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Original Communications.

CASE OF ACUTE YELLOW ATROPHY OF THE LIVER.

BY J. BRADFORD MCCONNELL, M. D.,
*Professor of Pathology in Bishop College
Montreal. Consulting Physician to the
Montreal Dispensary **

Mrs. G., aged 51, widow, has had five children, is about medium height, inclined to corpulency, weighing about 200 pounds, has usually enjoyed good health with the exception of occasional attacks of biliousness or indigestion and symptoms referable to hepatic derangement; these attacks have occurred off and on for the last 22 years, never had jaundice, has never used alcohol, and there is no history of syphilis. Had la grippe during the second week of last month, and had a relapse about first of February. I saw her for the first time on the 13th of February, 1890. She complained of loss of appetite, nausea, headache, constipation and pain in the region of the liver; on percussion the liver dullness extended 3 inches in front, no stigmata on the face. About the 20th a

slight icteroid hue of the skin was observed, which became well marked jaundice by the 25th, with increased headache and a burning, pricking sensation in the skin, no pain complained of, bowels moved by purgatives.

March 7th—Jaundice more marked, the skin having a bronzed appearance and the conjunctivæ deeply tinged, an epistaxis had occurred the day previous, little tenderness over the liver—vertical dullness being only two inches. During the last three days, and five or six times daily, a rushing sound in the ears has been felt, followed by temporary deafness. Tongue is heavily coated in the centre, clean and smooth at the edges, hands and feet slightly œdematous; urine scanty and high colored, sp. gr. 1019, no albumen or sugar, loaded with bile pigment; skin dry, and temperature rises in the evening.

March 17.—Hue of skin the same, but less itching, no œdema, headache for three or four hours daily, and vomiting of a bitter, sour, yellowish liquid two or three times a day. No pain in the region of the liver, but a fullness complained of, food does not digest, but is vomited up sometimes twelve hours after; stools have the appearance of white marbles; temperature in a.m. 98½.

* Read before the Medico Chirurgical Society of Montreal, March 18th 1892.

March 28.—Headache, almost constant dizziness, and deafness complained of; pains in calves of legs and thighs; to-day complained of pain in the liver region and under the right scapula, which was very severe in the afternoon, but suddenly abated and was followed by an attack of diarrhoea.

April 1st—Diarrhoea has continued, stools liquid and bright yellow, complains of acute pain in the region of the gall bladder, had one attack of excruciating pain lasting three minutes, severe headache, jaundice less marked.

April 15th—Diarrhoea still continues, stools liquid, saffron yellow and not offensive, colicky pains complained of in the abdomen. The treatment has been chiefly symptomatic, sprudel salts and phosphate of soda; mustard applications in the beginning until diarrhoea set in.

11th—Somewhat better, diarrhoea kept in check by an occasional camphor and opium pill, hæmorrhoids have caused some distress.

17th—Condition much the same, diarrhoea with yellow stools continues, and headache more or less constantly present.

May 17th—Patient has continued much in the same condition, but during the last three weeks fluid has accumulated in the peritoneal cavity, complains of more or less constant pain in the abdomen; during the last three days vomiting has been frequent, urine loaded with bile pigment, sp. gr. ranging between 1012 and 1026, and containing abundant deposits of leucin, but I was not able to detect tyrosin; no albumen.

May 20th—Urine suppressed to-day, and abdomen much distended with ascitic fluid and gas; pulse 130; respiration 40; temp. 97°; pupils widely dilated; she is in a condition of stupor, tossing about, profound coma supervened, death occurring about midnight.

Autopsy seventeen hours after death.—

Rigor mortis present post-mortem, discoloration on back and shoulders well marked, skin generally has an icteroid hue, not much emaciation, 2½ inches of fat on abdomen, about four gallons of ascitic fluid removed from the abdomen, stomach distended with gas, but normal in appearance. Liver weighed 38 ounces, averaging 1¾ inches in thickness, rather firm in consistence, although very flaccid as a whole, bile-stained, yellowish brown in color, thickly mottled with small whitish spots which are raised above the surface, gall-bladder contained about two ounces of fluid, bile is easily forced through the cystic and common ducts into the duodenum. Spleen weighed 6½ ounces, dark violet in color; kidneys normal in appearance, slightly congested, capsule not adherent. Microscopical examination of the liver shows marked hyperplasia of the connective tissue, much of it apparently freshly formed, vessels and bile ducts have been formed in it, the lobular arrangement of the cells is completely obliterated, the cells much atrophied, and in some places have undergone fatty degeneration, in others only the detritus of broken down cells remain, in some cells bile pigment is deposited, no crystals of hæmatoidin or bilirubin observed, few of the terminal interlobular branches of the portal can be seen. There are masses of liver cells apparently belonging to sound lobules surrounded by white fibrous tissue, besides these masses there are those where only a few atrophied cells are found also surrounded by connective tissue. Connective tissue is especially abundant in and around the portal space, the marked angularity of the cells is a striking feature in the sections, no ecchymoses were discovered; the nuclei in some of the cells take the stain.

I found this case interesting chiefly from the fact that I was not able to make a satisfactory diagnosis. After a few weeks observation a number of affections of the

liver could be excluded, thus amyloid disease could not exist, as no chronic suppurative process was present and the liver was diminished in size—it was not cancer from the absence of great pain and progressive enlargement, hydatids are also accompanied by enlargement, the pain and history is different from what is observed in contractions of the liver following local peritonitis. In the contraction following occlusion of the gall ducts by calculi there is a history of numerous attacks of hepatic colic followed by temporary jaundice, clayey stools and the *fièvre intermittente hépatique* of Charcot. No evidence of occlusion of the portal vein by thrombus, pressure or otherwise was obtainable. The absence of fever, sweating, and rigors excluded all acute inflammatory affections. It seemed to become a question between interstitial hepatitis or sclerosis and acute yellow atrophy of the liver. Against the view that it is the former is the absence of a history of indulgence in alcoholic liquors or of metallic poisoning, the short duration of the attack, the persistent and high degree of jaundice and its occurrence at the onset of the attack, no enlargement of the organ preceded its atrophy, no particular emaciation of the patient, the late appearance of the ascites and its not being particularly distressing and the normal size of the spleen. In favor of the case being one of acute yellow atrophy there is the appearance of jaundice in the prodromal or early period of the disease and lessening during the later half—although this may be accounted for by the appearance of bile in the stools, as if some slight obstruction, catarrhal or otherwise, in the ducts had been removed, and it is noticeable that from the date of this egress of bile diarrhoea set in, and continued, being kept up chiefly through the obstructed portal circulation in the liver. A polycholia existed for a time, in which the jaundice was diminished but slightly, although

accompanied by copious bilious stools. The abundant deposits of leucin indicated a corresponding degree of lessened excretion of urea, the dilatation of the pupil during the last few weeks, toxæmic symptoms with elevation of temperature at the end, the termination in coma, and all occurring in a period of about three months are points in favor of a subacute form of acute yellow atrophy, and the microscopical examination demonstrates atrophy of cells and considerable development of connective tissue, a condition described as being sometimes present in this disease by Waldeyer. The age of the patient is very unusual for the occurrence of this disease, and its extreme rarity necessitates care in the diagnosis; but from most points of view I think the evidence is in favor of this case being one of this rarely observed disease subacute in character. Among the functions of the liver are its antiseptic functions; poisonous substances from the gastro-intestinal tract are destroyed, or their action modified in the liver. Some have supposed acute yellow atrophy to be due to the action of bacteria, but most observers have failed to find them, and have to fall back on the supposition that some irritating ptomaine is the cause. Why not in this case explain the lesser degree of atrophy by supposing the morbid products to have been conveyed to the liver in such amounts that it was able to overcome it partially, death occurring from toxæmia before all the lobules had been completely destroyed.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, March 4th, 1892.

F. BULLER, M. D., PRESIDENT, IN THE CHAIR.

Resection of the Intestines for fibrous stricture following Strangulated Femoral Hernia.

—DR. SHEPHERD exhibited a woman, aged 53, on whom he had performed this operation in

December last, and at present the patient is in good health, having a perfectly normal condition of the bowels. The history of the case was given shortly as follows: Patient was brought to the Montreal General Hospital on 5th August, 1891, for strangulated femoral hernia, which was relieved by operation; the bowel, looking suspicious, was returned with some misgivings, and was retained immediately within the femoral ring. The patient did well, but after a couple of weeks the wound re-opened and some sloughy tissue came away; after this she rapidly improved, and left the hospital on Sept. 12th, with a small sinus still persisting. She was seen again in October, and at that time was suffering from marked symptoms of chronic obstruction. There was pain and tenderness over the whole abdomen, which was much distended and tympanitic, and there was frequent vomiting. This was soon succeeded by a severe diarrhoea, which was accompanied by the passage of a large amount of flatus. The distension, tenderness and discomfort soon subsided, only to be succeeded in a few days by a similar condition of affairs. At the site of the operation wound there seemed to be a large mass of cicatricial tissue, and pressure here caused pain. She said that the obstruction was always felt to be at this point. Exploratory operation was suggested, and she was told to return to hospital if her condition did not improve. She was re-admitted to hospital on December 17th, 1891, for operation.

Operation.—An incision was first made in the linea alba, and the seat of obstruction explored. The bowel was found embedded in cicatricial tissue at seat of old operation, and whilst endeavoring to separate it, it was torn. A second incision was now made in the right semilunar line so as to see better the attached intestine. It was found that the whole anterior wall of the small bowel at this point was a mass of cicatricial tissue, and that the lumen of the bowel was not greater in diameter than a lead pencil. It was immediately decided to resect the bowel, so the attached portion was separated and the strictured part was cut out, altogether about three inches of bowel were removed with the attached mesentery. The two ends were now brought together in the usual way; the upper end of the bowel being much larger, the lower end was with some difficulty approximated to it. Two rows of fine interrupted silk sutures were used, an inner row passing through the muscular and mucous coats, and an outer row passing through the external coat after the method of Lembert. After dropping back the united intestine, both abdominal wounds were closed with silkworm gut sutures and a rubber drainage tube inserted into the lower angle of the lateral incision. This reached the point where the bowel had been involved in the cicatricial tissue, and which was freely

oozing. The wound was dressed with iodoform gauze and absorbent cotton. The patient did well for some days, and on the fourth day after operation (21st) passed a well formed stool. On the 23rd of December she complained of chilliness, pains in her limbs, and soon there was high fever and a bronchitic cough, which developed into a severe attack of bronchitis. She had for many years been subject to asthma, and had had frequent attacks of bronchitis. All this time there were no symptoms referable to the abdomen, though her general condition gave rise to alarm. Under active treatment she gradually improved. The severe cough caused much pain in the abdominal wounds, and frequently disturbed the dressings, so that a small abscess formed in connection with the central wound; this was in the walls of the abdomen only, and as soon as opened healed rapidly. Towards the end of January patient was going about the ward; the abdominal wounds were completely healed and bowels quite regular. Later on she developed a middle ear abscess; this, I have no doubt, followed the bronchial attack, which was evidently a form of the prevalent influenza. She left hospital with the ear trouble quite well on February 16th, and her general condition has improved ever since.

Dr. Shepherd also stated that Dr. Boone of Presqu'Isle, Maine, a graduate of McGill of 1887, wished him to report a successful case of resection of the intestines in a case of strangulated inguinal hernia. The case occurred in a man who had extroversion of the bladder with double inguinal hernia. The right side became strangulated, and operation for relief was immediately performed by Dr. Boone. The bowel was found to be gangrenous, so nine inches were excised. The patient did well, and is now alive and in good health. The operation was performed in April, 1890.

