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ACUTE HEMATOGENOUS INFECTION OF ONE KIDNEY IN PERSONS APPARENTLY WELL.

BY T. B. RICHARDSON, M.D., TORONTO.

Under this title, a paper of more than passing interest, by Dr. Farrar Cobb, assistant surgeon to the Massachusetts General Hospital, appears in the November issue of *Annals of Surgery*. The subject has proved of especial interest to the writer on account of two similar cases which have occurred in his own practice during the last year—the first, that of a man of about 38, declined operation and is still occasionally subject to sub-acute attacks of pain; the other, a woman of 26, operated on, kidney incised and drained (not removed) has made complete recovery. As Dr. Cobb's paper is very complete, and his cases fully recorded, I shall content myself with as brief, yet thorough, a résumé of it as possible, rather than dwell on my own cases.

After stating that it is not well understood by the profession as yet that persons apparently in good health may suffer from septic infarcts of the kidney (usually due to the colon bacillus, circulating in the blood), Dr. Cobb goes on to show that infection of this kind is of two varieties, in so far as its origin is concerned, viz., ascending, the urogenous type, and infection, from the blood—the hematogenous type. It may take place also through wounds or by extension from other abscesses in the immediate vicinity of the kidney. The infection may be carried, in the form of minute bits of infected tissue, to the kidney and arrested in some of the terminal vessels, or bacteria, circulating freely in the blood, may be deposited in like manner in the kidney.

Recent experimental research seems to prove that the majority of the organisms introduced into the circulation are destroyed before reaching the kidneys, and that while many bacteria are eliminated by the urine, it is unusual for them to lodge in the kidney, if the kidney and ureter are normal. Micro-organisms may be thus excreted without in any way injuring the organ; thus bacteria in the urine of typhoid cases does not necessarily mean renal infection. Sampson, of Johns Hopkins, performed a series of experiments on dogs, in which he tied the ureter of one kidney and injected pure cultures of staphylococcus into the jugular vein. He found that bacteria were eliminated to a certain extent by the urine, but only in those cases in which he tied the ureter did the kidney become infected. Brewer, later, in a series of experiments on dogs, found that not only obstructing the ureter, but bruising the kidney caused infection. In addition to the intestine, the bladder, prostate gland, and the uterus and its adnexa are additional possible sources of bacterial infection of the kidney through the blood. The blood-vessels of the kidney communicate with those of the bladder, aside from the general circulation, through two other channels, the utero-ovarian and the vessels of the ureter itself.

In persons apparently well, the onset is usually acute and without warning. The course of the disease may be rapid, with increasing toxic symptoms, or after an acute onset the patient may go for weeks or months in a septic condition. The very acute cases are the ones which simulate most closely abdominal infections. On the contrary, in a small number of cases infection may manifest itself by slight pain in the back, and long continued fever with or without pyuria, which symptoms may never lead to a suspicion of the kidney.

In advanced stages of renal abscess, it is difficult, if not impossible, to decide whether the infection came through the blood or lower urinary tract. Dr. Cobb cites the histories of eight cases, of which the first one—a fulminating case simulating gastric or duodenal perforation—is particularly interesting:

Rose H., 23 years old, married. Aside from children's diseases her previous history was unimportant. Had been married three years, and but for slight irregularity in menstruation and some leucorrhœa and occasional "nervous attacks" had considered herself well. Had had no children and no miscarriages. Up to a few months before, she was constipated: since then the bowels have been loose, about three movements a day. She had noticed nothing unusual in the character of the stools. For three weeks

previous she had not felt as strong as usual, and had been somewhat drowsy and stupid. She did not consider herself sick, however, and was able to work every day at her occupation, that of a saleswoman. Twenty-four hours before entrance to hospital through accident room, while at work in the store, she was seized with a sharp, stabbing pain in the abdomen, especially on the left side high up, which was so severe that she fainted. The pain increased in severity and became general over the abdomen. The most severe pain was described as starting just below the ribs on the left, radiating into the left groin. She required large doses of morphia during the night. The pain continued with increasing severity, accompanied by hard chills and frequent vomiting. After entering the hospital she had two chills and vomited several times.

Examination:—A fairly well-developed and nourished young woman. Somewhat anemic, evidently very sick. Nothing abnormal found in heart or lungs. The abdomen was everywhere extremely rigid and tender, the greatest amount of muscular spasm, however, was in the left hypochondrium. There was marked tenderness in the costo-vertebral angle on the left. Vaginal examination showed some tenderness and increased resistance on the left of the uterus, but no mass could be felt. Uterus normal in size and freely movable. Temperature 104 deg. F.; pulse, 140; poor quality. Leucocytosis, 26,000. Examination of urine showed no pus, blood or albumin. Neither kidney could be palpated, but attempts to palpate the left kidney caused exquisite tenderness anteriorly and posteriorly. While the symptoms and signs pointed with definiteness to an acute abdominal infection, probably gastric perforation, the marked tenderness in the costo-vertebral angle made me consider an infected kidney, yet because of the positive abdominal signs and the absence of blood and pus in the urine, it seemed wise to make an anterior incision first.

A short incision through the left rectus muscle above the umbilicus was made and the abdominal cavity opened. There was no evidence of peritoneal infection. The right kidney was normal in size and position. The left kidney was found to be enlarged and the perirenal tissue edematous. The anterior wound was rapidly closed and the left kidney cut down upon through an incision in the flank. It was covered with characteristic small dark and yellow spots, the multiple septic infarcts. The kidney was removed, the renal vessels having been tied with silk. A gauze drain was left in and the wound closed about it with chromicized catgut and silkworm gut. One pint of salt solution was given intravenously before the patient left the operating room.

The patient made a prompt and satisfactory recovery. Twenty-four hours after the operation, the temperature had dropped to 100 deg. F., and the leucocyte count to 16,000. Three days after the operation the temperature was normal and the leucocyte count 7,000. The wound drained a large amount of rather foul pus for two weeks, after which it healed without incident. Cultures from the infarcts showed pure colon bacillus infection."

The kidney may be infected by a variety of pus-producing micro-organisms. The streptococcus, staphylococcus, the typhoid bacillus, Friedlander's diplococcus, the bacillus of diphtheria, the bacillus pyocyaneus, and the pneumococcus, have all been isolated from renal abscesses. The most frequent infections are, undoubtedly, due to the colon bacillus and to pus organisms. In two of Dr. Cobb's acute cases, small stones were found embedded in one of the calices, in one a very small calculus on the floor of the bladder was discovered by the cystoscope, and in a fourth case a nephrectomy for stone had been done a year previously. In all probability a frequent cause is an abnormality of the ureter, due to stricture, the result of inflammation or calculi; in women, deformities in the ureter may be caused by pregnancy or child-birth. Infection, so far as known, usually comes from the intestinal canal, although it may come from the reproductive organs and lower urinary tract in the female, especially in those cases where old pelvic disease with intestinal adhesions is present.

Diagnosis:—In the acute fulminating cases there may be nothing pointing to the kidney except tenderness in the costo-vertebral angle—this, Dr. Cobb observes, has been a constant sign. These acute cases present an exact picture of an acute abdominal infection—sudden abdominal pain, tenderness, muscular spasm, vomiting, high temperature, pulse, and leucocyte count. In such cases, unless blood and blood casts, with or without pus, are found in the urine, or an enlarged and tender kidney can be palpated, a positive diagnosis cannot be made. In the less acutely sick cases the condition of both kidneys should be studied by ureteral catheterization and X-ray. Leucocytosis is always high in the acute cases, 18,000 to 36,000. It is Dr. Cobb's opinion that in acute cases in which positive evidence of the kidney cannot be obtained, it is better to make a preliminary anterior incision to settle the diagnosis and the existence of the other kidney as quickly as possible. Delay, even long enough for ureteral catheterization, may be dangerous. The presence of albumin, pus and blood in the urine, associated with tenderness in the costo-vertebral angle, and a high white blood count, should point to

the kidney as the cause of the acute symptoms in persons previously in apparent good health.

The second case reported by Dr. Cobb, illustrating the type that is less acute in its onset and in which definite signs pointing to the kidney existed, is as follows:

"Mrs. M. E. S., 34 years old, married, white. Entered the hospital October 21st, 1907. Patient was never strong. In the last fifteen years she had been operated on three times for tuberculous glands in the neck and axilla. Last operation was in March, 1900. She had had one child seven years ago. Five years ago she had a miscarriage. Three weeks before admission she again miscarried and was curetted at another hospital, but was up and about at the end of a week, and considered herself in better health and strength than for two or three years. Five days before admission she was awakened at night with a severe pain in the region of the appendix. She called her own physician, who told her that her temperature then was 103 deg. F., and the pulse 110. During the following week the pain gradually subsided and her general condition improved, although she remained in bed.

