TRANSACTIONS

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DR. JOHN A. HARTWELL, in the Chair

PERFORATED DUODENAL ULCER AND BLEEDING JEJUNAL ULCER

DR. JOHN DOUGLAS presented a young man, twenty-three years old, who had had an acute perforation of a duodenal ulcer, July 19, 1921. He was operated on eight hours after perforation. A large indurated ulcer, situated just distal to the pylorus, had perforated. Because of the extensive induration and œdema, excision of the ulcer could not be done and closure of the perforation seemed to obstruct the pylorus to such a degree that a gastrojejunostomy was performed, a procedure which he usually does not follow in the presence of acute perforation. His convalescence was interrupted by the development of a large subdiaphragmatic abscess in the right side which was drained by resection of the tenth rib under local anæsthesia.

On February 10, 1922, seven months after operation, he had a large hemorrhage from the bowel, and again on September 10, 1922, a large hæmatemesis, followed by several tarry stools, causing marked anæmia. Radiographic examination at this time showed nothing diagnostic. October 31, seven weeks later, he had another large hemorrhage from the stomach which was repeated the same evening, reducing his red blood cells to 1,900,000 and his hæmoglobin to 30 per cent. After three direct blood transfusions during the next two weeks, it was decided to again operate on him as his stools continued to show the presence of blood. It could not be decided at this time whether the blood was coming from his old unhealed ulcer, a new ulcer or a jejunal or gastrojejunal ulcer, although he at no time had complained of the severe pain which is usually associated with the latter lesions. His only subjective symptoms other than the hemorrhages were occasional gastric discomfort and gas pains in the left side of the abdomen and a severe attack of diarrhœa a week before his last hemorrhage.

At operation on November 18, 1922, it was rather surprising to find very few adhesions about the pyloric region, notwithstanding the local peritonitis, following the perforation, and the subdiaphragmatic abscess. The old ulcer showed a very small smooth scar, with no thickening about it or the pylorus. Just distal to the site of the gastrojejunostomy was an indurated area in the jejunum. While holding up the jejunum in order to separate the intestine and stomach at the point of anastomosis

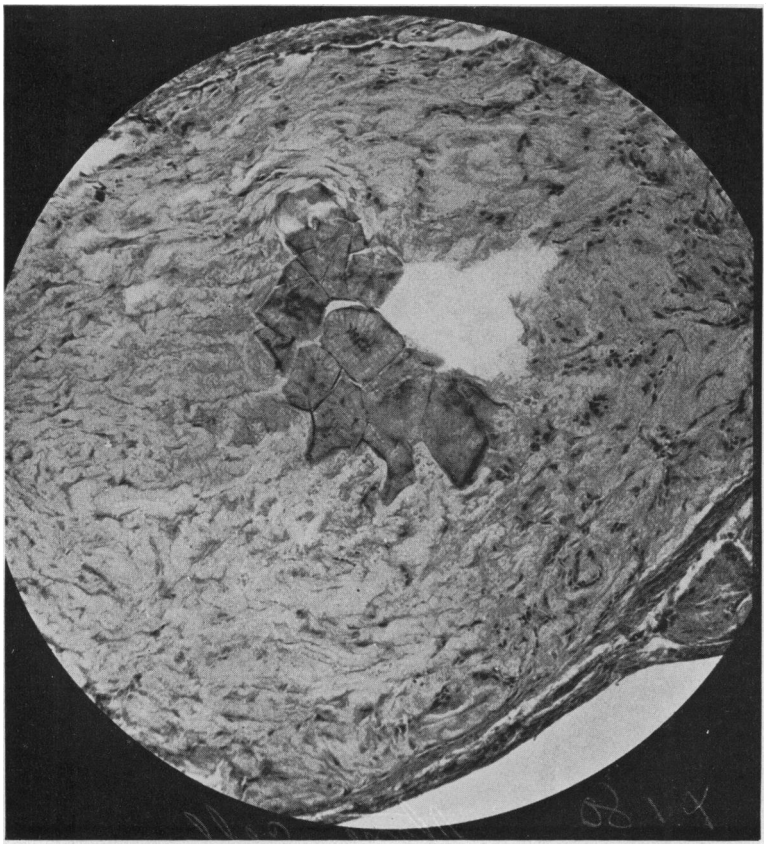

FIG. 1.—Section from nodule on serosa of stomach showing "stone cells."

this area tore through, revealing an ulcer, evidently at the point of perforation. This ulcer was not marginal, as the continuity of the gastric and intestinal mucosa was flawless at all points along the edge of the stoma. No non-absorbable suture material had been used in the anastomosis. The stomach and jejunum were separated and the wounds in each closed with chromic catgut and the abdominal wound closed without drainage. Recovery was uneventful and the patient has been free of symptoms and has gained twenty pounds since his operation. Radiographic examinations, however, during the past few days, show that he has a considerable degree of six-hour retention. The patient is presented because of the early development of the jejunal ulcer, and the severe massive hemorrhages occurring therefrom, although he suffered from very little of the pain which is usually a prominent symptom in the presence of this lesion.