Spina Bifida.—DR. JAMES BELL showed a child on whom he had operated for this condition, and gave the following history of the case:—

The child, a female, when first seen at 15 months of age, had a tumor about the size of a cocoon situated over the sacrum and attached by a broad, short pedicle about two inches in diameter. It was covered with normal skin, was translucent, and, according to the mother's statement, was growing rapidly, out of proportion to the growth of the child. It was described as of about the size of a hen's egg at birth, and covered with thin, reddish skin. No increase of tension was observable when the child cried. Two months later, Jan. 29th (the conditions being as already described), the tumor was excised. An incision was first made longitudinally and well to the side, to avoid any nerve elements which might possibly be attached to the sac. The fluid, clear and colorless, escaped, and the interior of the sac was exam-

ined. It contained no nerve elements, and there was no communication with the spinal canal although the arches of the last lumbar and upper sacral vertebræ were absent; and on subsequent examination the tissues of the sac were found to correspond in structure with the membranes of the cord. The tumor was excised by elliptical incisions, the edges brought together with catgut sutures, with a few strands of catgut at the lower angle for drainage. Primary union took place throughout, and the child was discharged from hospital on the 19th day after operation.

Dr. Bell stated that he brought the case before the Society mainly for the reason that spina bifida seemed to be considered by physicians generally as a condition not amenable to surgical treatment. This view was no doubt based upon the fact that under old surgical methods the mortality was very great, and after excision the patient almost invariably died within a few days from septic meningitis. Hence the tendency to leave these cases to nature, although it is a generally accepted fact that only a very small proportion of these patients live to reach adult life, and in a still much smaller proportion the tumor undergoes spontaneous cure. Hence, also, the treatment by ligature and injection. Dr. Bell considered excision the ideal operation, and thought that success or failure depended largely, if not altogether, upon asepsis, and quoted from recent authors in support of this statement. The case in point was one of those (sometimes called false spina bifida) in which any method of treatment would succeed, and in case of rupture or suppuration spontaneous cure would result.

Uterine Polypus.—DR. LAPHORN SMITH exhibited the specimen which he had removed last summer from a patient sent to him by Dr. DeMoulied, who had been treating her for some time for profuse menstruation. Being single, and 35 years of age, it was several months before she could be induced to submit to an examination. The vagina was found filled with a solid fibroid tumor, the pedicle of which extended up into the uterus as far as the finger could reach. When Dr. Smith first saw her she was in a state of profound anæmia. The fibrous pedicle was snipped off easily from its insertion to the cervix, about the level of the internal os, and no hemorrhage followed. The patient made a rapid recovery, being able to walk about at the end of two weeks. She was then put on Bland's pills, with very great benefit. Dr. Smith pointed out the necessity of insisting upon a local examination in every case of profuse hemorrhage from the uterus which is not arrested by a few weeks treatment with ferruginous tonics.

Pelvic Hæmatocele possibly due to Extra-uterine Fætation.—DR. LAPHORN SMITH reported this case, which occurred in the practice

of Dr. René DeCotret. Madam G., aged 27, married seven years, and mother of one child four years old, consulted Dr. DeCotret about a month ago for metrorrhagia, which had lasted five weeks. She had begun to menstruate at 15, and had always been regular until May, 1891, when her periods came on twice in a month and lasted eight or nine days, suffering at the same time from constant headache, leucorrhœa, constipation, and frequent micturition. In November she missed a period, and since then her breasts have been tender; the metrorrhagia began in December, and was accompanied by severe pain in the abdomen, loins and perineum. Dr. DeCotret found a badly lacerated cervix and the uterus pushed over to the left side by a swelling in the right lateral fornix. Dr. Smith was called in consultation, and found the above conditions, and diagnosed disease of the tube and ovary of the right side, strongly urging their removal. Consent was given, and two days later Dr. DeCotret, assisted by Dr. Smith, performed abdominal section. On passing his finger into the abdominal incision the operator came on a soft tumor the size of an orange, through the walls of which he easily entered, and at once there appeared at the incision about half a pint of tarry fluid. This was sponged out and a handful of clots torn away. The ovary was then brought up and found to be cystic, the tubes were enlarged to the size of the thumb for a distance of two inches from the fimbriated extremity; the tube and ovary were removed, the cavity flushed with hot water at 110°, a drainage tube inserted, and the wound closed with silkworm gut. The tube was removed on the third day. The temperature has been 98½° ever since, with the exception of the third night, when it reached 101° for a few hours only. There has been total absence of pain; but one hypodermic of morphia was given after the operation to weaken the heart and so diminish oozing. The bowels were moved next day with Rochelle salts, and on the twelfth day the patient was practically well and on full diet. The operation was performed in a little tenement house, with none of the conveniences of a modern hospital, and by a surgeon who had never performed the operation before. The specimen was a beautiful one; the tube could be distinguished in its whole extent, about five inches in length. About an inch from the uterus it suddenly ceased to have its thick whip-cord appearance, becoming distended to the size of the thumb for about three inches with a solid clot, and its walls being stretched out to the thinness of tissue paper. The remaining inch with the fimbriated extremity on the end of it was not distended very much, but contained a little dark blood. The fimbriæ were buried in a large blood-clot which filled the peritoneal cul-de-sac, and in which the ovary was imbed-

ded. The layers of the broad ligament were separated by a layer of blood-clot half an inch thick. The appearances were just such as we would expect to find in a case of extra-uterine foetation which had ruptured, at the twelfth week, into the broad ligament, some of the blood escaping into the peritoneal cavity through the fimbriated extremity. Against this view, however, we have the report of Dr. Bruère, who, after a careful examination, states that no chorionic villi or decidual cells had been found. Unless we are willing to admit that these tissues can undergo fatty degeneration and be absorbed in about a month, we must fall back upon the opinion which Dr. Bruère holds, that this is a case of hæmatosalpynx; in other words, that the mucous membrane lining the tube became so congested that it began to pour out venous blood faster than it could escape into the uterus, and that the rest of the blood ran into the peritoneal cavity, where it produced just enough local peritonitis to throw out a wall or limiting membrane of exudation.

DR. WM. GARDNER said that in a large proportion of cases such as the second, we would expect to find chorionic villi if not a foetus, but we cannot gainsay the pathologist's report. He had met with a somewhat similar case. A French woman, mother of seven children, had lost blood for thirty-eight days, and during the last two weeks had three violent paroxysms of pain. A mass was discovered on one side of the uterus. On opening the abdomen a quart of blood was found in the cavity, and had evidently recently escaped; the left fallopian tube was removed. The outer extremity was very much more trumpet-shaped than normal, being large enough to admit the thumb; on opening it, it was full of recent clot. Though very weak, she rallied and left the hospital in three weeks. He emphasized the fact that a patient should not be allowed to go on to an exsanguine condition before operative interference. He had removed a number of polypi, some so large as to completely fill the pelvis, and had to be removed in wedge-shaped pieces. He had never been troubled with hemorrhage after their removal. He had lost one case of enormous polypus; inversion took place during its removal, the uterus was returned, but the patient never recovered.

Small Ovarian Cyst with Papillomata.—DR. WM. GARDNER exhibited the specimen, which he had removed from a woman whose only symptom had been severe vesical irritation some two months ago; this irritation suddenly ceased and a lump was detected. He thought that while the tumor rested in the pelvis it kept up an irritation of the bladder, but on slipping up out of the pelvis the symptoms ceased. It was an unilocular cyst filled with papillomata, and presented no difficulty in removal. This condition furnished an argument for early oper-

ation while the cyst remains whole and has a convenient pedicle, for if it should burst and the papillomata become scattered about and grow into masses all over the peritoneum, the prognosis is of the worst. He had removed a number of similar papillomatous cysts without any recurrence.

Bacillus of Diphtheria.—DR. MCCONNELL exhibited two tube cultures on solidified hydrocele fluid of Löffler's bacillus. They grow in from 18 to 24 hours, and as no other bacillus will form a layer so rapidly, we have a means by which we are able to make an absolute diagnosis. The first culture had been taken from a patch on the throat of a child who had suffered with patches on its throat time and again, but which were lightly regarded; the tube was inoculated, and within 18 hours a copious growth could be seen. He thought that many of these transient cases in which there was headache and sore throat with membranous formations were really diphtheria, caused by an attenuated form of the bacillus, which is exceedingly variable in its degree of virulence. The second tube was made from a culture nine months old. To test the activity of these old bacilli he inoculated a tube, and found that they grew even more rapidly than in the culture from the child's throat. This is a practical point, for it shows that the disease may linger about a house for a long time, especially if the bacilli become attached to organic matter, and suggests thorough disinfection. The great rapidity of the growth of these organisms suggests that the application of some antiseptic to the throat should be made very frequently. It is his rule to order the throat to be sprayed every forty minutes, and to give the iron mixture, with sulphurous and boric acids and half glycerine, between each application, in small doses so as not to irritate the stomach. He thought that the usual iron mixture owes its beneficial effects almost entirely to its local antiseptic action. Only when the secretions from the throat fall upon carpets or bedding and the like and become dry can the poison be distributed about in the air. Once the bacilli start to grow in sewers, the heat and moisture greatly favor their propagation, and he thought that it would be impossible to get rid of them.

DR. DECOW thought that it was well to treat all cases of sore throat in children as diphtheria, for we know that the sooner we commence treatment the better.

THE PRESIDENT asked where the patches were located in the child, and if it was not peculiar to have repeated attacks of diphtheria within so short a time.

DR. F. W. CAMPBELL cited the case of a family in which three members were attacked simultaneously by diphtheria, and the evidence pointed out conclusively that the infection

arose from the sewers. He agreed that once the poison got into the sewers it would be impossible to get it out, and he thought that it could be conveyed through the air.

DR. MCCONNELL said, in reply, that the danger of conveyance of the poison by air would be reduced to a minimum so long as it was kept moist. All rags used for cleansing the mouth and nose should be immediately burnt. The germs are easily destroyed by a temperature below the boiling point of water.

The late Dr. J. J. Dugdale.—The following resolution of regret was proposed by Dr. F. W. Campbell, seconded by Dr. McConnell, and carried: "That this Society wishes to express its deep regret at the death of Dr. J. J. Dugdale, one of its members, and begs to convey to his relatives deep and heartfelt sympathy."

Stated Meeting, March 18th, 1892.

F. BULLER, M.D., PRESIDENT, IN THE CHAIR.

General Tuberculosis in a Child Seven Months Old.—DR. LAFLEUR exhibited the organs of a child who had died suddenly. A caseous mass was found at the bifurcation of the trachea; the lungs were hyperæmic, over-distended with air, and contained a few scattered miliary tubercles, especially at the roots. A caseous tubercular nodule situated in the left lung was the only one observed in the lungs. The spleen contained miliary tubercles, some beginning to caseate; the same condition was present in the cortex of the kidneys. In the ileum, just above the fold of the ileo-cæcal valve, there was a ragged ulcer with thickened edges; it was probably tubercular, though no tubercles were found about its edges or base. The lesions are typical and originated in the tubercular focus in the bronchial glands. The case was of interest on account of the age of the child. It has been asserted by some that tuberculosis is unknown in infants under one year, but Landouzy and other French pathologists have shown that it may be present in sucklings, while in America Emmet Holt has demonstrated the same fact. In this case the lesions hardly appeared sufficient to cause death, but the trachea and bronchi were filled with a material identical with that found in the stomach, so that the child had probably been choked by drawing regurgitated food into the trachea. The family history was unknown.

Cancer of the Ovary and Peritoneum.—DR. LAFLEUR exhibited sections of this condition under the microscope. At the autopsy the abdomen was found distended; on section the walls were thin and the cavity contained three gallons of dirty brown, turbid fluid. The peritoneum was much thickened generally, and cancerous deposits were found on both the

visceral and parietal layers. The omentum showed the usual changes; it was drawn up like a cord about the transverse colon and quite unlike omental structure. There was no metastatic deposits in the liver, kidneys or spleen. Histologically the growth consists of fibrous stroma and alveoli containing small round and oval cells with nuclei about one-half the size of the cell and which stain deeply. The chronicity of the case was shown by the amount of fibrous tissue, all the pelvic viscera being bound together so that they had to be removed as a whole, forming a conical cast of the pelvis. In the right ovary there were areas of fatty degeneration and liquifaction, many of the cysts being filled with a grumous fluid.