Examination:—Thin, poorly nourished woman. Temperature on the day of entrance was 101 deg. F., and it varied between that point and 99 deg. F., until the acute attack six days afterward. Pulse, 110; fair strength. . . . The left kidney could not be palpated. The right kidney was distinctly enlarged, movable, and slightly tender. Nothing abnormal in the abdomen. No tenderness or muscle spasm could be made out *at this time*. Vaginal examination found nothing abnormal. X-ray plates of both kidneys showed no shadow of stone. Cystoscopy and ureteral catheterization by Dr. Lincoln Davis showed nothing pathological in the urine from either kidney *at this time*. Because of the tubercular history and the large kidney with the pain in the right side, a probable diagnosis of renal tuberculosis was made, although special examinations of the urine gave no evidence of it. Six days after entering the hospital the patient had a sudden severe attack of pain on the right side, with a temperature of 104 deg. F., and pulse of 120. The pain persisted and the high temperature was accompanied by chills. Leucocyte count 10,500. The right kidney was at this time very tender on palpation. Ureteral catheterization then showed that the urine from the right kidney contained pus, blood, and swarms of bacilli. There was tenderness in the costo-vertebral angle.

Operation by Dr. Conant, on October 31, ten days after entering the hospital, sixteen days after the first attack of pain in the

right side, and three days after the acute attack, with positive signs in the urine and a markedly tender kidney. Through an incision in the flank the right kidney was removed. A gauze drain was left in. The kidney showed typical foci of infection of various sizes. Infection, colon bacillus.

Patient made a good recovery. At no time did the temperature rise above 100 deg. F. The remaining kidney performed its functions with entire satisfaction. Gauze drain removed on the fifth day."

Dr. Cobb thinks it probable that some of the cases, especially those less acute in onset, may recover without operation. (One case under the care of the writer seemed to make a good recovery under the opsonic treatment. The infective agent in this case was also the colon bacillus.) He comes to the conclusion that: "Delay in operating, especially in those fulminating cases in which diagnosis is doubtful, cannot be justifiable. Delay for reasonable study and observation in the subacute cases will always be wise."

Treatment: This should always be by operation, even in the presence of severe sepsis. Recovery will be the rule if operation is not delayed too long. In the majority of reported cases nephrectomy has been the operation of choice. In three or four cases drainage of the infarcts with rubber tubes or gauze wicking has been successful. (A second case, under the writer's care, was treated by drainage. Temperature, 104 deg. F. at time of operation. Kidney (left) greatly enlarged and engorged, perinephric edema, but no pus found at time of incising the organ. No calculus found. Subsequently free discharge of pus and urine. Temperature fell steadily after the operation and reached normal in a few days. Patient made uneventful recovery. Sinus closed and patient left hospital about four weeks after operation.) Two of Dr. Cobb's cases recovered after treatment by drainage. One remained well, but in the other case it was necessary to do a nephrectomy subsequently because of stone. In very toxic cases in which the areas of infarction are numerous, so that the function of the kidney is seriously interfered with, nephrectomy must always be done. It is not advisable to remove an infected kidney through the anterior incision, on account of the risk of infecting the peritoneum, although this has been done once by Dr. Harrington, and quite successfully. Woolsev has reported a case in which the cortical substance involved only the lower pole of the kidney. He resected the infected third of the kidney, leaving the remainder. The infection was staphylococcus. Although this unique operation was successful, it can hardly be a safe procedure, even if the septic areas are so distributed as to make it possible.

Selected Article.

THE ACTION AND DOSAGE OF PHENOLPHTHALEIN.

BY WARREN PHILO ELMER, M.D., SAINT LOUIS, MO.

Assistant Professor of Medicine, Saint Louis University.—*The Medical Record.*

Phenolphthalein has been known as a purgative for about eight years,¹ but so little has been written concerning its physiological action and definite dose that it has not received the attention from the medical profession that it deserves.

In reviewing the literature the following problems present themselves: (1) What is the physiological action? (2) Has it toxic properties or is it broken down in the course of its passage through the body into substances which are toxic? (3) What limits, if any, must we place on the dose prescribed, and how is it best administered?

Valmosy² and Tunnicleffe³ believe that phenolphthalein remains unchanged in the acid media of the stomach, but on reaching the intestine forms a sodium salt in the presence of the bile. This salt is said to increase the osmotic pressure in the intestine and thus to act as a hydragogue cathartic.

It is a well-known fact that phenolphthalein is much less active in dogs than in man, and Valmosy² explains this by saying that less of the sodium salt is formed in dogs.

With these statements in view, I performed the following experiments on dogs: Three dogs were selected, weighing 35, 25, and 7 pounds, respectively. The stools were carefully watched for ten days, the average number and consistency being noted. On the eleventh day phenolphthalein in aqueous suspension was administered by means of a stomach tube in doses of one grain per pound of body weight; *i.e.*, the 35-pound dog received 35 grains; the 25-pound dog received 25 grains, and the 7-pound dog received 7 grains. During the forty-eight hours following no change was noted either in the number or consistency of the stools, although phenolphthalein could be detected in the stools of all three dogs by the end of thirty-six hours.

On the fourteenth day 70, 50, and 14 grains, respectively, were administered in the manner described above, with the same

negative result as regards the number and consistency of stools, although larger quantities of phenolphthalein could be detected.

On the seventeenth day doses of 95, 75, and 21 grains produced no noteworthy changes. On the twentieth day 140, 100, and 28 grains were given. Twelve hours later the 25-pound dog developed a moderate diarrhea (five stools in twenty-four hours), and examination of the urine showed traces of phenolphthalein. The consistency of the stools, while somewhat thin, was by no means watery.

The 35-pound dog showed no changes in the stools, but the urine gave a fairly marked reaction for phenolphthalein. The 7-pound dog showed no changes either in stools or urine.

On the twenty-third day, after a dose of 175 grains, the 35-pound dog developed a moderate diarrhea (seven stools in twenty-four hours). The reaction for phenolphthalein in the urine continued. The stools of this dog resembled those of the 25-pound dog, viz., thin but not especially watery. Phenolphthalein in large quantities and absolutely unchanged could be detected. The 7-pound dog at this time was given 40 grains without effect.

During this series of experiments the dogs were fed on boiled beef and bread, and allowed free access to water at all times. They were kept in roomy wire cages so placed that urine could be collected, and with a wire grating in the bottom, so that the stools were kept fairly well separated from each other. The general condition of all the dogs remained good; there was no loss of weight; in fact, the 7-pound dog at the end of twenty days had gained three-fourths of a pound. The appetite was unimpaired, and no evidence of any ill effects from the drug could be observed.

After a rest of ten days, a further set of experiments were undertaken, but in the meantime the 7-pound dog was accidentally killed, so that further experiments were performed on the 35-pound and the 25-pound dogs. The same quantities of phenolphthalein were again administered, this time suspended in 100 c.c. of N-40 sodium hydrate. After the first three doses the results were the same as in the previous experiments, except that the stools were streaked with the red sodium salt from twenty-four to thirty-six hours after each administration, and continued to be so colored for from twelve to twenty hours, showing that the sodium salt left the body unchanged.

After a dose of 95 grains the 35-pound dog showed traces of phenolphthalein in the urine. The urine of the 25-pound dog showed phenolphthalein after a dose of 70 grains. Both dogs

continued to show small amounts as long as the experiments were continued, the urine never being free from it even at the urination previous to the following administration.

After 140 grains the 35-pound dog developed a moderate diarrrhea, similar to that appearing after the administration of 175 grains of the watery suspension of the drug.

The 25-pound dog developed a similar diarrrhea after 100 grains. The stools of both dogs were soft, but not watery, and contained considerable quantities of the unchanged phenolphthalein, together with the sodium salt.

After another ten days' rest, the 25-pound dog was given 70 grains suspended in 100 c.c. of 0.3 per cent. hydrochloric acid, without result; 110 grains produced practically the same results as previous suspensions of a like amount.

I conclude from the above experiments that while there is slightly greater absorption of phenolphthalein when suspended in N-40 sodium hydrate, there is not sufficient difference to warrant a conclusion that sodium plays any part in the purgative action of the drug. This conclusion is also strengthened by the results in the two cases of catarrhal jaundice reported below, where the bile was almost entirely absent from the stools. Suzzor⁴ and Tunnicliffe³ report similar observations in jaundiced patients.

As to whether the action of the drug is directly on the mucous membrane as an irritant *per se*, or indirectly as a hydragogue, I am not prepared to state; but, from the character of the stools, both in dogs and in man, I am inclined to believe that the action is that of a direct irritant, otherwise the stools should be more fluid.

In regard to the toxic properties of phenolphthalein, little can be found in the literature. Best reports a case of poisoning from a 15-grain dose, but I am unable to find the records of any other case of poisoning. My own experience with dogs, cited above, and the statement of Valmosy² that doses up to 1 grain per kilo of body weight can be given to animals without danger, would indicate that phenolphthalein is practically without toxicity for animals. In my experience four patients have taken 30 grains or more daily for at least two weeks, one taking from 30 to 60 grains daily for fourteen months without ill effect.