PERFORATED DUODENAL ULCER

DR. JOHN DOUGLAS also recited the history of a patient eighty-one years old, first seen on October 24, 1922. His gastric symptoms dated back only three or four months, during which time he had suffered from pain and discomfort after eating, loss of flesh and strength and increasingly frequent vomiting. Careful questioning elicited no previous history of stomach symptoms. Radiographic examination demonstrated an advanced degree of pyloric stenosis with a large twenty-four-hour retention. There was no defect in the stomach outline indicating carcinoma and examination of the gastric contents showed normal total acidity and free HCl. It was therefore believed, notwithstanding his age, that he had a benign stenosis, and as his blood-pressure, blood sugar and blood urea and kidney function tests were all remarkably good for a man of his age, operation was advised. He was operated on under local novocaine anæsthesia on November 15, 1922.

At operation the pylorus and first portion of the duodenum were found buried in dense adhesions which could not be separated or satisfactorily explored under the local anæsthesia, but no mass could be felt anywhere in the stomach, nor were the regional glands enlarged. On the anterior wall of the pyloric end of the stomach were two small white nodules about the size of the head of a pin, attached to the serous layer of the stomach wall. These had the appearance of and were believed to be carcinomatous implants, secondary to some primary growth, and were removed for diagnosis. A gastrojejunostomy was then done.

The pathological report from these specimens received was "vegetable cells in the serosa of the stomach," and Dr. F. C. Wood, the pathologist, informed me that these cells were the so-called "stone cells" (Fig. 1.) which occur in the pulp of pears and some other fruits and could only have reached their present location as a result of a perforation of the stomach or duodenum. The following day it was learned from the patient that two years previously during the summer, he had suffered from a severe attack of abdominal pain most marked in the right hypochondrium. This pain was so severe that he had fallen

to the ground and been unable to get up. He received morphine, was kept in bed for about two weeks, and then entirely recovered, having no stomach symptoms until two years later when his pyloric stenosis developed. It is therefore quite evident that he had an acute perforation from which he recovered without operation at the age of seventy-nine years. The patient is shown because of his recovery from an acute perforation without operation at the age of seventy-nine, the occurrence of a benign stenosis of the pylorus at the age of eighty-one and the curious manner in which the diagnosis of perforation was made.

PERFORATED DUODENAL ULCER IN A CHILD

DR. WILLIAM A. DOWNES presented G. J., aged three. Admitted to St. Luke's Hospital on December 28, 1922. Discharged January 19, 1923. Diagnosis: Acute perforated duodenal ulcer. Chief complaint: Vomiting and pain in abdomen. Present illness: Began six days ago with vomiting. Vomitus at first contained food, and later became bile-stained. There was no temperature or pain. All food by mouth was stopped and was given nothing but water. On the fourth day was put on small quantities of barley water. Vomiting ceased and child seemed to be better. About ten o'clock on the morning of the sixth day complained of a sudden severe pain in the upper abdomen and immediately vomited a large quantity of brownish material. Vomiting and pain continued during the day, and there was a gradual rise in temperature. A blood count showed 12,000 leucocytes, and a polymorphonuclear count of 82 per cent. The case was considered a surgical one with a probable diagnosis of acute appendicitis.

Upon admission to the hospital at eight P.M., December 28, temperature had risen to 102. There was slight rigidity over the entire abdomen with moderate distention in the epigastric region. An indefinite resistance could be felt to the right and above the umbilicus, giving the impression of an enlarged liver. A blood count showed leucocytes 20,000, polymorphonuclears 92 per cent. In view of the rapid change in the blood count, increasing temperature and the indefinite mass in the upper right quadrant, an exploratory operation was decided upon. Provisional diagnosis: Acute appendicitis with the appendix situated high up under the liver. Mid-rectus incision: Immediately upon opening the abdomen a large quantity of bile-stained fluid escaped. The gall-bladder was found distended and upon exposing the duodenum a perforation about one-eighth of an inch in diameter was found on the anterior surface just distal to the pylorus. There were no adhesions about the perforation and a bloody fluid could be seen escaping from the opening. Perforation was closed by purse-string suture of fine chromic catgut reinforced by several interrupted sutures. All fluid aspirated from the abdominal cavity and wound closed without drainage. Convalescence uninterrupted. Child was discharged from the hospital on the twenty-first day post-operative. X-ray examination made on the seventeenth day after operation showed the stomach to be functioning normally.

DR. JOHN GIBBON remarked that in a large perforation closed with difficulty and where an omental graft is unsatisfactory, or where infolding of the ulcer results in obstruction, the artificial stoma is indicated. However, if one has observed many perforations from typhoid, one realizes that the obstruction from infolding is more apparent than real as shown at autopsy or at operation for a second perforation. In the case operated upon within a few hours after perforation, it is a question whether gastro-enterostomy should be done. There is a type in which it should not be done and that is where the patient is very ill and where prolongation of the operation adds greatly to the risk. One of the interesting features of this question is what happens to the ulcer after simple closure without gastro-enterostomy. He had had occasion to operate upon three patients in whom a simple closure at the first operation was done. The interval between operations in these cases, sixteen months, nine years, and fifteen years. Each was apparently well after the second operation. Without a gastrojejunostomy, nearly all of these cases will get well and have no further trouble. Fourteen years ago the speaker, in conjunction with Doctor Stewart, reported (*J. A. M. A.*, March 6, 1909) twenty-two cases of perforation on which they had operated, and every case operated on within eighteen hours got well, and every case operated on after eighteen hours, with one exception, died. In late cases it would seem more advisable not to do a gastrojejunostomy.