DR. FINLEY gave the following history of the case: A woman, aged 55, a total abstainer. Towards the end of 1890 she began to feel unfit for much active exertion and was easily tired. He first saw her on July 22nd, 1891, when she complained greatly of eructations of gas and swelling of the abdomen; she had lost some flesh and was somewhat pale and thin. On August 18th there was a large amount of fluid in the abdomen with very distinct fluctuation and dullness in front and in the flanks, with a tympanitic note in the epigastrium as if fluid was beneath the great omentum. At this time there was also a good deal of vomiting, and the temperature ranged from 100° to 102°. Early in September the cancerous cachexia became very distinct, and the face showed the peculiar drawn expression so characteristic of severe abdominal disease. In December the distension of the abdomen was extreme; the superficial veins were much distended; pigmentation of the skin and œdema of the legs. Some thirteen quarts of fluid of a port-wine color were drawn off, sp. gr. 1020, and containing large numbers of red blood corpuscles and clumps of cells of a large size, probably cancerous. After tapping, the great omentum could be felt as a distinct bar across the upper part of the abdomen. During the last eight weeks of her life she took absolutely no food, and only small quantities of ice and water, which she would regurgitate. A few small subcutaneous hemorrhages developed before death, and occasional coffee-ground vomiting. There was no jaundice, and the only pain felt was in the back, and was never severe. The emaciation was most profound, due to the eight weeks fast. The mind remained clear to the last. It was at first doubtful whether the disease was cancerous or tubercular peritonitis. The patient's mother and sister died of tuberculosis, but as soon as the cachexia developed the diagnosis became certain. No pelvic examination had been made, as there were no symptoms pointing to disease of the pelvic viscera. The duration was probably about fifteen months, and the onset very insidious.

Branched Kidney Calculus.—DR. JAMES BELL exhibited the specimen, which was removed from the right kidney of a man aged 36 years, who gave the following history: The first symptoms were noticed about Christmas 1890, and consisted of sharp pain about the right loin, which persisted for about ten days, and then disappeared; in about a week it returned and was followed by swelling, which was noticed in the right hypochondrium. After free purgation the swelling disappeared, but he has suffered from vomiting and dyspeptic symptoms ever since. On admission to hospital on Feb. 3rd, 1892, the patient had a distinct painful swelling in the right hypochondrium; he had also suffered from vomiting, pain and discomfort about the tumor, which was always greater when he was constipated, and was always relieved by a saline purge. After a few days' observation the tumor suddenly became much reduced in size, and coincidentally there appeared in the urine a large quantity of pus. The urine had always contained some pus, but as the patient suffered from a tight old stricture five and a half inches from the meatus, its origin had been considered doubtful. For some days the flow of pus continued and the tumor became reduced in size until it could be distinctly felt to be the kidney. No blood had ever been observed in the urine. The question arose as to whether the kidney should be operated upon at once or the stricture first treated. The latter course was decided upon, and on the 24th of February the patient was anæsthetized and the stricture cut internally on the roof of the urethra, followed by dilatation up to 30 (French), and a drainage-tube through the membranous urethra. Troublesome hemorrhage followed, but was controlled without much difficulty, and the operation was promptly recovered from. Two weeks later the kidney was opened by lumbar incision and the stone removed from the upper and posterior part of the organ. The patient has made satisfactory progress since operation, but the urine still contains a small quantity of pus, and pain is complained of at times along the course of the ureter and just over the brim of the pelvis.

Retro-Pharyngeal tumor.—DR. JAMES BELL gave the following report: L. H., aged 12, admitted to General Hospital 9th March, 1892, complaining of a lump on right side of neck. This was first noticed on the 11th April, 1891, and was then about the size of a hen's egg. There was no pain. No history of tooth-ache, earache or sore throat having preceded it. It has increased very slowly in size, but more rapidly, she thinks, during the last few weeks. It has never been painful, neither has there been any difficulty in swallowing. Personal and family histories negative. On the 10th March an incision was made behind and below the angle of the jaw to avoid the branches of the

facial nerve. The tumor shelled out with the greatest ease, and, with the aid of the finger of an assistant in the pharynx, was delivered without any trouble. Recovery was uninterrupted. These tumors, which are comparatively rare, are typically illustrated in this case.

DR. LAFLEUR exhibited the tumor for Dr. Bell. It was spherical, with irregular surface and a distinct capsule. On section, it is seen to be of a greyish-pink color, and is not entirely solid, there being one large distinct cavity full of fluid, and several smaller ones filled with sago like material. The cells are very small and oval, with large nuclei. In places where the tumor has degenerated the basis can be made out better; the stroma is very delicate, reticulated and branching. The tumor more closely resembles a lympho-sarcoma than anything else, but as the tumor had a definite capsule, and was so independent of the surrounding tissues, it is very doubtful if it will recur.

Acute General Peritonitis following rupture of an Ovarian Cyst; Operation; Recovery.—

DR. BELL gave the following clinical report:—A. F., a widow, aged 35, was admitted to hospital on the 1st of March with symptoms of acute general peritonitis. She had complained of abdominal pain for nearly two weeks, and had been confined to her bed, very ill, for four days. She had always menstruated regularly, had never been pregnant, and menstruated last about two weeks before admission. The abdomen was considerably distended, very tense, hard and tender on pressure, with an indistinct fullness in the left hypogastrium which gave a dull note on percussion. Patient lay with her knees drawn up, and complained of constant severe pain, with spasmodic exacerbations. Pulse 120; temperature 102°F. Bowels had moved several times since onset of illness. During the night the bowels moved several times, and next day the fullness in the left hypogastrium had disappeared. Examination by rectum and vagina gave no definite results. On the 4th of March, the patient's condition being desperate, the abdomen was opened in the median line below the umbilicus. As soon as the peritoneal cavity was opened a copious flow of dark, olive-colored fluid escaped. The intestines were covered with lymph and matted together, so that the coils of small intestine had to be carefully separated to allow the hand to reach the pelvis. The appendix, greatly swollen and covered with lymph, was separated from its attachments, ligatured, and removed. On examination, however, it was found to be quite normal within, and only swollen from the general inflammatory process within the abdomen. On reaching the pelvis a collapsed cyst with a large rent was felt, which, with about a pint of grumous, semi-decomposed blood-clot, filled the cavity of the pelvis. The blood-clot was removed, and the cyst, which was adherent every-

where and involved both ovaries, was separated from its attachments. The right Fallopian tube, first ligatured and removed, was normal, with the exception of a little swelling. The left tube was greatly swollen, and its fimbriated extremity, red and pointing, resembled a lobster's claw. The pelvis was freely irrigated with warm boiled water, and the wound closed as rapidly as possible, with a glass drain in the lower angle, as the patient's condition was extremely critical. She rallied somewhat slowly from the operation, but has since progressed most favorably. The abdominal wound is now (two weeks after operation) closed, and with the exception of a little suppuration around the site of the drainage tube (extra-peritoneal), and an abscess in the arm from the injection of brandy, ether, tr. digitalis, etc., at the time of operation, the patient's condition is excellent.

DR. LAFLEUR exhibited the specimens, the two ovaries had coalesced and become firmly adherent. The contents of the cysts were those usually seen. There were secondary changes in the walls of the tumor, areas of coagulation necrosis forming superficial sloughs. In some places the walls are distinctly vascular, while in others there is fatty degeneration. It is a typical ovarian cystoma, and beyond being double and adherent presents no special pathological interest.

The PRESIDENT said that this case forcibly illustrates the great advances made in abdominal surgery, and thought that Dr. Bell should be congratulated on his bold treatment of a desperate case.

DR. LAFLEUR said that the virulence of peritonitis depended upon the nature of the infection. It has been shown that the most virulent cases are those due to streptococci, whereas those cases in which the bacillus coli communis was found were more favorable.

DR. MCCONNELL then read the report of a case of *acute yellow atrophy of the liver* of which see page 457.

DR. F. W. CAMPBELL understood the difficulty in diagnosis, but it would have been well to have dropped the term "acute," the course of three months is against it, being acute yellow atrophy. He had met with cases, at post mortems, with distinct cirrhosis of the liver where there had never been a drop of alcoholic liquor taken. Some of the generally recognized symptoms of acute yellow atrophy were absent, there was no delirium and the headache not acute, though the history of diminution of liver dullness followed the usual course. He was sorry that Dr. McConnell had not gone more fully in to the examination of the urine; nothing had been said of urea, uric acid or earthy phosphates, which are much diminished or may be almost entirely absent. The position of the liver found at the autopsy had not been described, whether the disappearance of dullness

is due to the liver falling back behind the intestines. He thought that he would prefer to consider the case one of cirrhosis.

DR. DECOW said that the most prominent symptoms of acute yellow atrophy were not present, namely, the tendency to hæmorrhage, profound cerebral disturbance, changes in the urine and rapidly fatal termination. Exclusion of alcohol has nothing to do with it. Some authorities held that it may be due to mental disturbance. He had seen a case under the care of Dr. Bristowe in London, a child a few years old, where the hæmorrhages were the earliest symptoms.

DR. LAFLEUR asked Dr. McConnell if he thought he saw the patient at the beginning of her illness. He may not have seen her during the time of the original enlargement, but only after atrophy had commenced. He had frequently found cirrhosis at autopsies, though never suspected, death being due to some intercurrent disease.

DR. FINLEY said that there were many cases of cirrhosis when alcohol had never been used. The ascites and long duration are points in favor of its being cirrhosis.

DR. MCCONNELL said in reply that as far as he could learn there had been no previous symptoms except the bilious attacks for a number of years. Jaundice was the first symptom of her illness, the absence of hæmorrhages was a weak point in the diagnosis, but might depend on the subacute form of the malady. The fact of finding leucin is a proof that there is lessened urea. He thought it would be well to drop the term "acute."

Extra uterine foetation.—DR. E. A. MCGANNON, of Brockville, read a paper on this subject.

Mr. President and Fellows.—Originally, I intended merely to exhibit this specimen and make a short report of the case; but on looking back over the past ten years, I can now see many cases that have gone "the way of all flesh" undiagnosed, consequently puzzling and most vexatious, causing unhappiness, for the time at least, to myself and no doubt to some of the friends of my patients. And having had the subject brought most forcibly before my mind recently by two cases—one where the post-mortem showed a ruptured tubal pregnancy to be the cause of death, and the other where a suspected tubal pregnancy led to operation when the condition present proved to be one of pyosalpinx and an enlarged ovary—I determined on dilating more fully on the subject.

I find, on reviewing the writings of the best authors on this subject, that many prominent men differ in their opinions, and very unflattering epithets have been used, even by the first men in the profession, over such differences. "*Extra Uterine Gestation*," "*Ectopic or Ec-*

topian Gestation," is the development of the impregnated ovum outside its normal locality. To trace out the pathological conditions existing, one must of necessity refer to histology and physiology. The functions of the tubes, it is generally agreed, are to transmit the ovum from the ovary to the uterus, and permit the passage of spermatozoa from the uterus in the direction of the ovary. The ciliated epithelium lining the tube and the peristaltic action of its walls aid in this matter. In regard to this, Michael Foster, in his "Text-Book on Physiology," says: "The spermatozoa find their way into the Fallopian tubes, and here in its upper part comes in contact with the ovaries. In some of the lower animals, impregnation may take place at the ovary itself."