As to its fate within the body, according to Valmosy² 87.17 per cent. of all phenolphthalein taken by the mouth can be recovered from the stools. Allowing for the usual errors of such determinations, it would appear that practically all of the drug is excreted by the bowel unchanged. After very large doses small quantities appear in the urine.

If phenolphthalein were broken down, one would expect an increase of the aromatic sulphates in the urine; this, however, neither Valmosy² nor Tunniceffe³ was able to obtain. It should be borne in mind, however, that active purgation decreases the aromatic sulphates to some extent, so that these observations are not absolutely conclusive, but for practical purposes are sufficiently accurate. The statement of Suzzor,⁴ that 0.3 grains will cause the drug to appear in the urine is not confirmed by the majority of observers, and was not true in any of my cases. For this reason Tumminia's⁶ claim that phenolphthalein may be used as an indicator for the functioning power of the kidney is without foundation, at least, in the vast majority of cases.

My conclusions then in regard to the toxic properties of phenolphthalein are: It is not toxic in any dose that I have given it, and can certainly be given with safety up to twenty or thirty grains daily. It is not broken down within the body so far as can be determined. Best's case I am inclined to regard either as an idiosyncrasy, such as at times gives rise to statements of toxicity in regard to almost all drugs; or else the symptoms described were due to something else beside the phenolphthalein.

The more recent writers, as Tumminia, state that the dose of phenolphthalein varies greatly with different patients. To a certain extent this is true, but in 90 per cent. of patients the variation is not greater than with most drugs. A brief summary of one hundred and sixteen cases of various diseases, combined with constipation, and treated with phenolphthalein at the St. Louis University Dispensary and in private practice, will best illustrate this uniformity.

In one hundred and twelve cases the dose varied from one to ten grains daily, the average being $3\frac{1}{2}$ grains. The above cases included the following conditions:

Chronic constipation without other symptoms other than those referable to this condition, eighteen cases. Chronic constipation, accompanied by hemorrhoids, ten cases. Contrary to the experience of Buckley,⁷ the hemorrhoids were not aggravated by phenolphthalein.

Catarrhal jaundice, two cases, in both of which were acholic stools. In neither case was more phenolphthalein required than in cases where the stools showed abundance of bile, although both patients were quite constipated. The remaining cases included: influenza, eleven cases; acute and chronic rheumatism, seventeen cases; neurasthenia, seven cases; hypochlorhydria, ten cases, and hyperchlorhydria, thirty-five cases. Of the four cases requiring large doses three were diagnosed spastic constipation; each patient

took from thirty to forty grains for at least two weeks without satisfactory results, but without any symptoms of intoxication.

The fourth case was that of a man, 68 years old, with benign stenosis of the pylorus contracting the opening so that a bead three-eighths of an inch in diameter was the largest that passed through the stomach. This patient requires from forty to sixty grains of phenolphthalein daily, and has taken such doses for eighteen months. Of other cathartics tried, all require from five to eight times the usual dose, and most of them produce disagreeable symptoms, such as cramps and tenesmus.

I have secured better results from using phenolphthalein in powder than when compressed into tablets, or even when given in capsule. Usually I prescribe 2 drams of the powder, and direct the patient to take what will lie on a dime (about 3 grains) before going to bed. It is best taken by placing it on the tongue and taking a swallow of water. The powder is tasteless and odorless, and as a rule is not objectionable; the dosage is easily regulated by the patient.

General Conclusions.—Phenolphthalein probably belongs to the class of intestinal irritants, but its action seems to be accompanied by less discomfort than the majority of cathartics of this class.

It is nontoxic, at least in doses up to 25 or 30 grains. It is extremely stable, very little if any being broken down in passing through the body. A little is absorbed, but is excreted by the kidneys as such.

The average dose may be placed at from 1 to 5 grains, best given in the powdered form, either at night or in divided doses after meals. In cases of hyperacidity it can be advantageously combined with an antacid powder.

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Clinical Department.

Acute Dilatation of the Stomach—Report of an unusual case.

W. R. HOUSTON, A.M., M.D., PITTSBURG, PA., in the *Jour. A.M.A.*

Patient.—Mrs. T., a moderately well-nourished woman, aged 47, was seen at 2 a.m., August 16, 1908, at the City Hospital in Augusta, Ga. She had been brought in from a Sunday excursion train returning from Savannah, after an exhausting day's outing that involved ten hours on the train and seven hours on the seashore. She had been feeling well up to 9 p.m., when she was taken with abdominal pain after having eaten several bananas. On the train she had already had three-fourths of a grain of morphine, by mouth, and two drinks of whiskey. There was a history of previous attacks which had been relieved by these medicines.

Examination.—I found the patient with a pulse of 110, full and regular, temperature normal, extremities cold, and complaining bitterly of pain in the abdomen. The pain was not localized but referred more to the upper quadrants, and was lessened by pressure. The patient showed a remarkable abdominal distention. The distention was at first more marked on the right side, but in course of time became everywhere the same. Palpation showed a highly developed drum-like hardness of the abdominal walls, and a uniform dull tympany was observed. The heart and liver were considerably displaced upward.

Treatment.—Though the history was that of an obstipation of some days' standing, repeated asafetida enemas gave no relief and the water returned clear and with little flatus. Four attempts were made to wash out the stomach. The tube, which unfortunately was of too small calibre (25 Fr.) was introduced apparently into the stomach, but the water came back almost immediately bringing only a little bloody mucus. This was thought to be due to the great pressure of gas in the intestines. Several attempts to administer water by mouth, four ounces at a time, resulted in the regurgitation of the clear water after ten or fifteen minutes. At 4 a.m. the patient's pulse began to grow rapidly quicker and weaker. The breathing became gradually shallower.

Consultation.—Dr. W. H. Doughty was called in as a consulting surgeon. An exploratory laparotomy was decided on, looking to the probable necessity for an enterostomy. Before anything could be done, however, the patient died at 7 a.m.

Postmortem Examination of Abdomen.—An autopsy was declined, but as the undertaker thought it necessary to let out the gases before giving up the body for transportation, an opportunity was offered for a casual examination of the abdominal contents. The abdominal distention was found to be due solely to the distention of the stomach. The stomach extended to within an inch of the symphysis, and pressed against the lateral walls of the abdomen on both sides from top to bottom. The antrum was pouched out under the liver on the right so that it extended four inches to the right of the first part of the duodenum. The intestines seemed normal and contained the usual amount of gas. They were quite hidden by the stomach. When the wall of the stomach was punctured there was a loud explosion of gas. The greater curvature retracted to a position an inch below the navel. The lateral distention was little affected. There seemed to be no gastroptosis, but the conditions suggested a chronic dilatation preceding the acute. The duodenum and pylorus showed no thickening or infiltration. There was a half-pint of dark acid contents in the stomach.

As to the physics of the conditions here discovered, I refer to the experimental studies of Braun and Seidel. The esophagus enters the cardia obliquely. The closure of the cardiac orifice is maintained chiefly through lateral pressure exerted by the musculature of the fundus. When the fundus is inflated the pressure is increased. In the case recited the closure had become so great as to block the passage of a rather too flexible stomach-tube and cause it, evidently, to double on itself. The antecedent chronic dilatation had prepared the way for a kinking of the first part of the duodenum, and, as the antrum was forced further to the right by the increasing distention, the pylorus became more and more tightly closed. The first impulse to the acute attack may have been given by an exaggeration of chronic motor insufficiency induced by the fatigues of the day.

But for the unfortunate misinterpretation of the symptoms, the patient might doubtless have been rescued. Death resulted apparently from shock.

PREAURICULAR pain and tenderness points to an enlarged lymphatic gland, a decayed tooth, an affection of the parotid, or a neuralgia of the fifth nerve; auricular tenderness itself indicates some affection of the auricle or the external canal; post-auricular tenderness may be hysterical or indicate mastoid disease.—*American Journal of Surgery.*

A Diphtheria "Carrier":—Persistence of the Klebs-Löffler Bacillus nine months after attack. THOMAS STRAIN, M.B., CH.B., GLAS., D.P.H. CANTAB, Resident Medical Officer of the Enfield and Edmonton Joint Isolation Hospital, Winchmore Hill, in *The Lancet*.