DR. GEORGE P. MULLER thought that the tendency at the present time in the non-perforative cases was to excise the ulcer with or without gastro-enterostomy; if one was able to operate early in a simple perforation then one could practice such excision and not do a gastrojejunostomy. All writers agree that those cases seen after thirty-six hours will die and yet we teach that they are the ones in which we simply should open the abdomen and establish drainage; the stomach has no chance to empty against the advanced infiltration and œdema, so we ought to be more radical in these cases and by doing gastrojejunostomy perhaps reduce the one hundred per cent. mortality. The speaker recalled a case which resembled the first case of Doctor Douglas. A physician who was operated on in 1914 for perforated ulcer and on August 22, 1922, had a severe hemorrhage. He was given rest and cold treatment, but had another hemorrhage, and after transfusion the stomach and jejunum were opened, but no ulcer could be found. The gastrotomy was closed and the patient entirely recovered.

DR. EUGENE H. POOL said that it seemed to be in the minds of some surgeons that if gastrojejunostomy could be done in conjunction with closure of the perforation, it would insure a permanent cure and prevent future symptoms. It is true that a gastro-enterostomy will prevent symptoms from subsequent pyloric obstruction; but, on the other hand, it will add an appreciable risk, first, of marginal ulcer (2 per cent.), second, a real risk of discomfort and functional distress (about 25 per cent.), which attends all gastro-enterostomies. Therefore, the policy at the initial operation should be

to avoid a gastro-enterostomy, if possible, rather than to do a gastro-enterostomy, if possible. Gastro-enterostomy should be reserved for those conditions mentioned by Doctor Gibbon. When no gastro-enterostomy is done the patient should be carefully watched and a gastro-enterostomy made when and if indicated. Deferred gastro-enterostomy is apparently necessary in about 33 per cent. of the cases.

DOCTOR DOUGLAS, in closing the discussion, explained that the reason he had done a gastro-enterostomy in this patient was because he was certain that he had closed the pylorus to such an extent that pyloric obstruction would result. He thought that in most of these perforated ulcer cases the patients were better off without gastro-enterostomy and agreed with Doctor Gibbon that this procedure was rarely necessary.

HYPERNEPHROMA OF OVARY IN CHILD

DR. WILLIAM A. DOWNES presented a second case. T. B., aged three and a half years. Admitted to St. Luke's Hospital on May 4, 1922. Discharged May 20, 1922. Diagnosis: Hypernephroma of the right ovary. Chief complaint: Pain and abdominal distention. Present illness: Began about ten days ago, at which time child complained of sudden severe pain in the lower abdomen. This pain lasted about one-half hour. A few days later complained of a similar attack of pain, lasting about same time. Mother then noticed rapid increase in the size of the abdomen, although she thinks there had been some distention for the past year. On the day of admission to the hospital, child had a temperature for the first time which was later explained by the fact that measles developed two days after the operation. Mother states that the patient has always been considered precocious, acting and talking like a much older child. An unusual development of the external genitals with the appearance of pubic hair was noted some months before the onset of the present symptoms. General health always good. Physical examination showed a well-developed and well-nourished child. Head, neck, thorax and extremities normal. Abdomen much distended, apparently containing a large amount of free fluid. A freely movable mass about the size of a baseball can be felt to the right and below the umbilicus. No tenderness, no rigidity. Provisional diagnosis: Tubercular peritonitis.

Operation, May 5, 1922.—Lower right rectus incision. Immediate escape of a large quantity of straw-colored fluid. The tumor which had been palpated was found to arise from the right ovary and measured about 14 x 12 x 12 cm. The peritoneal covering was congested and the pedicle gave the appearance of having been recently twisted. Left tube and ovary normal. There was no evidence of metastasis in the parietal or visceral peritoneum. The pedicle which was about 3 cm. in width ligated with No. 1 gut. Wound closed in usual way. Convalescence complicated by measles. Discharged from hospital on the sixteenth day. Condition of child at the present time excellent.