Lusk says: "After coitus the spermatozoa make their way through the Fallopian tubes to the pelvic cavity, and *it is possible*, therefore, for the ovum to become impregnated at any time on the way from the ovary to the uterus." It is a well-known fact, and one not to be forgotten, that *spermatozoa* move by *inherent force* at a rate variously estimated. Henle says, "they move an inch in seven and one-half minutes." Sims calculates that "they move their length in a second," nor are their movements easily interfered with, for Robin states, "they push out of their way epithelial cells or crystals ten times their size."

The inherent power of the spermatozoa is made manifest in those cases where women have become pregnant with an almost imperforate hymen, or with atresia vaginae so nearly complete that there was only a small fistulous tract leading to the uterus, or in that remarkable case where the spermatozoa reached the uterus through the bladder, having to pass through the urine. Kœberle reports a case "where the uterus had been amputated two years before for fibroid tumor, but a fistula was present in the cicatrix of the cervix through which spermatozoa passed into the abdominal cavity, and pregnancy resulted. That when one tube being closed, the ovum may become impregnated by spermatozoa from the other tube is shown by the experiments of Leopold. He tied the right Fallopian tube in rabbits in two places, and excised a portion of the tube between the ligatures, the left ovary was carefully removed and the abdominal wound closed. After recovery the rabbits were put to the male. In two such cases pregnancy resulted."—(*Arch. f. Gynæc.*, vol. xvi., page 24.)

That the spermatozoa *may* and *do* find their way into the abdominal cavity Bischoff has proven beyond a doubt; both he and Parry have seen them on the ovaries. Of this Leishman says: "The ovum, as has been shown, is developed within the ovary in the Graafian vesicle; while yet it occupies that position, even before rupture of the vesicle has taken place, impregnation may occur."

Parry in his work on "Extra-Uterine Pregnancy" does not think it difficult to conceive of the rupturing of the Graafian follicle and the ovum remaining, and thus affording a better opportunity for the spermatozoa fecundating the egg in its very shell. He says: "When we remember the process by which the ovum escapes from the Fallopian tubes, it may occasion no surprise that it should be sometimes retained even after rupture of the vesicle of De Graafe has occurred."

Regarding the functions of the tubes and ovaries, Mr. Tait has proven conclusively that ovulation *can and does take place before, during, or even after menstruation* ceases, and that the change at puberty of greatest importance is in the functional movement of these accessory organs—that is, the "grasping," so to speak, of the ovary by the fimbriated extremity of the tube at only stated times or during the menstrual epoch. Ovulation and menstruation are not always coincident; the passage of an ovum does not always take place, though the fimbriated extremity is grasping the ovary, since it frequently happens that at such times no ripe ovisac present. If, then, as has been shown, ovulation continues inter-menstrually when the tubes are quiescent, the question arises, what becomes of the ovum when the sac ruptures? There is only one place it can go, and that is into the peritoneal cavity, where it perishes and is absorbed.

Mr. Tait, in his work on "Diseases of the Ovaries," says: "I believe that the ovum falls into, and perishes in, the peritoneal cavity in by far the greater number of cases, and that the passage of it into the uterus occurs in only a small percentage."

The ovule is short-lived, and if not vivified in the tube by contact with the male element, degenerative changes will destroy its vitality before it reaches the uterus. Charpentier and other recognized observers claim that after it passes the outer third of the tube it is covered by a layer of albumen which the spermatozoa cannot pierce. Many other facts could be given to prove that impregnation does not occur in the uterus.

Regarding other than normal pregnancy, Tait's amended classification is probably the best yet devised, as given in the *Lancet*, Sept. 1st, 1888. He divides the different forms of gestation into:

I. *Ovarian*—not yet proved, though possible.

II. *Tubal*—In free part of tube, and is contained in tube up to 14th week, at or before which time primary rupture occurs, and then the process of gestation is directed

Either into abdominal or intra-peritoneal gestation, uniformly fatal either from

hemorrhage or suppuration of ruptured sac and peritonitis ;

Or into broad ligament extra-peritoneal gestation ; when it may develop in broad ligament to full term and be removed at viable period as a living child ;

Or may die and be absorbed as extra-peritoneal hæmatocele ;

Or may die, and the suppurating sac discharged at or near the umbilicus, or through the umbilicus, or through the bladder, vagina or intestinal tract ;

Or may remain quiescent as a lithopædian ;

Or may become abdominal intra-peritoneal by secondary rupture.

III. *Tubo-uterine or Interstitial*—Is contained in that part of the tube embraced by the uterine tissue, and so far as known is uniformly fatal by intra-peritoneal rupture before the 5th month.

Of these, by far the most common form is the tubal. All agree that the majority of cases are primarily tubal.

Causes—Are stricture of the tube due to lessening of its calibre by old inflammation or by contraction of lymph thrown out by pelvic peritonitis and flexions of the tubes.

Tait gives us "desquamative salpingitis" as a cause ; here, catarrh of the mucous membrane leads to loss of cilia, and allows of the implantation of the impregnated ovum on the surface of the denuded tube.

Lusk gives as a cause "dilatations with hernial pouches due to protrusions of mucous membranes through the separate bundles of muscle fibres of the tube."

The Diagnosis.—Cases proved by abdominal section or post-mortem show that diagnoses have been made before rupture, but it is rarely done, and in any case can only be presumptive, because the same symptoms are present in cases of "retroflexed gravid uterus," in "ovarian cyst," "uterine fibroid," "hemato-salpinx," or pregnancy in the rudimentary horn of a bicornate uterus. All these conditions, at different times, have been diagnosed as extra-uterine pregnancy.

Want of diagnostic skill may by some be assigned as the cause of mistaken diagnosis. Such cannot be charged against Dr. Mann of Buffalo. Yet Dr. Mann diagnosed a case as one of extra-uterine pregnancy, and, as he supposed, killed the embryo by electricity. That same case, a short time afterwards, fell into the hands of Dr. Wylie of New York, who operated and found a large purulent sac containing a pint or more of fluid, but nowhere any trace of an extra-uterine pregnancy ever having been present.

Dr. Mundé diagnosed a case as one of extra-uterine pregnancy, and operated, only to find a normal pregnancy in the rudimentary horn of a bicornate uterus. This mistake in diag-

nosis would surely not be attributed to want of diagnostic skill on Dr. Mundé's part.

From the nature of things, most cases rarely come under observation before the period of rupture, because there are seldom symptoms, or, if any, not alarming enough to lead the patient to seek medical aid.

The symptoms of the period prior to rupture are indefinite and indistinct, as best given by Dr. Joseph Price, and are :

I. A partial or complete cessation of menstruation for one or more periods, generally accompanied by other rational symptoms of pregnancy, though occasionally all these are wanting.

II. Pain which is peculiar, being generally severe, paroxysmal and long continued ; a *sickening* pelvic pain which is neither cramp-like nor colicky, though it is often described by these terms ; these pains, probably caused by distension of the tube, are apt to subside for a time, only to recur again.

III. The appearance of uterine hemorrhage which is again peculiar, in that it is usually irregular both as to time and quantity, generally lighter in color than the normal discharge, and contains shreds of tissue which are portions of decidua vera.

Physical examination further shows the uterus slightly enlarged, cervix soft and patulous, and to either side and slightly behind is found a painful mass.

Histories are not to be relied upon in making a diagnosis in extra-uterine pregnancy before rupture. It is only after repeated examination and watching the enlargement of the tumor that we can even make a presumptive diagnosis. There is one point, however, in the history of most cases that should be of some assistance—that is, there has been a long period of sterility either with no former pregnancy or following one or more confinements. Parry says : "Women who have become pregnant with the child outside the uterine cavity frequently show a previous inaptitude for conception. If the woman has borne children, a period of sterility frequently precedes the extra-uterine pregnancy." This was the case with my patient ; she had already borne children, and then did not become pregnant for nearly ten years ; during which time she suffered with continuous pelvic trouble.

Now, a diagnosis of extra-uterine pregnancy having been made, how are we to treat the case for the best interests of the patient ? If diagnosis be correct, and the tumor left undisturbed, it will continue developing until about 12th week, when rupture takes place, which in the majority of cases means death to the mother, unless relieved by operation. Of 149 cases of intra-peritoneal rupture reported by Parry, 145 proved fatal.

Reading the mass of literature on this sub-

ject which has appeared within the past few years, it is plainly seen that the only scientific and certain treatment is by abdominal section and extirpation of sac and contents. I am aware that this view is disputed by the advocates of electricity, among whom may be numbered men who are not lacking in experience, diagnostic skill, or sound judgment. In the hands of competent men the removal of these sacs should be neither more difficult nor dangerous than that of a "cystic ovary" or "pus tube."

The method of treatment by electricity has objections.

There is no certainty that the foetus will be killed and the growth stopped. Tuttle reports a case where the faradic current was passed through the mass for ten days without reducing size of tumor. In this case the thorough and intelligent use of electricity for the purpose of destroying the embryo was followed by no evident amelioration of symptoms nor interruption in growth of tumor, but, on the contrary, continued to grow worse.

The treatment is not without danger. Brothers cites four cases which had presented alarming symptoms during or after the application of electricity. Baldy of Philadelphia had a case where severe peritonitis followed a single application.

It is slow in its action, and while waiting for its effects other accidents may happen, as tubal pregnancy frequently ruptures before the 13th week.

It almost invariably leaves the patient with dangerous after conditions, even in cases reputed as cured. The sac and contents not infrequently had to be removed later by laparotomy. Tuttle reports the case of a foetus passed by rectum after electrical treatment. Hanks reports cases in which, after electricity, the foetus passed by the bladder, rectum and uterus. Thus it appears as an unscientific and wholly unsurgical procedure; and even though the embryo be destroyed, it does not give the patient immunity from subsequent dangers.

All tubal pregnancies must rupture, and this event may take place from the 8th to 14th week; the tension caused by the growth of the gestation brings on a spasm of the muscular walls, causing a separation of a portion of the placenta and allows of bleeding; part of the blood passes through the uterus, the rest remaining increases distension. This process repeated in the end causes rupture, which may take two directions—intra-peritoneal, *the fatal form*; or into the broad ligament, *the extra-peritoneal form*.

In the "intra peritoneal form" there are two cardinal symptoms—shock and hemorrhage; there is collapse, shown by cold, clammy skin, intense pallor, vomiting, etc., death often ensuing in a few hours. The patient may recover

from the shock, only to be attacked again within a few days, when from repeated hemorrhages death ensues unless surgical steps interfere. In the diagnosis of this form we must not expect to find a definite tumor, for the blood is unlimited by any membrane; it can be felt as a soft bag bulging into the vagina. No tumor can be detected above the rim of the pelvis.

In the "extra-peritoneal" variety the symptoms are not marked, the shock slight, pain is not so severe, and power is soon regained; there is, however, more bearing-down sensations, difficulty of micturition, and defaecation is increased. If examination be made at once, a boggy condition of the pelvis is encountered; if examined after a few days, the distension will have disappeared from the spreading of the effused blood into the connective tissue of the pelvis.

About three-fourths of all "extra-uterine gestation" die, and more than half die shortly after rupture. The condition is one of concealed hemorrhage from the rent in the tube, the blood vessels keep pouring blood into the peritoneal cavity, here it is diluted by peritoneal lymph and thus prevented from clotting; there is nothing to check the hemorrhage, which continues until the patient is exhausted, or temporarily stopped by nature's means—fainting. In treatment, the same principle applies here as in other parts of the body—surgical; the hemorrhage demands that you cut down and tie the bleeding point.

The "extra peritoneal form" should be treated as a simple hæmatocele; if possible, it should be left alone, or such palliative and sedative treatment adopted as pelvic pain, obstructed defaecation or obstructed micturition may call for. The only dangers the woman is subjected to during this period are from secondary rupture into the peritoneal cavity, from inflammation and suppuration in the sac, and when the foetus having died, Nature is trying to eliminate the foetus by fitulous openings in various directions.

