET MEDICAL DICTIONARY.

Giving the Pronunciation and Definition of the principal words used in Medicine and the Collateral Sciences including very complete tables of Clinical Eponymic Terms, of the Arteries, Muscles, Nerves, Bacteria, Bacilli, Micrococci, Spirilla, and Thermometric Scales, and a dose-list of Drugs and their preparations, in both the English and Metric Systems of Weights and Measures. By George M. Gould, A.M., M.D., Author of "The Illustrated Medical Dictionary," "The Student's Medical Dictionary"; Editor of "The Philadelphia Medical Journal"; President, 1893-1894, American Academy of Medicine. Fourth edition revised and enlarged, 30,000 words. P. Blakiston's Son & Co., 1012 Walnut Street, Philadelphia, 1900.

This little pocket dictionary pronounces and defines 30,000 medical words.

It is gotten up in a very attractive form and it would be hard to compress into smaller space such a large store of useful information.

PROGRESSIVE MEDICINE.

Volume iv, Dec. 1899. Edited by H. A. Hare. Lea Bros. & Co., Philadelphia and New York.

This volume is we think fully up to the high level of its predecessors in the series. Particularly full and free from padding is the article by Stockton of Buffalo, on diseases of the digestive tract and allied organs, liver, pancreas and peritoneum. The chapter on recent physiology is useful and interesting, particularly to the general practitioner whose daily virtue, unless he reads at intervals such a work as Progressive Medicine, quite fails to realize how eminently true, particularly of medicine and surgery, is the old saying, "of the making of many books there is no end, and much study is a weariness to the flesh."

J. T. F.

DISEASES OF THE NOSE AND THROAT.

By J. Price Brown, M.B., L.R.C.P.C., Member of the College of Physicians and Surgeons of Ontario; Laryngologist to the Toronto Western Hospital; Laryngologist to the Protestant Orphan's Home; Fellow of the American Laryngological, Rhinological and Otological Society; Member of the British Medical Association, the Pan American Medical Congress, the Canadian Medical Association, the Ontario Medical Association, etc., etc. Illustrated with 159 engravings including six full page colored plates, and nine colored cuts in the text, many of them original. Philadelphia, New York, Chicago, F. A. Davis Company, 1900.

It has been a sincere pleasure to peruse this volume—the first to issue from a Canadian writer in connection with diseases of the nose and throat. Unlike so many of the newer writers on this topic, the author while endeavouring to cover the subject, which few men can do out of their own experience, has given us a record of his own experience and the results of his observations, and therefore has made a distinct contribution to medical science. He is to be commended in that he has avoided padding his volume with long histories of cases, or with long extracts from other writers, and has arrived at and succeeded in making his descriptions of the various diseases brief, and yet comprehensive and perfectly clear. To the student principally this is of great value.

Many of the illustrations are original, and some of them are particularly fine, notably those of Primrose and Bensley. The illustrations of pharyngo mycosis is the most striking that we have seen. The author has brought the book fully up to date and the chapters on pharyngo mycosis, autoscropy, fibrinous rhinitis are examples of this.

The use of the metric system is a bold but right step. Perhaps it is because of our ancient feud with the French that we find it hard to adopt a system which plainly has so many advantages.

While we have said this much in favor of the volume we must mention at least one error of judgment. It would have been in better taste had Dr. Brown refused to follow the *American* custom in the selection of the titles to be appended to his name and been content to follow his namesake of London fame with a modest three lines. We think too that the index will be found unsatisfactory by many readers.

The F. A. Davis Company are to be congratulated upon the issuance of this the best work thus far published by them upon the nose and throat.

WISHART.

PUBLISHERS' DEPARTMENT.

GLYCERINATED VACCINE VIRUS AND ITS PREPARATION.

BY HENRY WALLACE, M. D.,
Assistant Surgeon St. John's Hospital, Brooklyn, New York.

During the summer of 1898, while acting Major and Surgeon of the Forty-seventy Regiment, New York Infantry, United States Volunteers, application was made to the Surgeon-General of the United States Army for vaccine virus for the protection of the regiment. Within forty-eight hours a supply sufficient to vaccinate the entire command was received from Pocono Biological Laboratory. The virus (glycerinated) was put up in Strenberg bulbs, ten in a package, with an equal number of needles for sacrificing, and heavy orange-wood toothpicks for rubbing the vaccine in.