Pathological Report.—Diagnosis, hypernephroma of ovary. Tube

normal. Macroscopical examination: Specimen consists of a tumor of the right ovary with tube attached. The surface of the ovary is smooth and shining and shows minute cysts as well as diffuse congestion of the underlying mass. It measures 14 x 12 x 12 cm., is semi-fluctuating, at one end soft, but at the other cellular. On section there are several broken-down areas at the cystic end, the cavities being filled with bloody serous fluid. About half the mass is yellow, opaque, and consists of rounded tumor masses and a slight amount of hemorrhagic stroma. The growth has no capsule aside from the ovarian wall. The tube is normal. Microscopical examination: Section of the tumor shows a very cellular growth in which there are numerous areas of necrosis. No ovarian tissue appears in the sections, but a very delicate stroma supports the diffuse growth of large cells which are arranged in the form of small alveoli without lumen. For the most part, in the better preserved portions of the tissue, the cytoplasm is either clear or granular, but the cell walls are uniformly well defined and the nuclei small, comparatively regular and stain deeply. Occasionally multinucleated cells are found, but these are usually in the more degenerated portions and suggest involution structures. The growth is extremely vascular and contains large numbers of sinuses with only a single endothelial support. The growth as a whole strikingly resembles tumors of the adrenal cortex, and it is probable that the chromaffin cell furnished an origin for it. Carmine stains show scattered but fairly numerous granules of collagen within the cells.

DR. JOHN SPEESE alluded to a case which came under his observation a few weeks ago. The child, an hermaphrodite, nine days old, was admitted to the Children's Hospital with symptoms of congenital pyloric obstruction, for which an exploration was done. The operation revealed a pylorus somewhat thickened and spastic, the characteristic tumor of congenital hypertrophy was not present. Having in mind the possibility of an early stage of such an hypertrophy, the serosa was divided over the thickened area. The vomiting which had persisted from birth was relieved for several days and there was a slight gain in weight. A recurrence of vomiting occurred, however, which was uncontrollable, and death resulted one week after operation. The autopsy revealed a patulous pylorus; bilateral hyperplasia of the adrenals, the right one, adherent to the surrounding tissues, was the size of the kidney, and was the tumor felt before operation and erroneously diagnosed as pyloric hypertrophy.

From the clinical point of view the case was regarded as spasm of the pylorus and in view of the autopsy findings the condition seems of some importance. The connection of adrenal hyperplasia and hermaphroditism has been established. The relationship between adrenal disease and such a gastric neurosis is of interest, particularly in respect to the experimental work of Friedman, who some years ago endeavored to show a relationship between the development of gastric ulcer and disturbances in the ductless glands. He found that spastic conditions of the stomach musculature were caused by

deficiency in parathyroid or epinephrin secretions, or by excesses of one or more of the thyroid products. If a true diminution in secretion of the adrenals followed disease of the gland in the case mentioned, it is interesting to speculate as to the possible value of the administration of adrenal gland extract in cases of this type.

DR. WALTON MARTIN said that in regard to the explanation of the increase in pubic hair growth, the stimulation of the ovary, due to the presence of the growth, would cause this, and referred to the case of a child of five with tumor of the ovary, and of a boy of seven with tumor of the testicle, in both of whom this phenomenon had occurred, to disappear on removal of the growth.

DR. HOWARD LILIENTHAL did not believe the hair-growing symptom to be entirely a sex matter, but that it was connected with some disturbance of the adrenal secretion. It is on record that hypernephroma has stimulated the unusual growth of hair and this coming on suddenly is one of the diagnostic points of the presence of hypernephroma.

SEPSIS FOLLOWING TONSILLECTOMY

DR. EDWARD W. PETERSON showed a child, Martin G., four years of age, who had had his adenoids and tonsils removed by another operator previous to being seen by the speaker. The patient was allowed to go home on the day following the operation and that night was found to have a temperature of 104°. There was swelling at the angle of the jaw on both sides of the neck. When examined he had a temperature of 105°, was apathetic, somnolent, and decidedly septic looking. The general examination was negative except for a dirty looking membrane in the tonsillar spaces and a suppurative cervical adenitis, just below the angle of the jaw on the right side. Incision and drainage of this abscess made no impression on the general condition. For the first ten days his temperature was constantly high, ranging from 102° to 106° F., then it became intermittent and ranged from 97° to almost 107°. For forty-seven days he had more or less fever.

While in the beginning the patient was apathetic, somnolent, and wished to be left undisturbed, later he was extremely hyperæsthetic, wakeful, fretful, and cried a great deal. Several times he had severe chills. He lost weight and strength gradually and showed a moderate, secondary anæmia. Blood cultures were negative. When the sepsis reached a subacute stage a transfusion of 320 c.c. of unmodified blood was given into the left external jugular vein by puncture, by the syringe cannula method. There was a decided fall in temperature, gain in appetite and in strength and improvement in the boy's general condition. This lasted for several days, when the temperature began to rise again. There developed at this time a hard swelling in the left parotid region which gradually increased, until the left eye was closed. Later fluctuation could be detected just above and in front of the left external auditory meatus. Incision into this mass revealed a periostitis of the mandible on the left side just below the articulation. Another

transfusion was given at this time. Following the drainage of this focus of infection and the blood transfusion the temperature dropped to normal and convalescence was rapid and complete.