When secondary rupture has taken place into the peritoneum the abdomen should be opened and blood removed, then sac incised, contents scooped out (foetus may be present or may have been absorbed); any hemorrhage still going on in the sac stopped; the edges of the sac should be brought into the incision, which should be closed except at its lower part, where a drainage-tube should be inserted. If a definite placenta be present it should not be touched, as great hemorrhage is likely to take place from its site, and there is no efficient means of arresting this hemorrhage. So in the treatment of "extra-uterine pregnancy," between the primary rupture and the viable period, there are only two alternatives worthy of consideration, namely, *expectancy* and *lapa-*

rotomy; and as with the present method of reating the placenta the operation at full period is not more dangerous. I would say give the child a chance and enjoin on the mother precautions as to avoidance of exertions likely to produce secondary rupture or death of the fœtus. At full time we may operate during the false labor, or allow the child to die, and operate when circulation through placenta has ceased.

In coming to a decision, too much reliance should not be placed in the older statistics, for the majority of cases operated on before the days of antisepticism died through lack of cleanliness of the peritoneal cavity. The peritoneal cavity being a gigantic lymph sac, poisonous matters might as well be injected into a vein as left there.

In the primary operation, great success was obtained by Veit, of Berlin, and Mr. Tait. Veit reports seven successful cases: Tait, out of five cases, saved three mothers and all the children. This, combined with our better means of dealing with all the conditions within the abdomen, to my mind makes this the proper treatment. On account of the rearrangement of the peritoneum we should make the incision well to the side of the middle line to which the gestation is. When the sac is opened the fœtus should be carefully lifted out by the feet. Tait then squeezes all blood out of placenta, ties the cord close to it, and cuts it off. The sac is then cleansed of all blood, membranes, etc., filled with water, and stitched tightly around drainage-tube, through which the water is drawn off and then opening closed. When it is possible to tie a big pedicle round attachment of the placenta to the tube and broad ligaments, which contains most of the blood vessels to the placenta, this should be done and the placenta removed; bleeding can be stopped by perchloride of iron.

When the case is seen after death of the child, the operation should be deferred until absorption of the amnion and placenta circulation has ceased. This period is variable. Schræder found in one case obliteration of the vessels three weeks after death of fœtus, while De Paul lost his patient from placental hemorrhage four months after death of fœtus.

CASE REPORT.

Mrs. P., aged 36, a well-developed woman of medium stature, began to menstruate at 14 years. Menstruation was always accompanied by considerable pain; flow usually free and lasting about four days. Married at 17, and had five children; no miscarriages. Last child was born February, 1879. During these nine and a half years she had been regular every month; no more pain than usual; no leucorrhœa. She always complained of pain on left side, and was tender on pressure. In September, 1888, her

menses ceased. She did not think she was pregnant; thought she had taken cold. About the twelfth week after, on getting out of bed in the morning, was seized with a sharp pain in the hypogastric and left inguinal region. This pain was of a colicky nature, and extended down the thigh, and so severe in its nature that patient fainted away. On recovering, pain continued to increase in severity. During this time there was a discharge from the vagina, pale pink in color, as though water and blood mixed. No membranes or shreds. She remained in bed for about eight weeks, during which time her physician treated her for severe grinding pains, which he told her was due to inflammation of the womb. These pains were continuous. Turpentine stupes and mustard *ad lib.* had no effect. It was not until she was out of bed, about the fifth month, that she noticed any enlargement of the abdomen. At this time a small lump was detected low down in the left of hypogastrium. This gradually kept getting larger. About the seventh month only did she begin to feel movements of the fœtus. Pain still continued getting more and more severe, described as though tearing in side of body. She could not lie down on account of this pain. As she approached full time, pain was so severe that it required hypodermic injections of morphia to obtain relief. About the ninth month, and after two rapidly-repeated injections of morphia, she felt a quivering sensation in the abdomen and afterwards all movements ceased. Pain also ceased, and none until nine days after, when she began to have severe pains resembling labor pains. They continued from 1 P.M. until about 10 P.M., when they gradually left. Her physician gave her ergot and in other ways tried to awake labor pains in order to complete delivery. Nothing being accomplished, outside medical advice was sought, but no diagnosis of the actual condition was made. I was sent for about four days later, and after dilating the os found an empty uterus. The history of the case, the position and condition of uterus, rendered the diagnosis comparatively easy. The child was then dead, so nothing was to be gained by an immediate operation.

Now this was a most typical case. 1st, The time from last pregnancy. 2nd, Pain and tenderness in left side; probably salpingitis. 3rd, Rupture and course of pregnancy.

I suggested her removal to the hospital and there prepare her for the removal of fœtus. She did not consent and I withdrew. I took a trip out to the Indian Territory, and remained away two months. On my return I found my patient in the hospital awaiting operation. She had become greatly emaciated, suffered severely from night-sweats, and other symptoms of blood poisoning. She was well on in the thirteenth month when I operated. Assisted by my brother, Dr. Matthew C. McGannon, I opened the

abdomen and stitched the sac to the edges of the wound, then opened the sac and removed 12 qts. of yellowish, milky-looking fluid, and then the foetus, which had become attached in several places to the side of the sac, bands having been thrown around the legs and arm, one so strong that I had to remove the arm at the shoulder and carefully dissect off the adhesion. The placenta I found detached and lying loose in the bottom of the cavity. I washed out the sac with warm water until nothing was left. My patient had ceased to breathe, but the hot water quickly dashed into the sac revived her, and by the continued efforts of my assistant she rallied. Drainage tubes were left in the wound, and the sac was daily washed. No bad symptoms followed, and she made a rapid recovery. Is now a strong, fat and healthy woman.

DR. ALLOWAY thought the history of the case a little short, he did not catch how long the foetus was in the abdominal cavity proper. He congratulated Dr. McGannon on the result of the case.

DR. MCGANNON said that the history was very definite, and he thought that there could be no question about the length of time, which was within a few days of thirteen months.

Progress of Science.

THE NATURE OF INFLAMMATIONS IN THE LIGHT OF RECENT DISCOVERIES.

BY W. P. CARR, M.D.,

PROFESSOR OF VISCERAL ANATOMY AND DEMONSTRATOR OF ANATOMY IN THE MEDICAL DEPARTMENT OF COLUMBIA UNIVERSITY, WASHINGTON, D.C.

So much of the mystery connected with this subject has been cleared away by the investigation of recent observers, that we are now in a position to drop much of the old mysterious technology in regard to inflammation, and to explain its varieties and phenomena as clearly and rationally as we can explain any biological process.

Before beginning to discuss the subject in a connected manner, I will make the following propositions, which I consider either as axioms or as propositions proved, and acknowledged as proved, by the majority of the profession.

1st. All inflammations are, strictly speaking, local, as we know of no disease in which all the tissues of the body are inflamed. Even if specific fevers be regarded as inflammation, or fermentation, of the blood, having in addition in many instances lesions of solid organs or tissues, we must remember that the blood is only one of the many tissues of the body, a

hæmatitis is as much a local affection as peritonitis.

2nd. The effects of local inflammations may become general in at least three ways: First, by the action upon the nervous system of septic poisons absorbed into the blood. Secondly, by direct injury or irritation to the nerves in the inflamed area, causing shock, pain, loss of sleep, and reflex disturbances of the general nervous system. Thirdly, through the drain of suppuration.

3rd. Every cell in the body is directly or indirectly under control, more or less complete, of the nervous system. This includes the blood cells, which are controlled indirectly by the vaso-motor nerves.

4th. The following phenomena of acute inflammation have been actually observed—viz., a dilatation of the capillaries of the part, a slowing of the current, accumulation of leucocytes around the periphery of the vessels, complete occlusion of the vessels in places by the leucocytes, stasis, clearing of the lumen of the vessels by the passage into the tissues of these aggregated cells, escape of plasma into the tissues, transformation of escaped cells into connective-tissue cells, and, in septic inflammations, the presence of bacteria in the interior of escaped white blood-cells, sometimes showing evidence of degeneration or digestion by the cell.

5th. The escape of leucocytes from the blood-vessels and their transformation into connective tissue also take place normally and in normal tissues.

6th. The escape of plasma also takes place normally for the purpose of bathing and nourishing the cells of the body, and is returned to the blood-vessels by means of the lymphatic circulation.

7th. The plasma that escapes in inflammation serves as a culture medium for the escaped round cells, and exerts a germicidal action upon bacteria.

8th. This escape of blood elements, which is the essential feature of inflammation, is therefore only an exaggeration of a normal process.

9th. Aseptic inflammation can be caused only by destruction or irritation of tissue by mechanical or chemical means, or by heat, cold or electricity, under conditions that prevent the access of bacteria. But any aseptic inflammation may quickly become septic by access of germs to the tissues.

10th. Aseptic inflammation is only a process of repair, and consists essentially of a replacing of destroyed tissue by connective tissue formed from the colorless blood-cells. Aseptic inflammation of a low degree may be indefinitely prolonged by the circulation in the blood of some toxic substance, purely chemical, which continues by its presence to irritate or destroy tissue. Otherwise, aseptic inflammations either

become septic or result in repair, or what we term resolution. This repair may be delayed by lowered vitality of the tissues, and in case of bone injury by lack of bone-forming material in the blood plasma.

If we consider these propositions proved, as I think we must, then we may give a more definite explanation of aseptic inflammation than has yet been done.

Take, for instance, a contusion with subcutaneous laceration of tissue. The injured afferent nerves carry an impulse to the vaso-motor centers (we need not now consider where these are situated), and through the vaso-motor nerves the capillaries are dilated. This dilatation causes a slowing of the blood current, and either opens pre-existing stomata in the capillary walls, or causes a relaxation and separation of the single layer of cells forming these walls, so that plasma begins to flow out through these openings. Many of the openings become choked by the colorless corpuscles that come lazily floating in the periphery of the slow blood current and are swept into the openings or stomata by the outgoing plasma. Other leucocytes catch against these, and the vessel becomes entirely occluded in places. Stasis results. But the cells finally pass out by amoeboid movement or are forced out by the blood pressure, the lumen of the vessel is re-established, and the current begins again. The cells after their escape wander about for a time by their inherent power of amoeboid movement nourished by the plasma that accompanies them, and which continues to pass out of the vessels and be absorbed by the lymphatics; but, finally, they become fixed, shoot out processes, and are thus transformed into connective tissues. It is possible that these cells may proliferate after their escape, and that there may also be proliferation of the older connective-tissue cells, but I regard this as improbable. The new connective tissue is laid down around capillary loops that shoot out from the blood-vessels just as they have been seen to do in the developing chick, and thus the destroyed tissue is replaced. Such cells as were killed in the original injury break down and form a mass of *débris* that is carried off by the lymphatics or absorbed by leucocytes as food. This *débris* has been called pus; but it is not what we commonly understand by pus, and should not be so called. The amount can not exceed the amount of tissue originally killed, and if the tissues remain aseptic, it is always completely absorbed. Not only so; this absorption must precede the connective-tissue formation, and the amount of new connective tissue usually corresponds to the amount of tissue destroyed. Sometimes, however, when there is more irritation of nerve terminals than destruction of tissue, the new connective-tissue formation may be excessive. Particularly is this the case when the nerve irri-

tion is increased by some form of chemical toxæmia, intestinal toxæmia, lithiasis, etc.