As a result of such an enormous number of vaccinations a rather large number of sore arms, constitutional disturbances, and a great many men relieved from duty as a consequence were expected.

To our great surprise and relief we had less than half a dozen really sore arms and but very few men laid off from full duty.

The pocks resulting were typical, and the almost complete absence of inflammatory reaction remarkable. To be sure, every man's arm was thoroughly cleansed, the needle flamed, and the sacrifice protected with a small sterile gauze pad held in place by a couple of strips of adhesive plaster, after the vaccination. Men who said they had been repeatedly vaccinated without success responded to the glycerinated virus.

As a result of this experience I have used it since in private practice with equal success.

It gave me great pleasure to accept an invitation to visit the laboratories whence the vaccine came.

Dr. Slee's laboratory is located in the Pocono Mountains of Pennsylvania, a beautiful, rough country, reminding of the southeastern part of Arizona.

A site selected is near a picturesque trout stream, which not only supplies water to the plant but also drink for the cattle.

The building is of substantial masonry, the barn close by, with corrals for isolating the waiting animals before and after the process. The main building consists of a stable, operating-room, packing-room, office, bacteriological and photographic laboratories. The building is finished in hardwood and cement floors throughout, being kept at an even temperature by furnace heat. The stables are always kept in the pink of perfection, ventilation throughout being excellent. The operating-room is large and airy, has a cement floor with central drain, and is kept in condition for the cleanest possible work.

To one side is the table, arranged so that the calf is strapped firmly to it while in the standing position, and then tilted so that the animal lies comfortably on its right side, exposing well the abdominal wall and inner thigh regions. The packing-room adjoins, as also the refrigerating-room where the virus is stored. Upstairs we find the photographic and bacteriological laboratories.

For the purpose of making vaccine, heifers three to six months of age are selected and are isolated for observation for at least a week. Young animals are chosen, for the reason that their skin is finer and more delicate, and also because they are much easier to handle.

When an occlusion is to be performed the calf is led to the operating-room, strapped to the tilting-table, and in a few moments is ready for the operation. The hair is cut very close over the abdomen and upper femoral regions and is then very carefully shaven and scrubbed with soap and water, leaving the skin looking beautifully pink and soft.

The operator and his assistants don their white duck suits and scrub up. All but the prepared portion of the animal is covered with a clean sheet and towels, and then, with a sterile scarifier, a large number of abrasions are made over the bared area. These scarifications are probably an inch to an inch and a half long by an inch wide, and reaching down to the rete Malpighi, just so as not to draw blood. At least one hundred to one hundred and twenty of these are made, the calf apparently not much discommoded.

The inoculation of a sterile glycerine virus is made, avoiding the reproduction of extraneous organisms as always occurs where the virus is carried from animal to animal by large points or spades, as they are called. Shortly after the spots are thoroughly impregnated the calf is returned to the stable.

For the next four or five days, or until the vesicles are well formed, the calf is apparently well and, apart from an occasional elevation of temperature (rarely exceeding 1 degree), has a good appetite and acts perfectly well.

By the fourth or fifth day, as stated before, this virus is collected. The calf is brought again to the operating-room and placed upon the table.

The points that surprised me were the appearance of the vesicles; they were formed along the course of all the lines and cross lines of the scarifications, and the total absence of any inflammatory areola. Here and there, between the scarifications, could be seen isolated and typical umbilicated vesicles. Sometimes the inguinal glands are found enlarged, but there was no pus visible to the naked eye. With a sterile "Volkmann" sharp spoon the vesicular growth is removed from all the scarifications and placed in a sterile jar. This pulp is found to contain streptococci and staphylococci.

The removal of the pulp allows to exude in greater or less quantity, according to the size of the vesicles, serum; "ivory points" are covered with this, allowed to dry and are ready for use.

After all available serum is collected the calf is released from the table and returned to the stable, where she remains for several days; later, the calf is allowed its freedom in a corral and by the end of two weeks is sent home to its owner in prime condition, having spent about four weeks on the vaccine farm.

The further history of the pulp is this: It is weighed, thoroughly triturated with a certain quantity of glycerin, placed in a sterile culture-tube, sealed and stored in a refrigerator. A culture of this glycerinated

virus on agar in a Petri dish show enormous colonies, as said before, of pus-organisms. At the end of the week the number of these colonies is found to be less, so that by the end of a month the material is found to be sterile, showing the germicidal and preservative action of glycerin.