DR. W. E. LEE said he had recently had a patient who, after very careful matching with a number of donors, was transfused by the citrate method with 500 c.c. of blood without any immediate reaction. One-half hour afterward, however, he developed a typical anaphylactic protein reaction with high fever, spasm of the unstriated muscles, asthmatic symptoms in the lungs with involuntary voiding of urine and several bowel movements. This subsided after one hour, but the man developed acute œdema of the lungs and died eight hours after the transfusion. During the reaction the urine was examined and no hæmoglobin found. The blood showed no hæmolysis or agglutination.

DR. GEORGE P. MULLER referred to a case he had under his care on whom a tonsillectomy had been done under local anæsthesia. One week later a swelling appeared on the left side of the neck, which subsided, followed by swelling on the right side of the neck, for which he was admitted to the hospital. He was very ill with a temperature 103°. An incision was made in the neck and an abscess found beneath the jaw and extending under the sterno-cleidomastoid muscle towards the posterior triangle. A counter-incision was made and Carrel-Dakin irrigation used. The colon bacillus and staphylococcus aureus were cultured from the pus. Four days later a second collection made its appearance at the lower end of the scapula, and three days after this a third collection appeared over the crest of the ilium. Both were drained. He was discharged, but two weeks later the left side of the neck became swollen and he was readmitted apparently very ill. While walking to the ward the man dropped dead. No autopsy was obtained. Regarding the use of blood transfusion in chronic septic cases, he has had remarkable results in many.

DOCTOR PETERSON, in closing, said that he had had one transfusion experience similar to that of Doctor Lee. A woman with an extreme degree of anæmia, having only 740,000 red cells, a leucopenia and a hæmoglobin of only 10 per cent. Preliminary blood compatibility tests were made and found satisfactory. The transfusion was started by the syringe-cannula method. With the injection of the first syringeful of blood the patient stated that she was dying, became restless and hysterical. The lips and eyelids became rapidly swollen and a giant urticaria came out all over the body. The transfusion was stopped at once and for the next twelve hours the patient was critically ill with temperature, delirium, and showed every evidence of a severe anaphylactic shock. She recovered and later several transfusions were given without any anaphylactic reaction, and with great improvement in the anæmia.

With regard to transfusion, Doctor Peterson believed that the procedure did no good during the acute stage of a sepsis, but that in the subacute or

chronic stage, blood transfusions did good through their strengthening and stimulating influence, rather than through any special bactericidal or antitoxic properties.

BILATERAL, MULTIPLE KIDNEY ABSCESSES

Dr. Edwin Beer presented the following case: J. L., male, twenty-two years old. Admitted Mt. Sinai Hospital, May 16, 1922. Discharged June 23, 1922. The patient was well until ten weeks before admission, when he had a mild infection of the toe. Two weeks later he developed an infection of the right index finger, and two weeks later he developed a cold in the head, and while in bed an abscess of the scalp. At this time he had a temperature for two to three days. Seventeen days prior to admission, he developed some pain in the left lumbar region with fever of irregular character, and was confined to bed. Since then he has had pain in the left lumbar region and tenderness, irregular temperature, no chills, and no urinary symptoms.

His physical examination showed a very pale, septic looking patient. His general physical condition was negative, but in the left lumbar region there was a marked tenderness but no mass to be felt. His blood count showed 29,600 white cells with 86 per cent. polymorphonuclears. His urinalysis showed a trace of albumen, some casts, and a few white blood-cells. Pre-operative X-ray of the genito-urinary tract was not satisfactory, but showed no stone. Pre-operative diagnosis was cortical abscess of the left kidney with possibly perinephric abscess.

On May 16, 1922, under gas, a left lumbar kidney incision was made and a perinephric abscess encountered. The thickened capsule of the kidney was turned back and multiple cortical abscesses were incised without delivering the kidney. The capsule was much thickened and œdematous. In one place the cortical abscesses were so grouped as to suggest a suppurating infarct or carbuncle. Rubber dam was placed in front and another behind the kidney and a tube between the two sheets of rubber. The wound was left wide open. The culture of the abscesses showed staphylococcus aureus. From May 17 to May 23 the wound was irrigated daily and the kidney regularly palpated in the wound and several soft suppurating areas in the cortex were broken up with the finger. During this period the temperature gradually diminished and the patient seemed to be convalescing, when suddenly on the 23rd his temperature rose to 105°. The wound was then explored with the finger and considerable pus evacuated, the kidney being easily palpated in the bottom of the wound. There was some urinary leakage from the kidney into the dressing. May 24, the next day, the temperature dropped to normal and it seemed as if the previous day's digital exploration had controlled the situation. Throughout this period the urine was clear, showing a trace of albumen, a few casts, and occasionally a few pus cells.