Aseptic inflammation, however, almost invariably terminates in rapid resolution, and leaves little trace behind. But any inflammation may become septic. And undoubtedly in open wounds this result is usually brought about by contact with some substance containing germs upon its surface. Rarely germs are deposited in the wound from the air or from particles of dust floating in the air. Still more rarely, we must believe, with all the evidence before us, true auto-infection takes place from germs floating in the blood of the individual. We can readily understand how this occurs in those diseases where pathogenic organisms are in the circulation, and it is more than probable that even in the blood of apparently healthy individuals some of the milder kinds of pathogenic germs may occasionally be found. Such germs are not vigorous and are not able to harm active cells, but, when brought in contact with injured cells and dead *débris*, may multiply, become vigorous, and cause serious results. They may cause suppuration, or may seriously interfere with the healing of the wound without causing suppuration, especially if the tissues are already weakened by malnutrition or toxæmia. Pyogenic bacteria may also gain access to subcutaneous lesions through microscopic abrasions of the cuticle, or, as recently pointed out by Dr. Welch, of Baltimore, from the deeper layers of the epiderm itself. Dr. Welch, in a paper read before the Congress of American Physicians and Surgeons, recently announced the discovery of a germ, very much like the *Staphylococcus pyogenes albus*, almost invariably present in the deeper layers of the epiderm, not amenable to washing or superficial disinfection, and capable of producing pus under favorable conditions. He regards it as the usual cause of stich abscess. He has also made the following interesting observations: Healing by first intention is not proof that no organisms were present, as he has found germs in the serum from such wounds. They were never abundant, however, nor of a virulent kind. He also finds that the power of a germ depends largely upon the amount of poison it carries with it, and that if germs are freed from the culture medium, rich in poison, in which they have been developing, they are much less active. He also finds the blood serum to have antiseptic properties, and that some tissues are much more resisting to germs than others in the same animal.

Thus the peritonæum was able to dispose of twenty times as much of a certain culture fluid, containing pyogenic bacteria, as was required to cause suppuration in the eye of the same animal.

We must conclude, therefore, that the tissues of the body are able to kill and dispose of a

certain variable number of most kinds of bacteria, and that this power is modified by at least six factors—viz.:

1. The kind of tissue. 2. The condition of the tissue as to vigor of its cells and antiseptic properties of its blood plasma. 3. The kind of germ. 4. The number of germs. 5. The condition of the germ both as to vigor in multiplying and producing poison, and as to whether or not it is accompanied by a quantity of its poison, and thus armed and enabled to destroy at once a number of cells in its immediate vicinity, and thus gain time for reproduction.

Therefore, when germs gain access to an area of inflammation, we are confronted by a very complex problem.

If a limited number of germs be present, if they are not too vigorous in producing poison, and if this poison is not of too virulent a kind, they are eaten by the white blood-cells that come pouring from the vessels, or are killed by the blood serum, and find their way into the leucocytes by chemotaxis; and the result is the same, whether we call it phagocytosis or chemotaxis. The germs are destroyed, and resolution and repair take place, as in aseptic inflammations.

But in other cases the germs are too powerful. They kill the cells by the excretion of poison, and this may take place after the germ has got inside the cell. Should this state of affairs occur in the deeper tissues, those cells in the center of the inflamed area are killed, and can not, of course, form connective tissue; but those around the periphery make their usual change into connective tissue, and thus wall up the pus and germs, forming an abscess. Here, shut up with their own excretions, the germs may, after a longer or shorter time, die, and the fluid in the sac become absorbed, leaving a cheesy mass that may remain indefinitely. More or less of the poison, however, passes by osmosis or is forced by pressure through the abscess wall, is absorbed into the lymphatics, poured into the blood, and gives rise to systematic symptoms by its action on the nerve centers.

In other cases the inner layers of the sac are killed by the virulence of the poison, and form fresh pabulum for the imprisoned germs, while fresh layers of cells are continually deposited on the outside. Thus the abscess grows until some surface is reached upon which it may burst.

In such cases as this we have practically an aseptic inflammation, around and outside the abscess wall, caused and maintained by the chemical poison transuded or forced through the wall from the active poison factory within, while the wall checks the movements of the germs and prevents a general and rapid spread of the inflammation.

After the abscess breaks, if not into some

cavity, the larger portion of the germs and the poison are extruded, and usually the cavity soon closes, largely by contraction of its walls, partly by formation of connective tissue, which is now produced more rapidly than it is destroyed. But should the abscess break into a cavity, such as the peritonæum, the germs, finding themselves in new pabulum, and already armed with a large amount of poison, increase rapidly and overwhelm the system by the rapid production of their deadly excretion. Unless this is promptly removed, there is but the faint hope for the patient that the germ may succumb to the combined action of its own poison and the antiseptic serum before the organism attacked.

That this fortunate termination may ensue is probable, in some instances, when even the peritonæum is invaded by pyogenic organisms. It must be due to the fact that the germ, when weakened by the antiseptic serum, is even more susceptible to its own poison than the patient; that recovery takes place from typhoid fever and other specific diseases. Otherwise the germs would continue to increase *ad infinitum*, or, at least, until the death of the patient. It is well known that many germs are readily killed by their own excretions. Those that produce lactic acid are readily killed by lactic acid; those that produce substances like carbolic acid are readily killed by carbolic acid.

But we may have a form of septic inflammation where the germs are so active and where their poison is so violent that the cells are killed too quickly, and the inflammation extends too rapidly, for any limiting wall to be formed. Such inflammation is produced by the erysipelas germ when once it has become lodged under the skin in the cellular tissue. Here, again, our only hope is that the germ may succumb first to the combined power of its own poison and the antiseptic action of the lymph, or that it may at least become so enfeebled as to die without leaving progeny.

Diffuse suppuration may also be produced by slow and comparatively mild germs when the tissues of the body are much enfeebled by malnutrition, hæmorrhage, shock, etc., or by the action of a poison—such, for instance, as the absorption of ptomaines from the intestine. Here the inflammation fails to be limited because the cells of the body are too feeble to act promptly, and, perhaps, because the blood plasma has lost its antiseptic properties.

On the surface of a tissue, or in open wounds, the process is modified by the fact that the germs and their poison are free to flow away from the body with the pus, and, as there is no pressure, there is little absorption of poison. Hence it takes a large area of superficial inflammation to produce systematic symptoms, and as the absorption is slight, the destruction of cells is less active than the process of repair.

Consequently, unless we have to deal with germs of unusual virulence, such as those that produce hospital gangrene; or, unless the tissues of the body are so feeble as to allow of phagedenic ulceration, the destroyed tissue is entirely replaced by connective tissue, and we have what we call healing by second intention. In those exceptional cases, however, the destruction will continue to spread until the germs are destroyed by caustics or other means.

Thus we see that every form of acute inflammation is a conservative process; and not only so, that it is only an excessive activity or exaggeration of the normal functions of living tissue.

We see that it consists essentially in all cases of a warfare of the blood elements upon bacteria and a replacing of destroyed tissue by round cells from the blood. Why, then, may we not define inflammation as *an unusual activity and concentration of blood elements in a tissue for the purpose of repairing injury or repelling noxa?*

And this definition need not be limited to acute inflammations. For, although there is some difference of opinion about chronic inflammations, particularly the scleroses, as to whether connective tissue is formed first, or whether destruction of cells takes place first, we must regard them as conservative. We must admit that they consist in a formation of connective tissue or glia, either for the purpose of replacing destroyed cells or for the purpose of walling out and limiting the action of a poison or irritant, a noxious substance.

Understanding thus the nature of inflammation, and being able to explain all its varieties, we are surely in a better position to prevent the dangerous forms—to prevent, in fact, all forms except the aseptic, and to guard against the danger of auto-infection and of operating upon tissue enfeebled by the absorption of ptomaines from the intestine.

THE INFECTIVITY OF TUBERCULOSIS.

The certainty that tuberculosis is an infective disease has for some time been one of the recognised truths of medical science. With the growth of our knowledge of tuberculous processes, since Koch's great discovery of the tubercle bacillus, much infallible evidence has been collected bearing upon this point; and while year by year more and more attention is being drawn to the mode of propagation of tuberculosis by infection, there is still much reason for supposing that more yet remains to be done in this direction. Practically speaking, it is only within the past few years that necessity for preventive methods in regard to the dissemination of the disease has been recognised. As the natural history of the bacillus has been evolved by the patient work of various investigators, and as we have

learned, so to speak, its habits and "where it comes from and whither it goes," our task of circumventing its efforts to propagate itself has been much more easy of accomplishment, and for this reason probably correspondingly more successful. It is, however, only fair to admit that the profession generally owes a good deal to the German bacteriologists for their vigorous insistence upon and uncompromising advocacy of the belief in the infective nature of tuberculosis. Even now in Germany, we believe, phthisis is regarded as infective as the zymotic diseases. Cases of pulmonary tuberculosis are treated in the hospitals, not in the general but in the fever wards, together with patients who are suffering from scarlet fever and other similar acute infective disorders. Moreover, in the German prisons, rules have been formulated forbidding the reception of phthisical prisoners, and if by some means a prisoner suffering from this malady has been retained in a cell, the earliest opportunity is taken to have him removed, while the most elaborate processes of disinfection are carried out in order to prevent the cell from becoming the source of the propagation of infection. All these measures are undoubtedly serviceable, even if not absolutely essential, but, at the same time, it must be admitted that the profession in this country have scarcely yet conceded the necessity of adopting such advanced methods of prevention as these. Apparently our German *confrères* recognise no limit to the infectiveness of tuberculosis. Moreover, it would seem that they have for some years now acted upon this hypothesis, whereas we are only being educated up to this standard. It is true that within the past few months more active steps have been taken to give expression to their views in this country; the appointment, for example, of the Commission on Tuberculosis—how very modest this Commission must be, we never hear anything of its work—was undoubtedly a step in the right direction, and there are not wanting signs that the importance of this subject is at last beginning to be recognised in other than professional circles. In this connection, however, it is impossible to dispute that, until we are prepared to emulate the example of our German *confrères* in combating the dissemination of tuberculosis, we cannot expect much assistance from the public in this respect. Half-measures in the case of preventive methods against an infective disease can scarcely be held to be of much avail; tuberculosis is either infective or it is not, but if it be so, then no measures can be too stringent for the prevention of its dissemination. This is the proper aspect from which to view the subject, and this is undoubtedly the view which medical practitioners should impress upon the minds of their patients and friends. To show how little the infectivity of tuberculosis has come to be

appreciated by the public mind, reference need only be made to the expressions of surprise which invariably greet the propounder of this doctrine among lay persons. Of course, the difficulty to be overcome in this matter is that of making the laity comprehend that all sources of infection have not the same characteristics as, say, those which belong to scarlet fever. The results of the infection of scarlet fever are seen within a few days, therefore the laity can understand that it is infectious; but it is quite another matter to cause them to believe that a disease is infectious the effects of which may take months to develop. Herein, then, there is plainly much scope for enlightenment among those to whom the facts in question would be calculated to be of the utmost service, and the sooner that a more universal recognition and appreciation of the infectivity of tuberculosis prevails, the sooner may it be expected that some tangible proof of the teaching upon this subject will be available for useful and congratulatory comparison. It may here be noted with satisfaction that the Medico-Chirurgical Society of Glasgow has memorialised the Town Council of that city, calling attention to the fact that tuberculosis is now fully recognised as an infective disease, and asking them to take the matter into their serious consideration with a view to the protection of the community from infection. The memorial in question sets forth many convincing arguments calculated to impress those to whom it is addressed, and should undoubtedly lead to active measures being taken under the advice of their medical officers by the Glasgow Town Council. We have no doubt that if practical recognition of the fact of the infectivity of tuberculosis were given effect to by the various Town Councils throughout the country, by means of resolutions enforcing definite rules adapted to prevent the dissemination of the disease, much good would be certain to accrue. It is, however, extremely unlikely that these municipal bodies would take the initiative themselves, and hence there is all the more reason that the profession should stir in the matter, and that influential medical authorities should lose no opportunity of representing to them what may strictly be called the urgency of so important a movement in the interests of the public health.—Editor *Medical Press*.

THE CHILBLAIN SEASON.