The patient, a nursemaid, having her home in this vicinity, was admitted into the Enfield and Edmonton Isolation Hospital, in July of this year, with the following history. While following her vocation in Somersetshire, she developed in December of last year a severe attack of diphtheria, with palato-pharyngeal paralysis. She was isolated and treated with diphtheria antitoxin. Before being discharged from hospital, swabs were taken from the nose and throat, and were submitted to bacteriological examination, and the patient was declared to be free from infection. Thereupon the girl went to a convalescent home in Devonshire, where she was further examined and was declared to be free from the diphtheria bacillus. She now secured another situation, where she was for ten days, then one of her charges contracted diphtheria; the maid's throat and nose were examined bacteriologically once more and the Klebs-Löffler bacillus was found to be present. She now returned to Devonshire, where she was isolated and treated for five weeks, when she was again examined and declared "free." Again she became nursemaid to a family in Cornwall, and after being there for three weeks one of the children in her care developed diphtheria, and again it was found that the Klebs-Löffler bacillus was present in her nasal passages. The maid now, very naturally, became alarmed and depressed, left her situation, came to her home, where she was seen by her family medical attendant, who advised her to go to hospital. When she was admitted on July 28th she was not suffering in any way, but the Klebs-Löffler bacillus could be cultivated from the swabs from her nasal passages, while on each occasion the swabs from the throat were "negative." She was treated by local remedies, as antiseptic douching, swabbing, and spraying, with glycothymolin, cyllin, chinisol, and chlorine water. During the six weeks that she stayed in hospital she was submitted to weekly swabbings of the nose and throat; the information gained was that while the throat was free the nasal passages harbored the bacillus. It was also observed that the bacilli were only intermittently present in these passages, one swab, or perhaps two, giving a negative result on cultivation, whilst another swab would give a positive result, notwithstanding that each swab was thoroughly applied to the affected passages on a day on which no antiseptics had been used.

It would appear from such evidence that the bacilli were only intermittently present in the nasal passages, suggesting one of the sinuses opening into the nose as affording a nidus, periodically discharging its contents into the meatus, although in this case at no time was there any nasal discharge.

The following are points of importance in the case: (1) the manner in which diphtheria may be communicated to children; (2) the importance of swabbing both the nose and throat; (3) the remarkable persistence of the Klebs-Löffler bacillus after disappearance of the clinical signs; and (4) in isolation hospitals the necessity of frequent and *repeated* swabbings previous to discharging cases of diphtheria.

The bacteriological examinations were undertaken by Dr. R. Haldane Cook, the medical superintendent of the hospital, and by myself.

Case of Gastric Tetany. C. L. SOPER, M.D., Wakefield, Mass., in *M. R. of R.*

Mrs. W. F.; 45 years old; native of Nova Scotia; married at 24; has had four pregnancies; children all living; eldest 17, youngest four years; has had measles, whooping cough and mumps; has a good family history, two of her sisters and three brothers being alive and enjoying good health.

The patient commenced work at the age of 13; was troubled with gaseous eructations in later girlhood.

After she came to this country at the age of 23 she came under medical care and has so continued.

After the birth of a child six years ago she became decidedly worse and has never regained the lost ground. Her symptoms were distress after eating, eructations of gas, vomiting of intensely sour material, flatulence, feeling of lassitude, loss of flesh.

In March, 1903, swelling appeared about the ankles, which gradually extended as high as the lower edge of the ribs.

Upon her remaining still, the swelling would gravitate to the most dependent parts of the body.

Face usually swollen in the morning. Urine very scanty, though about normal in color. Under treatment this condition passed away in about three months, allowing her to return to her household duties.

She now had occasional attacks of vomiting, and in the matter ejected there was sometimes found undigested particles that were known to have been eaten one week; or, in one case, 10 days before.

In October, 1904, a severe vomiting attack set in, accompanied by scanty urine. This continued three days, when she noticed a prickly feeling in the hands and feet. Twitching of the extremities then set in, and muscular cramps; finally tonic spasm of the flexors, particularly of the hands and wrists, spasm of the facial muscles giving a very pronounced *risus sardonicus*.

This condition lasted about 30 minutes.

This condition returned five hours later with greater violence than in the first attack, all of the strictly voluntary muscles being more or less involved.

This condition continued for three hours, with slight remissions, lasting 10 or 15 minutes, followed by exacerbations of an equal length of time.

Pupils slightly contracted; mind entirely clear.

Spasm did not disappear under chloroform. Contact of external objects with the skin had no effect upon the tetanoid condition.

The skin was dry and wrinkled.

January 1, 1905, after vomiting, she became entirely rigid and remained so for about two minutes.

On January 9, 1905, the patient consulted Prof. Heinrich Stern, of New York, at his clinic in the College of Physicians and Surgeons in Boston. The diagnosis made by Professor Stern was gastric dilatation, a stomach capacity of 10 liters and gastric tetany. The diet prescribed consisted of proteids only, with the addition of yolks of eggs. All carbohydrates were interdicted.

The patient adhered to this diet for almost six months, and during this time was entirely free from gastric trouble and the tetanoid manifestations. In the latter part of June she commenced to eat small amounts of starchy foods, such as graham crackers. The ingestion of the carbohydrate nourishment was followed on July 1 by a return of the tetany in a mild form.

She remained practically free from symptoms of the disease until August 18, when, after eating a graham cracker, she had a severe attack, during which she vomited large amounts of liquid having a very strong odor of yeast.

During the spasm which followed the patient lay on her back, the legs nearly straight and parallel with one another, the axis of the foot parallel with that of the leg, the foot being in the same position as a ballet dancer when standing on her toes. The trunk straight, the elbows, resting on the bed, were pressed strongly against the body, the forearm strongly flexed on the arm, the wrist drawn down until the skin shone white and bloodless, the fingers stiff and inflexible, pointed toward the centre line of the body.

The jaws were locked and the face twisted into a hideous grin; the breathing jerky and irregular.

I was assured that much the same condition had existed for as much as 30 minutes before my arrival, and it continued for 15 minutes longer, when slight relaxation followed the vigorous administration of chloroform. Entire relaxation did not take place for nearly an hour.

At the end of that time, however, a slight perspiration set in and the muscles returned quickly to their normal condition. During this attack the mind remained entirely clear and the pain was complained of as being "terrible."

The absorption of nearly a liter of normal saline solution by way of the rectum did not ward off the above attack. Urine normal in amount; bowels slightly constipated.

One week later the woman is doing her usual household work.

Large Echinococcus Cyst of the Liver; Operation and Recovery.

HERMAN E. HAYD, M.D., M.R.C.S. Eng., Buffalo, N.Y., in the *Buffalo Med. Jour.*

The tenia echinococcus is a variety of tapeworm found in the dog, and occasionally in the wolf and jackal, but very rarely in our native North American animal; in fact, only one authentic case is reported, and that by Curtice, of Washington, D.C. Numerous other observers, such as Osler and Clement, Sommer, Stiles, and Hassall of the Bureau of the animal industry, have made many dissections of many different varieties of dogs, and have never once found it. It is a tiny cestode four or five millimeters in length, and consists of only three or four segments, of which the terminal one alone is mature. The head is small, and provided with four sucking disks, a rostellum, and a double row of hooklets. The ripe segment contains about 5,000 eggs. It inhabits the upper intestines, and is seen as a little, white, threadlike body, closely adherent among the villi.

To the abdominal surgeon it is of especial interest, since it produces in man in its larval stage a disease which is termed hydatids, and which is developed in various organs of the body, especially the liver, where it occurred in 73.7 per cent. of the recorded cases. It also attacks the lungs, pleura, kidneys, the muscles and dermis, the brain, the female genitalia, and the bones and eyes. In this country the disease is exceedingly rare, and when found it is usually in the foreign-body individual, but in Iceland, where dogs

are used freely, and are in such intimate and constant association with the human being, the disease is so common that it is referred to as the "Liver Plague," and one in every seven or ten deaths is due to it.

In Australia it is also very common, and in certain parts of Germany, and in Winnipeg, among the Icelandic population, quite a number of cases have been found, but only one case is reported in a Canadian-born offspring. The eggs are voided in large numbers by the dog, and are deposited in water or on the various vegetables we use as food, or they may be conveyed from the body of the dog by hands to mouth. The egg is swallowed and gets into the stomach or intestines, and there its surrounding wall is digested or dissolved off, the embryo is freed and bores its way through the mucosa into a blood vessel, and is carried to various parts of the body. Wherever it makes a connection, an inflammatory exudate is thrown out which surrounds the cell, and subsequently becomes its protecting envelope or capsule. Inside of this capsule the parasite continues to grow; it consists of two layers, an outer lamellated structure called the cuticula, and an inner granulocellar—the parenchyma; from this inner layer, the secondary or daughter cysts develop, and from them tertiary or grand-daughter cysts, by a process of evagination; and on the inner surface of the cysts, whether primary, secondary, or tertiary, the heads or scolices of the immature worm are formed.

The disease is most common between the age of twenty-four and thirty, and the symptoms produced depend upon the organs involved, the size of the tumor, and the inconvenience which results from the pressure and contact upon other structures. The parasite produces no specific symptoms of itself, and its presence might not be detected were it not for the irritation, inflammation, and hyperplasia of the organ which shelters it; but the discomfort is often so slight that the disease remains unrecognized, and is only found out at post-mortem. Sometimes the cyst grows rapidly, and its capsule is thinned from pressure necrosis and ruptures, the contents of the sac gets into one or more of the body cavities, and may produce very serious inflammatory disturbances, or an abscess forms and points under the skin, and either breaks or is relieved by an operation.