Here, then, let me call attention to the comparison of virus collected on points and the glycerinated virus, and show why the former should not be used when the latter can be obtained.

In the first place, the quantity of virus obtained on a point is uncertain, and in the second place, it is unavoidably infected with extraneous organisms; further, where point virus is obtained, makers are said to wait until the seventh or eighth day of the vesicular development in order to collect enough serum to make the process pay, when by this time it is well infected by pus-organisms.

At the end of the month the glycerinated virus is sealed in tubes or Sternberg bulbs for the market.

Although the Health Board of New York City antedates Dr. Slee by several months in the production of glycerinated pulp virus, still it is to him that the credit belongs of preparing it in quantities large enough for commercial uses.

The United States Army, which has been using the preparation during the present war, is supplied now only with virus in tubes or bulbs, the medical authorities realizing the superior value of a glycerinated virus.

This paper is presented to the profession, feeling that might interest such as were not acquainted with the modern production of vaccine virus.

NAUSEA OF ANESTHESIA.

Nausea and vomiting following anesthetics is sometimes a distressing as well as dangerous condition, and it behooves us to avoid it as far as possible, not only for the comfort of the patient, but for the reason that in serious surgical interferences it may place life in peril.

Says the *Therapeutic Gazette*:—"Blumfield, in the *London Lancet* of September 23, 1899, observes that some of the chief points to be attended to in the avoidance of after-sickness are: 1. Use as little of the anesthetic as possible consistent with perfect anesthesia. 2. Wash out the stomach at the close of the operation when much mucus has been swallowed. 3. In long operations, substitute chloroform for ether after three-quarters of an hour. 4. Move the patient about as little as possible during and after operation. 5. Place him on his right side in bed, with the head only slightly raised. 6. Give nothing but hot, thin liquids in small quantity for at least eight hours after. 7. Do not alter the temperature of the room for some hours. With proper attention to these points, one-third of the patients operated on will be free from after-sickness, and for short operations the proportion will be much higher still. In fact, after all, in administrations up to twenty minutes, or not much longer, sickness will be found to be the exception."

I have for some time given Ingluvin in liberal doses (10 to 20 grains) just prior to the anesthetic, and have been favorably impressed with its

use, and would suggest its thorough trial by the profession.

Dr. E. H. Gingrich, 511 Cumberland street, Lebanon, Pa., especially recommends Ingluvin for the vomiting so frequently experienced by patients coming out of anesthesia.

Prof. Hobart Amory Hare, in *Practical Therapeutics*, writes:—

1. "That chloroform or ether vomiting is probably centric."
2. "Upon the mucous membranes, ether as a liquid or in a vapor acts as an irritant, and causes, when its vapor is first inhaled, great irritation of the fauces and respiratory tract."

Ingluvin is valuable on account of its mildly depressing the sensitive nerves of the stomach, thus lessening the irritation of that organ. The vomiting centres are subdued, with the result that vomiting is controlled.

For vomiting succeeding anesthesia, Ingluvin should be given 20 grains one hour before the administration of ether or chloroform, and immediately after coming out of the anesthesia, one 20-grain powder; to be followed every hour by 5-grain powders, until vomiting ceases. Usually the 20-grain powder will be found effective. Ingluvin is a bland powder prepared from the gizzard of the chicken, and contains nothing which might contraindicate its use in surgical operations as specified above.

It has long been used as a remedy to allay persistent vomiting of gestation with eminent success by many practitioners throughout the world. It therefore is not a new preparation, but simply an old remedy in a new capacity. Some months ago a professional suggestion was made to use it for the nausea of ether. Subsequent tests and their results have warranted its recommendation to the medical profession. Samples will be sent to any physician who wishes to test it in vomiting of anesthesia. Write W. R. Warner & Co., Philadelphia, for a sample.—*From Monthly Retrospect of Medicine and Pharmacy.*

Spring Coughs

Dr. George Brown, eye, ear, nose and throat specialist, of Atlanta, Ga., one of the most widely known specialists and skillful operators in the south, in a timely article in *Moody's Magazine of Medicine*, said: "Nothing is more annoying to a patient than a perpetual tickling cough. Whether the immediate cause be marked or mild, if allowed to continue the results are almost sure to be more or less serious. The paroxysms initiate untoward reflex impressions, augment the local disturbances; and by interfering with the patient's rest depress the vis vitae, making the sufferer readily susceptible to the inroads of other attacks.