No topic is too insignificant for discussion in the lay press during these days of short "copy," and accordingly a sufferer from the distressing but not very fatal form of localised Raynaud's disease known as chilblains has been able to give his misery a wide publicity. Now, there is certainly no lack of remedies for chilblains, indeed, their multiplicity is as re-

markable as their efficacy is doubtful. *Vox populi vox Dei*, however; and as our readers may be glad to know what remedies are most in vogue, this not being an ailment for the relief of which medical aid is usually summoned, there is the familiar compress of brandy and water, but its application varies: some people drink the brandy and put the water on the compress, while others sacrifice the beverage and convert it into a lotion. Teetotallers of course decline an alcoholic treatment, and prefer the common or garden onion, a very stimulating application, calculated to bring tears into the eyes. Then we have the hydropathic treatment, a compress of cold water cosily enveloped with towels as for gout, assisted or not by pumilio or other stimulating terebinthinate preparation. Tincture of iodine finds favor with people who do not resent a tiny smart, and soaking the feet in hot solutions of common salt, or sal ammoniac, gives employment to the more fastidious. With respect to the causation, cold is generally credited with being the principal factor, but this is only true in a limited sense. It is the change from cold to heat that determines the local congestion, consequently, chilblains are more common after a sudden change in the weather from cold to moist, and in those people who make injudicious attempts to thaw semi-frozen digits at too short notice.—*Med. Press and Circular*.

BENEFIT OF CLERGY!

Medical men who practise their profession as a livelihood will do well to be circumspect when called upon to attend clerical patients. They are notoriously bad hands at paying doctor's bills, but we fortunately do not hear of many capable of displaying as much *sans gêne* as a certain parson at—say at Anerley. This reverend gentleman was suffering from some affection of the kidneys calling for surgical treatment, and by the intermediary of a local practitioner he secured the services of an eminent surgeon, who went down and did what was necessary. The patient was (doubtless) effusive in his expressions of gratitude to the surgeon who had so skillfully relieved his sufferings, but when a request for a very moderate fee was sent in, he blandly replied that he had no money to pay doctor's bills with, the poor of his parish absorbing all he could spare. This is "benefit of clergy," or its nineteenth-century substitute with a vengeance. Formerly it saved them from durance vile in criminal cases, and now it serves them to avoid civil process. In fact, they trade upon the reluctance with which practitioners take legal action against the "cloth." Such conduct is the less excusable, seeing that if proper representations were made beforehand, no minister of religion would even be allowed to lack the requisite aid.—*Med. Press and Circular*.

AN UNUSUAL INTESTINAL CONCRETION.

For certain anatomical reasons no doubt the cæcum and its vicinity is more often perhaps than any part of the intestinal tract the seat of intestinal concretions. The vermiform appendix, for example, is an unfortunate source of mischief in this respect,—date-stones and other foreign bodies, even small concretions of fæces alone, having become blocked in its lumen. A case of a large concretion having become lodged in the cæcum has just been recorded by a French practitioner. The patient, a woman, had for long suffered from chronic intestinal catarrh, and after death the cæcum was found to be occupied with a large greyish mass, which readily broke down under pressure. On further examination the mass was discovered to consist of 85 per cent. of subnitrate of bismuth, together with 15 per cent. of organic matter. The presence of the bismuth salt was easily explained by the fact that the patient had for a long time before her death been accustomed to take large quantities of it. —*Med. Press and Circular.*

HEART DISEASE IN CHILDHOOD.

CRANDALL (*Arch. of Ped.*, December, 1891), in 142 cases of heart disease in children under 14 years, found 7 cases of congenital malformation—4 boys and 3 girls. Among the 135 acquired cases 38 per cent. were boys and 62 per cent. girls; this preponderance of females was greatest before 8 years. On the whole and for both sexes the period from 5 to 12 years appeared to be that of greatest danger. There was a rheumatic family history in the parent, or in one parent, in 50 per cent.; if brothers and sisters and grandparents were included, in 72 per cent. Inquiries were made as to rheumatic symptoms observed before the heart lesion in 117 patients; they had been noticed in 73 per cent., and in 9 per cent. more such symptoms were observed subsequently. Among rheumatic symptoms were counted acute rheumatism, joint pains, or mild subacute rheumatism, and growing pains without other symptoms; chorea was not counted, but recurrent tonsillitis was reckoned among the rheumatic after symptoms. Among these 117 cases, 41 suffered at some time from chorea; 33 of these cases of chorea were rheumatic. An apex systolic murmur was present in 91 per cent., and was about seven times as common as a mitral obstructive murmur; a distinct history of rheumatism was obtained in a smaller proportion of cases of stenosis than of other lesions. The symptoms of mitral disease calling for treatment are defective nutrition, anæmia, dyspnoea, and palpitation; pain was observed with mitral stenosis more often than with any other lesion. A defi-

nite rheumatic history was obtained more often with the aortic murmurs than with the mitral. One-third of the aortic cases suffered from chorea. Dyspnoea was the most constant symptom, and anæmia was nearly always present.

INFLUENZAL BRONCHITIS.

MAX KAHANE (*Centrabl. f. klin. Med.*, Jan. 16th, 1892) says that the cases observed by him in the recent influenza epidemic in Vienna were remarkably uniform in character. They began with a feeling of languor and depression. There was no shivering, and the slight fever lasted from one to three days. There was no severe nervous prostration. The respiratory symptoms were characteristic. There were violent attacks of cough, with irritation and dryness in the throat. The expectoration was scanty and viscid, or absent, and the abnormal physical signs but slightly marked. Among digestive symptoms loss of appetite and constipation were mostly present. Antipyretics were of little value, but inhalations relieved the respiratory symptoms. Among narcotics codeine seemed to be useful.

PROPHYLAXIS IN SCARLATINAL NEPHRITIS.

ZIEGLER (*Berl. klin. Woch.*, January 11th, 1892) says that during the past six years he has kept all scarlet fever patients, no matter how slight the attack, strictly on milk diet for three weeks, the transition to other diet taking place gradually after this date. He compares the statistics of the epidemics—ten in number—occurring before and after this change. Of the 115 cases belonging to the first category, the author says three was nephritis in half the cases; while in the second group of 100 cases there was no instance of nephritis. Three cases were deducted from the latter number, as strict milk diet was not adhered to, and of these two had nephritis. All the patients were treated in hospital, and therefore the conditions were as equal as possible.

ODOROUS BREATH IN MALARIA.

N. V. MAKAROFF (*Vratch.*, No. 22, 1891) draws attention to an undescribed pathognomonic sign of malarial fever. This consists in a peculiar aromatic odor of the patient's breath, resembling the smell of chloroform or ether. The odor appears to be most marked in women and children. Since the symptom occurs in all varieties of malarial poisoning its practical value is obvious. In otherwise obscure cases the aromatic smell alone is said to be sufficient to identify the disease. The statements are made on the ground of an extensive experience in classical malarial localities.

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EDITORS :

A. LAPHORN SMITH, B.A., M.D., M.R.C.S., Eng., F.O.S.,
London.

F. WAYLAND CAMPBELL, M.A., M.D., L.R.C.P., London.

ASSISTANT EDITOR

ROLLO CAMPBELL, C.M., M.D.

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MONTREAL, MAY, 1892.

**MINUTE ON THE DEATH OF DR. D
HAYES AGNEW.**

ADOPTED BY THE
COLLEGE OF PHYSICIANS OF PHILADELPHIA,
MARCH 24, 1892.

The death of Dr. D. Hayes Agnew, recently president of the College, in the seventy-fourth year of his age, and after a life crowned with honor and usefulness, calls for an expression of the sense entertained by the College of the gravity of the loss which it suffers, in common with the profession he adorned, the charitable institutions he served, and the community in which his skill did so much to lessen suffering and death.

He began his professional life with no adventitious aids ; yet by incessant industry, indomitable perseverance, and singleness of purpose he attained to its highest rank. No temptation disrouted his attention from the goal of his life, neither extraneous science, nor general literature, nor the allurements of art, nor the pleasures of society.

The undivided strength of his mind and his affections were devoted to enlarging the domain of surgery, not only in its operative methods, which he always subordinated to the welfare of his patients, but also in preparing for his profession a literary monument that might speak for him when his voice should be no longer heard.

His minute acquaintance with anatomy and his ambidextrous skill enabled him to perform,

with ease to himself and safety to his patients, operations which less accomplished surgeons hesitated to undertake.

He possessed a certain magnetism of manner quite independent of formality, that evidently proceeded from the heart and drew all hearts to himself. Never frivolous, but always cheerful, he was dignified, grave and earnest, making all who heard him as a teacher and speaker, or in familiar intercourse, recognize in him above all things the upright man. For he possessed eloquence of conviction and the force of absolute honesty in all his statements, and thereby drew to himself as enthusiastic admirers and disciples the successive classes of students whom he taught.

The College, desiring to show respect for the purity, uprightness, unselfishness and modesty of Dr. Agnew's character ; its admiration for the noble example of his life ; and its sense of the value of his contributions to the science and art of surgery, directs that this Minute shall be duly recorded, and a copy of it, signed by the President and Secretary, be conveyed to Dr. Agnew's family. Also, that the College will attend the funeral in a body, and that the President be requested to appoint a Fellow to prepare a memoir of our late colleague.

CHARLES W. DULLES, M.D.,
Secretary.

THE NATURE OF INFLAMMATION IN THE LIGHT OF MODERN DISCOVERIES.

We have special pleasure in calling the attention of our readers to the important article by Dr. W. F. Carr of Washington, on the above topic, which appears in another column. When these lines fall beneath the reader's eye we presume that he has already read the article referred to, but even so we would advise him to read it over again once more, for it clears up a great many mysteries connected with our daily battle with disease. Among so many interesting facts we might select just one which has an especially important bearing on the effects of drainage. We refer to the question whether septic matter has

a free exit or is pent up within the tissues. Any of us can remember cases of traumatism occurring in the preaseptic days, in which the temperature has suddenly risen and continued to remain high until the dressing was removed, the stitches cut, and the wound reopened, when within a few hours the temperature has fallen again to normal. The explanation in the light of modern discoveries is easy to see; for the thousands of bacteria not only could not escape owing to the wound being closed up, but they and the culture fluid in which they were multiplying were forced into the lymphatics from which they had a direct entrance into the blood. Now, we generally succeed in having no bacteria in our wounds, but if we are not sure of this we render absorption by pressure impossible by providing for drainage. This has an important bearing in one very fatal disease especially, namely, puerperal septicæmia, which in many cases could be almost immediately arrested by providing free drainage for the discharges. The temperature will often come down to normal in a few hours, simply by the introduction of an iodoform gauze drain into the uterus, even without, but preferably with, preliminary cleaning out.

Many other applications of the paper referred to will naturally suggest themselves to the reader, but we merely wish to direct special and thoughtful consideration to it.

MEETINGS OF ASSOCIATIONS.

The Ontario Medical Association will meet in Toronto on Wednesday and Thursday, 1st and 2nd of June. Sessions will be held each day at 9.30 a.m., 2.15 p.m., and 8.15 p.m. The President is Dr. Reeve, and the Secretary is Dr. Gibb Wishart. The meeting promises to be a most interesting one, including discussions on Diphtheria; on The third stage of labor; The present status of antiseptics in Surgery;

The therapeutics of constipation; Hay Fever; Hip joint disease; The Pneumonias of children; besides a great many papers on various important topics by individual members.

The CANADA MEDICAL RECORD has arranged to have a reporter present, so that our readers will have early information of the discussions in a condensed form.

The American Medical Association is to meet in Detroit on the 7th, 8th and 9th of June, under the presidency of Dr. Henry O. Marcy of Boston. This promises to be a remarkably successful one, and owing to the central location of the place of meeting will be largely attended not only by the American members but also by many Canadian visitors who will be made welcome.