POLYPI in the ear (as in the nose) indicate diseased bone conditions. Removal of the polyp does not prevent recurrence; removal of the diseased bone does.—*American Journal of Surgery*.

Therapeutics.

The Local Use of Epsom Salts in the Primary Dressing of Burns and Scalds.

Aside from the well-known internal uses of Epsom salts, we can derive most gratifying results from their local employment in the primary dressing of all forms of scalds and burns. Pain is almost instantly relieved and inflammation cut short and reduced.

There is no fear of toxic effects. We can always expect to find these salts near at hand, and can use them for burns on any part or parts of the body. No skill or special precautions are required in their application. In case of a burned hand or foot, make as strong a solution of salts as you can and immerse the limb, letting it remain as long as there is pain on removing it from the solution.

If it is not convenient to use the concentrated solution, then employ the dry salts, and cover with a wet cloth, or make a thick paste and apply it to such parts as the eyes, nose or mouth, or wherever the solution is not suitable. I find that Epsom salts used in the above described manner are oftentimes all the dressing needed, but the object of this brief paper is to impress you with the superiority of this treatment as a primary dressing until others can be obtained. Remember the main points of advantage:

- Instant relief;
- Reduced inflammation;
- Non-toxic effects;
- Easy to wash off;

The cheapness of the dressing and the fact that it is always at hand.

If by this paper the attention of the profession is directed to a simple, perhaps unknown, method which alleviates pain and assists in restoring the unfortunate sufferer quickly to his normal condition, I shall feel amply repaid for the effort, and thankful to this Association for its indulgence.—*M. N. Stowe, M.D., Jesup, Ga., in International Journal of Surgery.*

WHEN paraffin is injected subcutaneously allowance should be made for increase in the size of the mass by the growth of connective tissue around it.—*American Journal of Surgery.*

**Surgical Treatment
of Tuberculous
Cavities of the
Lung.**

In tuberculous patients presenting cavities of sufficient size to render an accurate diagnosis possible, major operative procedures are rarely indicated owing to the low state of their general health. In isolated cases, however, where the cavity communicates by a fistulous passage with the external thoracic wall, it may be advisable to resort to surgical intervention, which has sometimes proved very beneficial. Dr. Bessel-Hagen has reported such a case to the Surgical Union of Berlin. The patient, who had previously suffered with cough, developed a small abscess over the upper part of the sternum, with a slight infiltration over the right clavicle. The abscess was opened by a T incision, and it was found that fistulous passages extended toward the right into the pectoralis major and toward the left around the sternum into the deeper parts. After they had been laid open, the upper part of the sternum with the sternal attachment of the ribs was removed, preserving the sternoclavicular joint. Behind the removed bone a larger abscess cavity was exposed, with fistulous passages, which ran upward into the area of infiltration above the clavicle, backward to the vertebral column, and toward the right, below the first rib, into the lung substance. All the tuberculous tissue as far back as the vertebral column, as well as two tuberculous mediastinal glands, were removed. To follow the course of the fistula extending into the right lung a larger piece of the first rib had to be excised and the internal mammary artery ligated. The soft parts covering the fistulous passage were divided until access was gained to a large pulmonary cavity. This was found to contain a thin purulent fluid. The walls were quite smooth, containing only a few caseous foci, which were carefully removed with the sharp curette. The operation had to be constantly interrupted on account of the frequent paroxysms of cough. The cavity was tamponed with iodoform gauze. Recovery was uneventful, and the later course of the case has been favorable, with marked improvement of the nutrition, and disappearance of all pathological appearances in the lung.—*International Journal of Surgery.*

A MEDIASTINAL tumor may be present for some time without other symptoms than cough, expectoration, loss of flesh and slight fever—thus simulating pulmonary tuberculosis. A skiagraph will determine the condition; laryngoscopy is also helpful, for adductor paralysis is frequently an early sign.—*American Journal of Surgery.*

Proceedings of Societies.

ONTARIO MEDICAL ASSOCIATION.

The next annual meeting of the Ontario Medical Association will be held in Toronto on June 1st, 2nd and 3rd, 1909. The following officers were elected last year to look after the interests of the Association at the coming meeting: President—Dr. H. J. Hamilton, Toronto. Vice-Presidents—Dr. R. R. Wallace, Hamilton; Dr. A. Dalton Smith, Mitchell; Dr. A. M. McFaul, Collingwood; Dr. Geo. Field, Cobourg. General Secretary—Dr. E. Stanley Ryerson, 243 College St., Toronto. Assistant Secretaries—Dr. Samuel Johnston, 169 Carlton St., Toronto; Dr. J. E. Davey, 145 King St. West, Hamilton. Treasurer—Dr. J. Heurner Mullin, 201 James St. South, Hamilton. Chairman Committee on Papers and Business—Dr. Herbert A. Bruce, 64 Bloor St. East, Toronto. Chairman Committee on Arrangements—Dr. Bruce L. Riordan, 73 Simcoe St., Toronto.

The Committee again decided to adopt the system of dividing up into sections, of which the following is a list, with their officers:

Surgery—President, Dr. G. A. Bingham; Secretary, Dr. A. B. Wright.

Medicine—President, Dr. W. H. B. Aikins; Secretary, Dr. F. A. Clarkson.

Obstetrics and Diseases of Children—President, Dr. Adam Wright; Secretary, Dr. J. A. Kinnear.

Eye, Ear, Throat and Nose—President, Dr. D. J. G. Wishart; Secretary, Dr. C. Campbell.

Preventive Medicine—President, Dr. C. Sheard; Secretary, Dr. C. J. Hodgetts.

General sessions will be held in the afternoons and on one evening, the Sections of Surgery and Medicine meeting every morning, and one of the Special Sections on each morning.

The Committee on Papers and Business have been successful in getting promises of papers from the following men: Dr. John B. Deaver, Philadelphia; Dr. E. F. Cushing, Cleveland, on "Copious Water-Drinking in Typhoid Fever"; Dr. W. P. Manton, Detroit; Dr. Little, Montreal; Dr. C. H. Vrooman, Winnipeg; Dr. A. Baines, Toronto; Dr. McFaul, Collingwood;

Dr. Slemons, New York; Dr. McDonald, New York; Dr. J. M. Elder, Montreal; Dr. J. M. Rogers, Ingersoll; Dr. Hadley Williams, London; Dr. H. B. Anderson, Dr. W. McKeown, and Dr. C. B. Shuttleworth, Toronto; Dr. E. Ryan, Kingston.

In order to get in closer touch with the various City and County Medical Societies throughout the Province, a motion was passed making the Presidents of these Societies Corresponding Members of the Committee. As some difficulty has been encountered in securing their names, the Secretary will be much obliged if the gentlemen occupying this position will send him their names and addresses. They will be kept informed from time to time of the work done by the Committee.

Physician's Library.

Vaccine Therapy and the Opsonic Method of Treatment. A short compendium for general practitioners, students and others. By R. W. ALLEN, M.D., B.S. (Lond.), late Pathologist to the Royal Eye Hospital. Late Gull Student of Pathology, Guy's Hospital. Second edition. Price, 7s 6d, net. London: H. K. Lewis, 136 Gower St.

As we were not awarded the pleasure of reviewing the first edition of this timely book, we cannot tell particularly wherein there is any improvement over the first. No doubt the demand has been so great that a second edition has been essentially necessary. The first edition was issued in November, 1907. Since that time the evidence has been conclusive that vaccine therapy has come to stay. The profession will welcome this second edition.

A Text-Book of Diseases of Women. By CHAS. B. PENROSE, M.D., PH.D., formerly Professor of Gynecology in the University of Pennsylvania. Sixth revised edition. Octavo of 550 pages, with 225 original illustrations. Philadelphia and London: W. B. Saunders Company. 1908. Cloth, \$3.75 net; half morocco, \$5.25 net. Canadian agent: J. A. Carveth & Co., Ltd., Toronto.

On five former occasions, it has been our pleasure to give notice to this admirable book. It speaks well for Penrose's "Dis-

eases of Women," when one knows this is the sixth revised edition. The increase in knowledge regarding gynecology has called for a revision. Originally written for the medical student as a textbook, demand for it on the part of the student who had entered upon and was practising medicine called for edition after edition, until to-day Penrose's book is one of the best known and widest used books on the subject of gynecology. It goes straight to the subject at the very start, embryology, anatomy, physiology, etc., having been eliminated.

Diseases of the Skin and the Eruptive Fevers. By JAY FRANK SCHAMBERG, M.D., Professor of Dermatology and Infectious Eruptive Diseases in the Philadelphia Polyclinic and College for Graduates in Medicine. Octavo of 534 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1908. Cloth, \$3.00 net. Canadian agent: J. A. Carveth & Co., Limited, Toronto.