As practitioners are aware, tickling coughs are particularly numerous and stubborn during the spring and fall. It is well therefore at such times to prescribe that which will be sure to relieve without unpleasant after-effects. In nine cases out of ten antikamnia and codeine tablets will be found almost a specific. The well-known analgesic properties of antikamnia act excellently and synergetically with the physiological effects of codeine which has a marked salutary selective influence on the pneumogastric nerve, making this combination one of the most valuable in medicine."

SYP. HYPOPHOS. CO., FELLOWS

CONTAINS

- The Essential Elements** of the Animal Organization—
Potash and Lime ;
- The Oxidizing Elements**—Iron and Manganese ;
- The Tonics**—Quinine and Strychnine ;
- And the Vitalizing Constituent**—Phosphorus ; the whole combined in the form of a Syrup, with a slight alkaline reaction.
- It differs in its effects from all Analogous Preparations :** and it possesses the important properties of being pleasant to the taste, easily borne by the stomach, and harmless under prolonged use.
- It has gained a Wide Reputation,** particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs. It has also been employed with much success in various nervous and debilitating diseases.
- Its Curative Power** is largely attributable to its stimulant, tonic and nutritive properties, by means of which the energy of the system is recruited.
- Its Action is Prompt :** It stimulates the appetite and the digestion ; it promotes assimilation, and it enters directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy and removes depression and melancholy ; *hence the preparation is of great value in the treatment of nervous and mental affections.* From the fact, also, that it exerts a double tonic influence, and induces a healthy flow of secretions, its use is indicated in a wide range of diseases.

When prescribing the Syrup please write, "Syr. Hypophos. FELLOWS" As a further precaution it is advisable to order in original bottles.

FOR SALE BY ALL DRUGGISTS.

DAVIS & LAWRENCE CO., LIMITED

WHOLESALE AGENTS

MONTREAL

NOTICE.

The residence in the town of Galt, at one time owned by Dr. Sylvester, now of Toronto, is for sale. The town is one of the best in the Dominion and is surrounded by a wealthy farming community. The residence was specially built for a physician, has all modern conveniences, heated with hot water system and will be sold on the most favorable terms. This is a good opportunity for a good physician as the town is not crowded as many towns are with physicians. Address, J. Melross, Galt.

J. J. GRANT, M. D., Monticello, Fla., says: I find nothing in the materia medica to equal ALETRIS CORDIAL in uterine diseases. I have used it in a very obstinate case, which outstood several important remedies. When I put the patient on ALETRIS CORDIAL every diseased symptom disappeared in a week's trial. I have used it in several cases, and can, therefore, say that it is an active and powerful agent for diseases of the womb.

Glyzine.

We take pleasure in again calling the attention of our readers to the page announcement of The Glyzine Manufacturing Company of Toronto and New York, appearing in this issue. Last month we took the opportunity of referring to this preparation at some length, and we feel that what we stated was but deserved. As a vehicle for administration of otherwise nauseating drugs, and as a means of covering up the taste of such preparations as quinine, chloral hydrate, bromide salts, ammonia chlor. and carbonate, etc., we are sure that the profession will find Glyzine to be thoroughly efficient. It is also an excellent coloring, sweetening or flavoring agent in any mixture, and is misible wth any liquid, (oils and acids excepted).

The Glyzine Company, Church street, Toronto, express their desire to send a sample bottle free to any physician on receipt of card and we are sure that our readers will take advantage of their offer and become thoroughly acquainted with Glyzine. We know the preparation has only to be known to be appreciated.

"Ferrol" is receiving much increased favor from the medical practitioners in general and the public institutions almost without exception are extensively adopting it, and the clinical results as is reported are greatly beyond what was expected "Ferrol" has the support of about 98 per cent of the medical practitioners of Ontario, and approaching similar favor throughout the rest of the Dominion

Medical Sanatariums all using and praising it.

Physicians regard the selection of ingredients of "Ferrol" as perfect and leaving nothing to be desired.

Physicians that have had "Ferrol" under a powerful microscopic view pronounce it the finest Emulsion they have ever seen, and the taste extremely agreeable and that very delicate stomachs meet with no difficulty in disposing of full doses

In the report of the Congress on treatment of Tuberculosis held in Germany during the past year. A combination of iron and codliver oil, such as Ferrol, contains with fresh air give the best results.