We trust that nothing however will interfere with our Canadian practitioners attending the annual meeting of the Canadian Medical Association which meets this year at Ottawa under the presidency of Dr. Bray of Chatham. The meeting last year was a most interesting one, and we feel sure that no one who attended it regretted having done so. It behooves us as Canadians to put more life into the meetings of our own Association, and the best way to do it is to attend faithfully every year. A large attendance ensures a better quality of papers and a more energetic discussion of them, while both specialists and general practitioners are greatly benefited by thus coming in contact with each other. Special low rates can be obtained on the various transportation lines by applying to the Secretary, Dr. H. B. Birkett, Montreal.

READ THE BOOK NOTICES.

We were very much pleased the other day on being told by one of our subscribers that he always looked first at our column of book notices. He is a bright, active country practitioner with a large practice, and being far away from any other doctor he has to act promptly, without consulta-

tion with an experienced confrère, in the most difficult cases, cases that in the city would call for a consultation with two or three at least of the very ablest. And yet from what we have seen of his work he is remarkably successful. The reasons are various, but one of them undoubtedly is that he reads the CANADA MEDICAL RECORD and other journals carefully, and is therefore quite up to date with his treatment; and the other is that he watches for the appearance of the new books in the Book Notice department, and sends for those most highly recommended. Without the medical journal the country doctor would be completely isolated from the profession; with them he is kept thoroughly *en rapport* with it. Indeed, the city practitioner or specialist must often be surprised to see how well up his country brother is, considering that he has so many subjects to keep informed on and so little time for study. We would remind our readers also that authors of reprints noticed in this journal are generally willing to send a copy to anyone taking an interest in that particular subject who will send his request for one, accompanied with a stamp. These pamphlets when bound form a very valuable volume.

CHANGE OF PUBLISHERS.

With this issue the CANADA MEDICAL RECORD has changed publishers, the Herald Company, which has been printing it during the last three and a half years, having failed, and Messrs. John Lovell & Son, one of the oldest and largest publishers in Canada having now taken is in hand. In spite of many delays and disappointments owing to the printing house having been twice destroyed by fire, the patronage of the Record has steadily increased. If this increase continues, our readers may shortly expect to see the Record considerably enlarged and otherwise improved. On one point at least we trust we shall not

in future be obliged to ask the indulgence of our readers, and that is for delays in the date of issue. The new publishers have solemnly promised to have the Record mailed on or before the eighteenth of every month.

PERSONALS.

Dr. Max Goltman has been installed for the ensuing year as house surgeon of the Western Hospital, where on several occasions as *locum tenens* he has already proven himself not only a favorite with the patients but also an attentive executive officer of the staff.

Dr. Burnett gold medallist of Bishop's College, has established himself at Point St. Charles, where so many of our most successful physicians have laid the foundation of their practice. We feel sure that Dr. Burnett's earnestness and industry will soon bring him to the front rank among the younger practitioners.

Dr. Tatley, who has served a year at the general hospital as house surgeon with the greatest credit, has left for a year's study and relaxation in Europe, after which we believe he intends to return and engage in practice in Montreal. His thorough knowledge of his profession and his genial manners, coupled with his great popularity among the citizens, will ensure him before long a large and successful practice.

Dr. Hackett has gone for a short rest from his arduous four years work, after which he will return to engage in practice in Montreal, having decided to settle in the west end of Notre Dame St.

Dr. Hackett spent his final year as house surgeon at the Western hospital, and deserves great credit for having not only performed his duties there with so much satisfaction but at the same time keeping so near the head of his class in the final examinations. His large experience of midwifery will no doubt serve him a good purpose in the rapidly growing locality in which he is about to settle.

Dr. Sylvestre has established himself at Cote St. Paul in the place of Dr. Aubrey who has moved into town and taken up his residence at the old stand of Dr. Lamarche in St Antoine st.

Although the citizens of Cote St. Paul offered Dr. Aubrey every inducement to remain among them, having voted him the honor of being mayor for several terms, he was obliged for various reasons to relinquish the honor and to move into town. We feel sure that his kindly manner and well known skill

will soon acquire for him as large a reputation in the city as he had in the suburb.

Dr. Warren has opened an office in the east end of the city, where, owing to his proficiency in both languages, he will be kept busy by both French and English patients.

The following gentlemen have been elected to the outdoor staff of the Western Hospital: Dr. Geo. T. Ross, Dr. Frank M. R. Spendlove, Dr. Rollo Campbell, Dr. W. Grant Stewart, D. Kenneth Cameron, Dr. J. A. Springle.

BOOK NOTICES.

TREATISE ON MEDICAL AND SURGICAL GYNÆCOLOGY. By S. Pozzi, M.D., Professeur Agrégé à la Faculté de Médecine, Chirurgien de l'Hôpital Lourcive-Pascal, Paris. Complete in Two Volumes. Translated from French Edition under the supervision of, and with additions by, Brooks H. Wells, M.D., Lecturer on Gynæcology at the New York Polyclinic; Fellow of the New York Obstetrical Society, and the New York Academy of Medicine. Volume Two. With 174 Wood-engravings and 9 Full-page Plates in Color. Royal Octavo. 174 Wood-cuts. Muslin, \$6.00; sheep, \$7.00; half morocco, \$8.00.

There has been a growing desire for some work which should give, in a condensed and, at the same time, a practical form, what is best and most important in the various works on Gynæcology, not only in Europe, but in America. This has been accomplished by the author, Prof. S. Pozzi, in the present work.

This is not an exposition of any one system or school, nor are the methods presented those of any one man or those of any one nationality; but the work is indeed a most complete digest of the best and most important writings on Gynæcology in France, Germany, England and America.

From the fact that it is an epitome of the best literature of the subject to date, and includes the valuable additions of Dr. Brooks H. Wells, who has thoroughly adapted the work to the practice of the profession in America, it is an invaluable and necessary book. We have already spoken of the great practical value of this work while reviewing the first volume, and we can only add that the second volume just to hand fully maintains the opinion formed by the perusal of the first one. Inflammation of the uterine adnexæ begins with a short chapter on the anatomy and distribution of the lymphatics and the cause of inflammation and infection. The second chapter deals with non-cystic salpingitis, and the third with orphorospingitis, while the fourth deals very fully with perimetro-salpingitis which includes pelvic peritonitis and pelvic cellulitis.

The next subject is neoplasm of the uterine adnexæ and ligaments, including all kinds of tumors of the ovaries, tubes, and broad ligaments, occupying over one hundred pages. There is a short chapter on tuberculosis of the genital organs, and then a very exhaustive one on hematocele, hematoma and intra uterine pregnancy. Eight pages are devoted to diseases of the vagina, and the same number to diseases of the vulva, including lacerations of the perineum and coccygodynia. Malformations occupy 60 pages, while the last chapter also of 60 pages treats of diseases of the urinary tract and rectum. The type is large and the paper good, while the illustrations are unusually profuse and beautiful. No gynæcologist can afford to be without this work.

R. C. M. PAGE, M.D., author "A Chart of Physical Signs of Diseases of the Chest," "A Hand-book of Physical Diagnosis of Diseases of the Organs of Respiration and Heart;" Professor of General Medicine and Diseases of the Chest in the New York Polyclinic; Visiting Physician to Randall's Island Hospital, St. Elizabeth's Hospital, the Polyclinic Hospital, and the North-Western Dispensary, Department of Diseases of the Heart and Lungs; Member of the New York Academy of Medicine, and New York Pathological Society.

A Text-book of the Practice of Medicine for the use of Students and Practitioners. Octavo 578 pages, illustrated. Red parchment muslin. price \$4.00.

In this practical and compact work Dr. Page has endeavored to present to the student and practitioner a digest of the practice of medicine as it exists to-day.

Notwithstanding the concise and condensed form of the book, rendered necessary by the exigencies of the case, the busy physician as well as the student will find a large number of prescriptions that have been practically tested and are in accord with the most advanced theories of treatment.

The author says that the chief objects in view in the preparation of the volume were, "to facilitate clinical instruction, and enable both physician and student to obtain, in brief, the most practical as well as scientific view of the various subjects treated of in a work on medicine."

It must not be supposed, however, that this book is merely a compend. Although it is much smaller than a systematic work in medicine, yet on this question of treatment especially it is unusually full and complete. It is so practical throughout that it is evident that the author had a large experience in teaching. The book is one which we can honestly recommend for general use among practitioners and students.

PYE'S SURGICAL HANDICRAFT: A Manual of Surgical Manipulations, Minor Surgery, and other matters connected with the work of House Surgeons and Surgical Dressers, with 300 illustrations on wood. First American from the third London edition. Revised and edited by T. H. R. Crowle, F.R.C.S., Surgical Registrar to St. Mary's Hospital; and Surgical Tutor and joint Lecturer on Practical Surgery in the Medical School. Complete in one volume. New York. Price \$4.00.

The fact that this work has run through three English editions and an American one is a fair proof that it possesses considerable merit. From a superficial perusal of it, it seems to us to possess the merits of being handy in size, moderate in price, and yet containing all that is essential in the larger and expensive works. It seems to strike a happy medium between the ponderous two volume works and the insufficient compend. We congratulate the publishers on the substantial binding and the excellent quality of the type and paper. As there seems to be a growing demand among practitioners for works of this kind, to which they can refer with a certainty of finding the information they require to guide them without taking up too much time, we feel sure that this work on surgery will have a large sale in the United States and Canada. It may be obtained through any bookseller.

CONSUMPTION: How to prevent it and how to live with it. Its nature, its causes, its prevention, and the mode of life, climate, exercise, food, clothing necessary for its cure. By N. S. Davis, Jr., A.M., M.D., Professor of Principles and Practice of Medicine, Chicago Medical College; Physician to Mercy Hospital; Member of the American Medical Association, Illinois State Medical Society, Chicago Medical Society, Chicago Academy of Sciences, Illinois State Microscopical Society; Fellow of the American Academy of Medicine; Author of a Hand-book on "Diseases of the Lungs, Heart and Kidneys." Philadelphia and London. F. A. Davis, publisher. Price 75 cents nett.

AMPUTATION of the Vaginal portion of the Cervix Uteri in cases of suspected Carcinoma. By Andrew F. Currier, M.D., New York. Re-printed from the New York Medical Journal for March 12, 1892.

A STUDY relative to the Functions of the Reproductive Apparatus in American Indian Women. By Andrew F. Currier, M.D., of New York City.

RECURRENT ERYSIPELAS.

HIRTZ and WIDAL report (*Sem. Méd.*, December 23rd, 1891) two cases of recurrent erysipelas. 1. A woman, aged 33, was attacked by erysipelas, the exciting cause being apparently a fall into water. During a little over three months this woman had at least twenty typical recurrences of the disease, sometimes localized in the face, at others on the lower and inner portions of the thighs, where they seemed to start from two patches of chronic eczema. Examination of some blood drawn from this point revealed the presence therein of typical streptococci which yielded pure cultures. 2. In another patient, also subject to true recurrences of erysipelas, there was, just by the right ear, a patch of eczema which always served as the starting point of the affection. The cultures of streptococci obtained from both these cases were highly virulent. The above cases seem to the authors to illustrate (1) how absolutely an attack of erysipelas fails—even for a time—to confer immunity against a second attack; and (2) how, given a quasi-permanent door of entry like a patch of eczema, this may serve as an incubating ground for the microbe.—*British Medical Journal.*

ANNOUNCEMENT.

IMPORTANT NEW TEXT-BOOK.

Materia Medica, Pharmacy, Pharmacology, and Therapeutics. By WM. HALE WHITE, M.D., F. R. C. P., etc., Physician to and Lecturer on Materia Medica at Guy's Hospital; Examiner in Materia Medica Royal College of Physicians and Royal College of Surgeons, etc. American Copyright Edition, edited by REYNOLD W. WILCOX, M.A., M.D., Professor of Clinical Medicine at the New-York Post-Graduate Medical School and Hospital, Assistant Visiting Physician Bellevue Hospital, etc. To be printed in one compact, handy volume.

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