This is a book which will be very acceptable to general practitioners and medical students. It is nicely printed, beautifully and elaborately illustrated for a book of its size—534 pages; concise, practical; a model of a working handbook on these two subjects. It is right up to date: three chapters on Actinotherapy and Radiotherapy and one on radium. Those on syphiloderma, small-pox, and especially chicken-pox, are, we think, for a work of this size and scope exceptionally good. A striking feature of the book is the many original illustrations. Some of these particularly show "before and after" treatment, as in epithelioma, etc. It gives us pleasure to testify to the undoubted value of this book.

Obstetrics for Nurses. By JOSEPH B. DELEE, M.D., Professor of Obstetrics in the Northwestern University Medical School, Chicago. Third revised edition. 12mo. of 512 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company. 1908. Cloth, \$2.50 net. Canadian agent: J. A. Carveth & Co., Toronto.

Here is a little work which, if we are not greatly mistaken, will prove a god-send not only to those qualifying for the nursing profession, but also to many medical men, and also to many women who are possessed of a laudable desire to have an up-to-date knowledge of the management of a normal labor. The text is

very clear, and the illustrations, excellent, as well as numerous, are nearly all reproductions of photographs of actual scenes.

To see this little book, is to *desire* it: then, you naturally buy it.

Gynecology and Abdominal Surgery. In two large octavos. Edited by HOWARD A. KELLY, M.D., Professor of Gynecologic Surgery at Johns Hopkins University; and CHARLES P. NOBLE, M.D., Clinical Professor of Gynecology at the Woman's Medical College, Philadelphia. Large octavo volume of 862 pages, with 475 original illustrations by Mr. Hermann Becker and Mr. Max Brodel. Philadelphia and London: W. B. Saunders Company. 1908. Per volume: Cloth, \$8.00 net; half morocco, \$9.50 net. Canadian agent: J. A. Carveth & Co., Limited, Toronto.

In a former number of this journal we had the pleasure of reviewing the first volume of this great work, and it has afforded us no little satisfaction to peruse this volume. To attempt to give anything like a complete review of it, however, is about as feasible as describing the various exhibits at a World's Fair, in one page! The articles dealt with in this volume are: Complications following operations, Cesarean section, operations during pregnancy, the operative treatment of sepsis in the child-bearing period, extrauterine pregnancy, diseases of the female breast, operations upon the gall-bladder, bile ducts and liver, operations upon the stomach, pyloroplasty, intestinal surgery, operations for diseases of the vermiform appendix, surgery of the pancreas, operations upon the spleen, tuberculosis of the peritoneum, penetrating wounds of the abdomen, hernia, the use of drainage in abdominal and pelvic surgery, surgery of the ureter, and surgery of the kidney. Each subject is so exhaustively dealt with, both in the matter of history, differentiation, and details of operation, that it would seem like making an invidious distinction to single out any particular writer's article.

To sum up, therefore, in a general way, one may draw attention to the excellent, clear text, and the almost prodigal display of illustrations, by no means the least valuable details in the general excellence of this immense work. What is gospel to-day (in surgery) is out of date to-morrow, so rapid is the advancement in this branch of the healing art; but one feels tempted, nevertheless, to predict that for a goodly time to come, Kelly and Noble's "Gynecology and Abdominal Surgery" will undoubtedly prove a classic to a great many general practitioners as well as surgeons on this continent.

- A *Text-Book of Operative Surgery*. Covering the Surgical Anatomy and Operative Technic Involved in the Operations of General Surgery. Written for Students and Practitioners. By WARREN STONE BICKHAM, Phar.M., M.D., Visiting Surgeon to Charity and Touro Hospitals, New Orleans. Third Revised Edition. Octavo of 1,206 pages, with 854 illustrations, entirely original. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$6.50 net; half morocco, \$8.00 net. Canadian agent, J. A. Carveth & Co., Ltd., Toronto.

It can hardly be deemed an easy matter to offer a comprehensive review of so elaborate and extensive a work as this, in the limited space at our command. And even if we were able to enter into a detailed description of the work, it must, at best, give the reader but an indifferent idea of the tremendous scope of this very eminent work. Neither can one rest content to indulge in a few terse superlatives in recognition of its merits: such a notice might pass equally well for a happy pocket hand-book on any subject.

Let us, therefore, try to do the author what brief justice we may, the while we heartily congratulate him on the complete success of his stupendous undertaking.

At the outset, it may not be amiss to remind our readers that this splendid work has in the short space of three years reached its third edition—a circumstance which must be very gratifying to the author, as well as to the publishers.

The work is divided into two parts, the first embracing thirteen chapters, and the second, eight chapters. The first part deals with operations on arteries, veins, lymphatic glands and vessels; nerves, plexuses and ganglia; bones, joints, muscles, tendons and tendon sheaths, ligaments, fasciæ, and bursæ; also amputations and disarticulations, and excisions and osteoplastic resections of bones and joints. Part II. deals with operations upon the head, spine and spinal cord, neck, thorax, abdominal region, male genital organs, female genital organs, and operations for herniæ.

It is to be expected that, even in the most up-to-date work, the operative procedures in all branches of surgery will continue to exhibit new methods. The details of Spence's and Larrey's operations for disarticulation at the shoulder joint, for example, remain much the same now as when first advocated. But in the domain of the newer and more highly developed branches of surgery, such as that of the abdomen and the head, Dr. Bickham has given us a wealth of detail that is truly satisfying. Take,

for example, Pylorotomy. Here we find, in minute and lucid detail, Mayo's, Kocher's, and Billroth's methods, followed by after-treatment and comments. Here, too, one can look up the latest mastoid operation, or the details of Kraske's operation for excision of the rectum; and every operation beautifully illustrated. One detail that appeals to us very much in this work is the author's method of giving a special heading to the "Incision," while under "Operation," the various steps are given in numbered paragraphs. And so we might go on indefinitely, drawing attention to one good feature after another, but perhaps enough has been said to indicate the real worth of the work.

The reader may have observed, at the head of this notice, that the work is published by the W. B. Saunders Company, of London and Philadelphia, which is tantamount to saying that the text and general craftsmanship of the volume are all that could be desired. Even at the risk of appearing somewhat undignified, we are tempted to say, "Here's to you, Dr. Bickham, and—more power to your elbow!"

International Clinics. Vol. III. Eighteenth Series. 1908. Philadelphia and London: J. B. Lippincott Company.

The third volume of this admirable quarterly has original articles on treatment, medicine, surgery, gynecology, pediatrics, orthopedics, psychiatry, neurology, ophthalmology, rhinology and pathology. An examination of the names of the authors shows many well-known names in the medical profession. There are two colored plates, namely, "Adenoma of Thyroid," and "Type of Cells from Ascitic Fluid." The volume is profusely illustrated. One Canadian practitioner, Dr. F. N. G. Starr, Toronto, has an article entitled "Cleft Palate and Harelip."

Manual of Infectious Diseases. By E. W. GOODALL, C.M.G., M.D., Lond., F.R.C.P. Second Edition, Revised and Enlarged by E. W. GOODALL. Price, 14s. net. London: H. K. Lewis, 136 Gower Street, W.C.

The first edition of this book appeared in 1896. As medical students are now taken into our infectious and contagious disease hospitals in Canada, they will find in this book a fitting companion for their studies on these diseases. There are some additions in this edition. There are chapters on Glanders, Cerebro-spinal Fever, and Plague. There are several illustrations. Altogether it makes a very complete handbook for others than medical students.

The Student's Handbook of Physiology. By the late ARTHUR CLARKSON, M.B., C.M., Ed., and DAVID A. FARQUHARSON, M.B., C.M., Ed., F.F.P. & S., Glas. Price, 12s. net. Edinburgh: E. & S. Livingston, 15 Teviot Place.

This text-book for medical students on the subject of physiology is a thorough yet concise exposition of the entire subject. It was completed by Dr. Farquharson after the untimely death of Dr. Arthur Clarkson, who was the author of a well-known Atlas and Text-Book on Histology. The sections on the Special Senses, and the chapter on the Central Nervous System are the work of Dr. Farquharson; all the rest that of Dr. Clarkson. The book is a convenient volume, quite aptly illustrated with a large number of new designs. We can heartily recommend it to our Canadian medical students.

Practical Points in Anesthesia. By FREDERICK-EMIL NEEF, B.S., B.L., M.L., M.D., New York. Price, Semi-De Luxe cloth, 60 cents, postpaid. Library De Luxe ooze flexible leather, \$1.50, post paid. New York: Surgery Publishing Co., 92 William Street.

This very practical monograph presents the author's impressions on the correct use of chloroform, ether, etc., and is a simple and coherent working method, and is of particular value to those general practitioners who are so situated that the services of a trained anesthetist cannot be secured. Among the subjects covered are: Induction of Anesthesia, Cardiac and Respiratory Collapse, When Shall the Patient Be Declared Ready for Operation, Maintenance of the Surgical Plane of Anesthesia, Important Reflexes, Vomiting during Anesthesia, Obstructed Breathing, Use of the Breathing Tube, Indications for Stimulation, Influence of Morphine on Narcosis, General Course of Anesthesia, Awakening, Recession of Tongue after Narcosis, Post-Operative Distress, Minor Anesthesia with Ethyl Chloride, Intubation Anesthesia, etc., etc.