May 25 to 26 the temperature again arose. Blood culture was negative and tenderness was recognized in the right lumbar region. May 27 the temperature rose to 103.8° and in the right lumbar region on

deep pressure tenderness somewhat more marked. Exploration with the finger of the left lumbar wound gave no explanation for the rise in temperature, and on May 29 it was decided that the patient, whose right kidney area was tender, probably had cortical abscesses in the right kidney with some perinephritis. On that day, a right lumbar incision was made and the lower pole of the right kidney was found necrotic and surrounded with thick green pus; perinephric tissues were thickened and œdematous. The right kidney was decapsulated *in situ* just as the left kidney had been, and multiple abscesses, some as large as cherries, were opened bluntly. Drainage with two sheets of rubber dam on either side of the kidney and tube between. Wound left open without any sutures. After this operation, the wounds on both sides being dressed and irrigated daily and rubber dam being withdrawn gradually; the patient's temperature became normal within two weeks. During this period several small areas in the right kidney were bluntly opened at dressings with palpating finger. From the right wound there was also moderate urinary leakage. Beginning the third week the patient had sufficiently recovered strength to be out of bed, and on June 22—about five weeks after his first kidney operation, he was discharged from the hospital.

In addition to the rapid recovery and the open method of treatment after decapsulation the most interesting features in this case are the apparently metastatic character of bilateral kidney abscesses; the absence of frank pus in the urine in some twenty-three examinations; and the remarkably firm union of both large lumbar wounds which had been left wide open without any sutures. Since the operation the patient has gained about forty pounds.

Dr. Charles H. Peck said that although he had seen no case of bilateral multiple kidney abscesses, he had seen many cases of unilateral infection of the kidney. He considered that Doctor Beer's case emphasized one point and that was that these cases should be treated conservatively. In many of them the clinical symptoms will subside without operation. In another form abscess of the cortex will form without involving the pelvis or the urinary tract, and the urine remains free from pus. These can often be treated by local drainage without sacrificing the kidney. Only a small percentage go on to demand nephrectomy, even bearing in mind that the onset may be very sharp. With a little patience this violent initial stage will pass off and the patient recover.

Dr. Howard Lilienthal referred to two cases he had had of bilateral multiple kidney abscesses which he treated the same as had Doctor Beer. The first was the result of a streptococcus infection of the face and the patient was in the hospital nine months. His second bilateral case was four years ago, a soldier in the American Army, who developed a phlegmon of the left arm and from that had lung abscesses and bilateral kidney abscesses. He was treated similarly to the first case and got well.

DOCTOR BEER believed that it is necessary to distinguish carefully between those cases with pyuria and colon infection and those cases without pyuria where the infection is probably due to coccic group of bacteria. In the latter, incision of the abscesses with decapsulation, at times resection of the infarcted area, and rarely nephrectomy seem indicated; whereas in the colon group nephrectomy, except in diabetics whose kidneys apparently are not able to take care of the multiple abscesses, is usually contra-indicated. If there is no obstruction to the outflow of urine, those cases usually take care of themselves, though some require decapsulation and, if stone is present in the ureter or pelvis, the removal of the stone may be necessary. The case that Doctor Lilienthal referred to, following erysipelas of the face, is a classic example of conservative treatment and has been quoted for years in literature. These cases of bilateral coccic infections of the kidney are very uncommon. He had seen only three similar cases and they were all treated as in the case presented with satisfactory end results.

SPLENECTOMY FOR HÆMOLYTIC JAUNDICE

DR. EDWIN BEER also presented a child, six years of age; admitted September 22, 1922. Present trouble began one week before admission with temperature and vomiting and progressive pallor. On admission, spleen five fingers below costal border. The liver was just palpable and there was a slight enlargement of the heart to the left, and a general adenopathy. Hæmoglobin, 43 per cent.; red blood cells, 2,000,000; white blood cells, 34,000; increased fragility of red blood cells; blood Wassermann negative; urine negative. While in the hospital on October 24, the patient developed some abdominal pain and icterus. On October 31 the temperature went up to 102, and icterus again became apparent. On December 12 the patient again had an attack of pain in the abdomen with tenderness and again became icteric. On December 13 the hæmoglobin had dropped to 32 per cent., and on December 17 there was again some icterus. The examination of the blood serum for bile showed a positive indirect VandenBergh, which, together with the increased fragility of red blood cells plus the enlarged spleen, made the diagnosis of hæmolytic jaundice. In the stools and urine there was an increase of urobilin. As the rest of the family showed no similar disturbance, this was apparently a case of acquired hæmolytic icterus in which there were icteric periods alternating with non-icteric periods.

Doctor Schwarz, on whose service the patient had been carefully studied, transferred the patient to the surgical service, where, on January 10, 1923, a splenectomy was done under gas-ether through a subcostal incision. The spleen was found to be enlarged and was removed after ligation of the pedicle, abdominal wound being closed in layers without drainage. The pathological report from Dr. F. S. Mandlebaum is as follows: "The spleen removed from E. S. measures 11 x 8 x 4 cm. and weighs 225 gms. The surface is smooth and the vessels at the hilus are patent. The cut surface of the spleen is quite succulent and dark red in appearance with no visible evidence of fibrosis. The Malpighian

bodies appear numerous and considerably enlarged. Smears made from the fresh surface show a large number of red blood cells, the usual forms of white blood cells and a marked preponderance of lymphoid elements. Large numbers of agglutinated blood platelets are also present. Microscopic examination shows hypertrophy of the Malpighian bodies, marked congestion of the pulp, moderate phagocytosis, and the presence of iron pigment in the cells lining the sinuses."