This extremely practical and useful little book is condensed to about fifty pages, but every page is replete with valuable data. Printed upon heavy India tint special Cheltenham paper with Cheltenham type, with marginal headings in contrasting colored ink.

The Physicians' Visiting List, for 1909 (P. Blakiston's Son & Co.), has reached us. This marks the fifty-eighth annual issue of this very useful little book, during whose life medical science has made greater progress, perhaps, than for five hundred years previous. Its very length of days bespeaks a popularity with the profession, which is a guarantee of its worth.

The Canadian Medical Protective Association

ORGANIZED AT WINNIPEG, 1901

Under the Auspices of the Canadian Medical Association

THE objects of this Association are to unite the profession of the Dominion for mutual help and protection against unjust, improper or harassing cases of malpractice brought against a member who is not guilty of wrong-doing, and who frequently suffers owing to want of assistance at the right time; and rather than submit to exposure in the courts, and thus gain unenviable notoriety, he is forced to endure black-mailing.

The Association affords a ready channel where even those who feel that they are perfectly safe (which no one is) can for a small fee enroll themselves and so assist a professional brother in distress.

Experience has abundantly shown how useful the Association has been since its organization.

The Association has not lost a single case that it has agreed to defend.

The annual fee is only \$3.00 at present, payable in January of each year.

The Association expects and hopes for the united support of the profession.

We have a bright and useful future if the profession will unite and join our ranks.

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No. 6.

COMMENT FROM MONTH TO MONTH.

Foot and Mouth Disease, sometimes called epizoötic eczema, having broken out in New York, Pennsylvania and Michigan, the Canadian Department of Agriculture has taken prompt action in preventing its introduction into Canada. As the disease sometimes appears in man medical men will be interested in the symptoms as they appear in the human being. It may be transmitted to man through milk, butter and cheese, or may be inoculated through wounds. The symptoms appearing in man are: fever, disturbance of digestion, vesicles on the face (lips and ears), fingers, arms, female breasts, mucous membranes of mouth, pharynx, and conjunctiva; abdominal pains, vomiting. Although the disease is rarely fatal in cattle, in young persons it sometimes supervenes. It is said not to be conveyed by eating meat. The disease has not appeared in Canada for over thirty years.

The Term "Certified Milk," now very much in use in connection with the pure milk crusade in Canada and the United states, originated with Dr. Henry L. Coit, Newark, N.J. When,

in the spring of 1887, Dr. Coit found himself confronted with the problem of artificially feeding his own infant son, he began to take a more intelligent interest in the question of pure, clean milk. After varying vicissitudes for several years, he was able to interest medical men to a great extent in it, and succeeded in founding the Essex County Medical Milk Commission in 1893. A dairyman was found who promised to live up to the requirements of this milk commission, who subsequently had the word "certified" registered in the United States Patent Office in 1904, it being distinctly understood that the use of the term should be allowed without question when employed by medical milk commissions. It was Dr. Coit who suggested the word to be applied, when the product conforms to the clinical requirements of cow's milk, fulfilling these three conditions: 1. An absence of large numbers of micro-organisms, and the entire freedom of the milk from the pathogenic varieties. 2. Unvarying resistance to early fermentative changes in the milk, so that it may be kept under ordinary conditions without extraordinary care. 3. A constant nutritive value of known chemical composition, and a uniform relation between the percentages of the fats, proteids, and the carbohydrate. The second commission was formed in 1898, five years later, and there are now about thirty operating in the United States. The standards for bacteria vary with the different commissions, a good many placing the maximum at 10,000 per cubic centimeter, though some go as high as 30,000 (about 15 c.c. to tablespoonful). The standard for fat, generally speaking, is 4 per cent. Very often the bacteria do not come nearly so high as the standard, averaging 5,000 to 6,000. Certified milk has been known to keep sweet forty-five days. Its average price is about 12 1-2 cents the quart. When dairies conform to the requirements of the medical milk commission, with whom they have legal contracts, as to ventilation, light and sanitary surroundings of stables, cleanliness and freedom from disease of all employees, proper veterinary inspection of cows, and thorough cleanliness in bottling, handling and refrigeration to 40 deg. F., certificates are issued to those dairymen, hence the term.

Should Doctors be the Issuers of Marriage Licenses?—This subject was given some attention in these columns before. It might be of sufficient importance to engage the attention of our provincial medical associations. In the degenerate, the tuberculous, the syphilitic, the gonorrhoeic, doctors know the unhealthy and evil consequences which follow in the wake of these marriages; and as preventive medicine is taking on such progressive strides the world over, this matter of the marriage of the unsuitable from the standpoint of disease will very soon come to the fore. Indeed, there are signs that sanitary laws will inevitably in the near future be applied to at least the syphilitic and gonorrhoeic. Advanced opinion on the social diseases advises medical inspection and examination prior to the consummation of the marriage rite. It is scarcely necessary to detail the numerous diseased conditions which follow in the wake of an unclean marriage contract. They are long since known and established in medical annals. One of the most terrible consequences is blindness in the offspring, the result of a latent gonorrhoea in the male parent. In fact, it has been computed, on authority scarcely to be questioned, that in the United States from twenty to thirty per cent. of blindness is caused by gonorrhoeic infection. Morrow says, as regards syphilis, that unquestionably the most sombre chapter of marital syphilis is the murderous influence of the disease upon the offspring. Knowing from practically personal experiences the murderously evil results in the social diseases to the family, are physicians as abreast of the times in the sanitary aspect thereof, as they are in other directions? Public sentiment would not listen to the regulation or police surveillance of either disease. In fact, where that has been in vogue it seems to have lamentably failed. But it would seem as though the day were coming when they shall be placed under the control of the health officer like other contagious diseases. A great deal of good would accrue to the family and to society were this done, and were a medical examination, at least, required of the male, and the issue of the licence proceed from a member of the medical profession. One State of the American Union is proceeding in this direction at the present time. Before the Georgia legislature there is a

bill looking towards a medical examination as a compulsory requisite before obtaining a marriage license. It would seem that the two would almost go hand in hand, as the physician could be empowered to withhold the license after the medical examination.

The Retirement of Dr. R. A. Reeve from the Deanship of the Medical Department of Toronto University is announced. For upwards of twelve years Dr. Reeve held this honorable position. That it was at times a laborious and trying one there is no doubt. He, however, was always able to bring to the discharge of his duties, energy, enthusiasm and tact. With the faculty and student body he was always popular. For the latter's interest he was ever indefatigable. He led the former, and presided over its deliberations with an unusual amount of common-sense and a spirit of fairness. He took a keen and very active interest in everything pertaining to the provincial university in its larger sphere, and did not confine his feelings and sympathies to the medical department. Ever urbane, always sympathetic and disinterested in personal aggrandizement, his tenure of office will be particularly remembered for the watchful care he took of the student body. He retires from his duties with the love and profound respect of a great many men who secured their degrees under his régime, as he has continued to command that of his confrères and contemporaries. We wish to his successor, Dr. C. K. Clarke, a like success in his administration.

Dr. W. A. Young, Managing Editor of the *Canadian Journal of Medicine and Surgery*, is, we are very pleased to announce, convalescing nicely after a very prolonged and severe illness.

News Items.

MONTREAL has been holding a Tuberculosis Exhibition.

DR. W. N. ROBERTSON has located permanently in Dunchurch.

SMALLPOX existed in fifteen centres in Ontario in October, with fifty cases.

DR. R. M. COULTER, Deputy Postmaster-General, is in Australia.

HAMILTON hospital nurses are to have a new Home, at a cost of \$20,000.

DR. MCGREGOR, of Waterdown, was thrown from his carriage and his thigh broken.

THE Western Hospital, Toronto, has been donated \$25,000 by a citizen of Toronto.

DR. PANTELEON PELLETIER is mentioned as Speaker of the new Quebec Legislature.

THE total number of deaths in Ontario in October was 2,328, a death rate of 13.8 in 1,000.

DR. L. C. PREVOST, Ottawa, accompanied Sir Wilfrid Laurier on his trip to the Southern States.

BRITISH COLUMBIA medical examinations have recently been held, there being thirty-two candidates.

THE Hammond Fund for the institutions of the National Sanitarium Association has reached over \$30,000.

DR. WILFRID GRENFELL, of Labrador fame, is on his annual six months' visit to Canada and the United States.

DR. D. J. GIBB WISHART, Toronto, has been promoted to chief of ear, nose and throat department of Toronto General Hospital.

THE Royal Jubilee Hospital, Victoria, B.C., is contemplating extensive additions. During October they treated 172 patients.

DR. MILLYARD, of Goderich, has gone on a six or eight months' absence, to be spent chiefly at the leading British and European hospitals.