The patient has made an uneventful recovery, two weeks having elapsed since the operation, and has had an absolutely afebrile course since the operation without any return of icterus. Five days after the operation, blood examination showed 80 per cent. hæmoglobin and 4,650,000 red blood cells.

DR. CHARLES H. PECK spoke of the satisfactory results from splenectomy in hæmolytic jaundice. He had operated on three cases in the past few years, one a boy of fourteen of the familial type; all have remained quite well. A fourth case, of the hereditary type, had cholecystectomy performed for gall-stones six years ago without splenectomy and had remained comparatively well without increase of symptoms, but the jaundice persists.

CHRONIC BILIARY FISTULA
IMPLANTATION OF SINUS INTO THE STOMACH

DR. HOWARD LILIENTHAL presented a woman, thirty-one years old, operated upon for cholecystitis with gall-stones in 1917, cholecystostomy and drainage having been performed. After two years of relief she began to have deep epigastric pain running to the back. She also had a gynecological trouble, for which she entered Mt. Sinai Hospital on September 20, 1921, where an amputation of the cervix for a non-malignant condition was done. It was intended to remove her gall-bladder when she should have recovered from the gynecological operation, but an acute suppurative cholecystitis came on two days afterward and necessitated a reopening of the gall-bladder without delay. This was done by Dr. Harold Neuhof, and by October 27 things had quieted down and she was ready for her radical operation. The external gall-bladder wound was still patent and discharging bile. The operation proved difficult, but was finally successfully performed, the common duct being incised and a number of stones milked out. The choledochotomy was a long one made in the direction of the duct, so that the great mass of calculous material and detritus could be expressed. Probing of the hepatic duct disclosed more stones which were removed as well as possible with the blunt curette. Probing into the duodenum was not entirely satisfactory, and, since the operation had lasted about an hour, and the patient was not in the best of condition, it was decided to terminate the procedure. A closely fitting rubber drainage tube was passed into the hepatic duct and held there by a single fine chromic catgut stitch. The stools of this patient had never been acholic, so it was hoped that when the hepatic tube would be removed the bile would again find its way out through the natural channels. This was not

the case, however, all the bile escaping at the wound even when the tube had been removed. About two months after the operation it did not look as if the bile would again find its way through the natural channels and it was decided to again operate to close the fistula, a formidable procedure in the presence of the mass of tough and extensive adhesions at the former operative field. On December 18, 1921, an incision was made transversely just above the old scar and continued upward in the median line for about three inches. The fistulous opening was circumcised, leaving a thin collar of skin and the sinus freed from its adhesions. When the stomach was reached the implantation of the sinus looked so feasible and tempting that it was decided to make the experiment. Accordingly a gastrotomy was performed about 2½ inches from the pylorus anteriorly and about one-third of the way from the lesser to the greater curvature. A straight needle was then plunged into the stomach through the greater curvature, carrying a piece of thick silk, and this, after traversing the interior of the stomach, was led out at the gastrotomy wound which had been made. The silk was fastened with a suture tied in a bow-knot to the tough structure of the fistulous tract near the skin. Traction upon the silk was made outside the puncture where it had entered the stomach. The fistula with sinus was drawn into that organ, where it was held by four or five chromicized catgut sutures passed through the outer coats of the stomach. Further inversion of the anastomosis was then made and maintained by suture. Before the last row of sutures was put in the end of the bow-knot which had been left outside was drawn upon, untying the knot so that the silk could be extracted through its place of entrance. To test the imperviousness of the suture line, a stomach tube was inserted through the œsophagus and the stomach filled with air, while water was dripped over the line of suture. No bubbles escaped. The wound was then closed in two layers with drainage by rubber dam. Three days later the patient stated that she occasionally brought up faintly bile-tinged mucus. A week after the operation, although there was no gastric leak, bile appeared for a time at the wound. This leak, however, was of short duration, and the wound then healed promptly. There was never a trace of icterus, the patient was greatly relieved, and she was discharged from the hospital apparently well about two months after the plastic operation.

Dr. John H. Jopson said that a year ago he had presented a case operated on for biliary fistula in which he established an anastomosis between the first portion of the common duct and the stomach, that had remained in perfect health one and one-half years after the operation. Dr. Ellsworth Eliot, in 1917, read a paper on "Repair and Reconstruction of the Bile Ducts," collecting and analyzing all of the cases on record. Many methods were described by different operators in different series. He included at that time eight cases in which the hepatic or the common duct had been anastomosed with the stomach. A study of Eliot's paper makes one realize that there is a great deal to be desired in the end-results of many of these cases; attacks of pain and

jaundice are frequent in the post-operative histories. The chances of an ascending infection of the duct after operation probably increase as one goes down the bowel. The anastomosis can be made to the stomach with comparative ease, and there seems to be less chance of ascending infection than when the anastomosis is made into the duodenum or lower down in the intestine. The speaker had once completely divided the duct during an operation for cancer of the stomach, and performed immediate end-to-end suture with excellent result. The patient remained well after several years.