DR. J. I. CASSIDY, formerly of Moorfield, Ont., but latterly of Brantford, has purchased the practice of Dr. McWilliams, of Drayton, Ont.

THE Nu Sigma Nu Greek letter society for medical men met in bi-annual session in Toronto during the week ending the 28th of November.

ST. CATHARINES, Ont., Marine Hospital treated 516 patients during the last hospital year. The hospital has a fund of \$8,620 for a new building.

THERE were five hundred cases of typhoid fever in Ontario in October, with 126 deaths, as compared with 50 deaths in the same month in 1907.

DR. GEO. D. PORTER, Toronto, has been appointed assistant and travelling secretary to the Canadian Association for the Prevention of Tuberculosis.

VANCOUVER citizens have during the past four years placed \$400,000 at the disposal of the Management Committee of the Vancouver General Hospital.

PROF. ERNEST RUTHERFORD, formerly professor of physics in McGill University, but now of Manchester, England, is slated to receive one of the Nobel prizes.

DR. CLARENCE HILL, who has been assisting Dr. Gunn, of Clinton, has been appointed house surgeon of the New York Hospital for a term of two years.

THE Canadian Medical Association meets in Winnipeg on the 23rd, 24th and 25th of August, 1909. Dr. H. H. Chown is chairman of the Committee of Arrangements.

DR. A. T. WILSON, of the Toronto Provincial Hospital for the Insane, has been appointed superintendent at the similar institution at Cobourg, in succession to the late Dr. Hickey.

DRS. JOHN BALL, of Hanover, and Hector N. McNeil, of Latchford, have been appointed associate coroners for Grey and Bruce Counties and Nipissing District, respectively.

DR. FERGUSON, Hensall, has sold his property and goodwill to Dr. Aikenhead, of London, and taken over the practice of his late brother, Dr. A. K. Ferguson, Bathurst Street, Toronto.

DR. HARVEY SMITH, Winnipeg, Man., is east on a trip to Toronto, Montreal and New York. Dr. Smith is secretary to the Committee of Arrangements of the Canadian Medical Association.

DR. W. T. WILSON, assistant superintendent of the Toronto Asylum, has been promoted to the superintendency of the Asylum at Cobourg, made vacant a month ago by the death of Dr. C. E. Hickey.

THE Ontario Medical Council has communicated with the Crown Attorneys throughout the province, asking for reports of its members who may be accused of unprofessional practices of a criminal character.

THE following have been admitted members of the Royal College of Surgeons: C. R. Runnig, E. M. Gideon, A. M. Rolls, G. S. Strathy, W. Taylor, of Toronto University, and E. A. Lindsay, McGill.

DR. ERNEST JONES, Bloor Street, Toronto, has been appointed pathologist and neurologist at the Toronto Hospital for the Insane. He succeeds Dr. J. G. Fitzgerald, who retired on October 1st last to accept an appointment in Boston, Mass.

THE gift of a brick house, with several acres of ground, as the basis, together with an endowment fund of \$25,000, to found a hospital, has been made to the township by Mrs. Gualco, Kin-cardine, Ont., who called together about sixty citizens at her home, Villa Kalisz, and handed the key of the house to the Mayor.

DR. C. D. PARFITT, who was for six years physician-in-charge of the Muskoka Free Hospital for Consumptives at Gravenhurst, Ont., and has been for the last seven months resident consultant to that institution and the Muskoka Cottage Sanatorium, has resigned his position. Dr. Parfitt will remain in Gravenhurst and continue practice in pulmonary and laryngeal tuberculosis.

DR. EDWARD STUBBS, Stratford, Ont., left recently for Rochester, Minn., where he will be joined by Mr. R. D. Forbes, F.R.C.S., also of Stratford, and together they will go to the North-West, and then through to the coast *en route* on a trip round the world. Dr. Stubbs intends making Vienna, Austria, his headquarters, while he takes a post-graduate course in the celebrated university there.

THE Academy of Medicine, Toronto, at its last regular meeting was the recipient of a valued addition to its collection of portraits of eminent medical men in the presentation of the portrait of the late John Fulton, M.D., M.R.C.S., L.R.C.P., by his daughters, Miss Fulton, Mrs. Jull and Mrs. Fisher. Miss Fulton unveiled the portrait, and Dr. G. A. Bingham made the presentation address. Dr. Fulton at the time of his death, in 1887, was professor of surgery in Trinity Medical College, having been previous to that date professor of anatomy in the same school. He was a brilliant anatomist and surgeon, entirely devoted to his profession, esteemed by everyone for his many charming qualities and greatly beloved by his pupils, whose firm and generous friend he ever proved himself. The remainder of the evening was occupied in the delivery of an able address by Dr. Kinghorn, of Saranac Lake, N.Y., on "The Tuberculin Test in the Diagnosis of Pulmonary Tuberculosis."

An English-Chinese Lexicon of Medical Terms, prepared by Dr. Philip B. Cousland, has just been published in Shanghai. Though the author is an Englishman by birth, he has based his book largely upon the Medical Dictionary of Dr. George M. Gould, of Philadelphia, a high compliment to American scholarship. Dr. Cousland has recently published a translation of Prof. Halliburton's edition of Kirke's Physiology.

MEDICAL APPOINTMENTS TO MUSKOKA SANATORIA.—At a meeting of the Board of Trustees of the National Sanitarium Association, held at the head office, 347 King St. W., on Monday afternoon, two important appointments were made in connection with the Muskoka Cottage Sanatorium and the Muskoka Free Hospital for Consumptives. Hon. W. A. Charlton occupied the chair, and among others present were W. J. Gage, J. J. Crabbe, T. H. Bull, Ambrose Kent, Thos. Long, Dr. W. P. Caven and Dr. N. A. Powell. The resignation of Dr. C. D. Parfitt, as Resident Consultant, was accepted. Dr. Alfred H. Caulfield, of the Toronto General Hospital, was appointed Resident Pathologist, and Dr. W. S. Lemon was added to the Resident Staff of the Muskoka Institutions. Dr. W. B. Kendall continues in his position as Medical Superintendent of the two institutions. These appointments very greatly strengthen the medical position of the Sanatoria, the two new appointees holding prominent positions in the profession. Dr. Alfred H. Caulfield graduated in medicine in 1904. After graduating he became Assistant Bacteriologist in the Provincial Board of Health, and demonstrator of Bacteriology in the University of Toronto. Later he accepted the position of Interne in Pathology at the Toronto General Hospital, and was subsequently made the first resident pathologist of that institution. Spending a year abroad, he entered the laboratory as an assistant to Sir A. E. Wright, London, Eng. This was followed by a period in the laboratories of Dresden and Berlin. Dr. Caulfield, not only from his excellent work done in the laboratories of the Toronto General Hospital, but through papers published, has achieved a reputation not only in Canada, but beyond, and is recognized to-day as one of the foremost pathologists in Canada or the United States. Dr. W. S. Lemon took first scholarship on entering his medical course in Toronto, and finally carried off the Gold Medal, Brown's Scholarship, and Clark's Scholarship. After graduating, he took up a course in research work in the University, and was also for a time Resident Physician in the Toronto General Hospital, and has spent some time in general practice in Toronto.

Publishers' Department.

OXOLINT ABSORBENT LINEN.—This is a pure product of flax. It is chemically prepared in a way that makes it aseptic and antiseptic, and gives it an unequalled absorbency. While in general appearance it resembles absorbent cotton it greatly differs from that substitute in every essential particular. It is more hygienic. It is cooler and more soothing where there is inflammation. It is more fibrous and therefore less fuzzy and freer from adhesive particles. It is more elastic and does not mat and pack as cotton does when saturated. It is five times more readily absorptive than cotton. It acts instantly. It is odorless, and it tends to destroy odors. It retains its peculiar properties indefinitely. It does not deteriorate with age. Surgeons, physicians, professional nurses, dentists, druggists and editors of medical magazines have endorsed Oxolint as the Ideal Absorbent. It is better than cotton and costs but a trifle more. Its uses are not confined to medical needs. It has many important services in the home. It meets toilet requirements as no other similar preparation does. It is not only cleansing and purifying, it is also healing. It is valuable alike in the nursery and in the boudoir. It is far superior to a sponge in the bathing of infants, being aseptic and antiseptic, and, a fresh supply being used each time, there is no gathering of microbes or filth through the carelessness or negligence of the nursery maid. For the same reason it is a periodicity ideal. Its sanitary virtues make it a household treasure. After having had experience with it no family will be without it. Oxolint supplies a demand that has long existed, and represents a triumph of scientific discovery. There had been many times repeated attempts to secure a pure linen absorbent, and it took the inventor of Oxolint twenty years to develop and perfect the processes that so wonderfully convert raw flax into linen fibre ready to card for spinning or making into Oxolint in the space of a single working day. For more centuries than have historic record it has required from eleven to thirty weeks to do with flax what the new processes