DR. FRANK H. LAHEY (by invitation) referred to two successful cases of transplantation of a common duct fistula into the duodenum. His own case was done on October 19, 1922, for a common duct fistula following operation for pancreatitis. The fistulous tract was coned out, care being taken to leave a thick wall about it to diminish the possibility of slough. This was transplanted into the duodenum, sewing a small No. 16 rubber catheter inside the fistula to maintain its patency during the healing. The abdominal wall was closed without drainage. The stools immediately became bile-colored and have remained so up to the present time. There has been no return of the fistula. This case was done without knowledge of a similar case done nine years ago by Dr. Hugh Williams at the Massachusetts General Hospital, who transplanted a common duct fistula into the duodenum and the patient, who has recently been seen by Doctor Williams, has remained entirely well with bile-colored stools and no return of the fistula up to the present time.

DR. JOHN GIBBON brought up the question whether so many persistent common duct fistulæ would occur if one did not remove the gall-bladder in the presence of stone, sand or mud in the common duct. He was convinced that it is a mistake to take the gall-bladder out when there is cholangitis. If the gall-bladder is left, the common duct can be drained and no fistula will follow. The common duct, if drained in the absence of the gall-bladder, remains open much longer than when the gall-bladder is present. If the gall-bladder is left in the above conditions these persistent fistulæ will not occur.

DR. WILLIAM A. DOWNES wished to know the experience of the members with reference to the permanency of a cure in operations for injury to the common duct. Six years ago in operating for gall-stones, he accidentally removed about one inch of the common duct and an end-to-end suture was done, which seemed to be very satisfactory. The patient was lost sight of, but a few days ago he turned up in the hospital intensely jaundiced. He was operated upon, and after freeing the duodenum, which was found adherent to the under surface of the liver, a half inch of dense cicatricial tissue was found at the site of the injury in the common duct. The cicatricial material was excised and a T tube inserted. He is convinced that these cases of injury to the duct, no matter how satisfactorily repaired, contract, and that this is the usual result. If the duct is injured, he wondered if it would not be wise to immediately anastomose the duct to the stomach or duodenum. The above case is the only one of injury to the common duct in his own hands,

but he had operated upon four other cases in which the duct had been injured and the late results have been satisfactory in only one case.

DR. JOHN DOUGLAS answered Doctor Downes' question to a certain extent. About one year ago he showed a patient who had destruction with separation of about 1 cm. of the common duct due to a bad sloughing and infection following cholecystectomy for a gangrenous gall-bladder. Three months before showing her, he had operated for the repair of the duct. He dissected the duct, sutured it together end-to-end and put in a T tube. The patient accidentally pulled out the tube within two weeks, but went out of the hospital apparently cured. She had remained well up to the time of showing her before the society three months later. About two months later she became jaundiced and had marked itching of the skin and clay-colored stools. She was given medicine to increase the flow of bile and finally the jaundice cleared up. That has happened to her three or four times in the past year. After acute attacks of pain her symptoms of biliary obstruction disappeared, probably due to pressure dilating again the stricture in the common duct, which has too small an amount of epithelial tissue lining the point of repair not to contract down.

DR. ALEXIS V. MOSCHCOWITZ said that he had a very peculiar experience within the past two years in connection with biliary fistula which he would like to place on record. About two and one-half years ago, he had occasion to do a simple cholecystectomy for cholelithiasis. The operation was exceedingly simple and easy; in fact, the entire operation did not last half an hour. The specimen removed was the gall-bladder filled with calculi and a short stump of the cystic duct. The patient did well for three or four days, then suddenly jaundice developed which persisted for about one week and ceased only after the discharge of a slough from the depth of the wound, whereupon a biliary fistula formed. This biliary fistula remained permanent. He reoperated and found an opening on the under surface of the liver which was apparently the hepatic duct. No trace of the common duct was found after a two-hour search. He introduced a tube into the opening into the liver (hepatic duct), made an opening into the duodenum through which the hepatic tube was introduced, and sutured it into place. Again a biliary fistula formed which has remained open to date. All the bile is discharged externally, but in spite of this she has remained in perfect health and for the present does not wish any further operation. In view of the simplicity of the first operation, Doctor Moschcowitz is inclined to believe that there was some unrecognized abnormality in the blood supply to the common duct. It was this which caused the sloughing of the duct and the formation of the biliary fistula.

DR. GEORGE P. MULLER three months ago operated on a patient for stricture of the common duct. The patient had been suffering from jaundice and loss of weight, following a previous cholecystectomy. At operation when the stricture was dissected out, the stump of the common duct was found to be within one-eighth inch of the junction of the right and left hepatic ducts.

A T tube was introduced, one end into the common duct and the other end split, one-half being placed in the right hepatic duct and the other in the left. The ends of the duct were partly sutured and omentum wrapped around the joint. The jaundice cleared up and the patient is now in perfect health. About four ounces of bile is discharging daily through the tube. The speaker said he is afraid to take out the tube. It has been in place three months, and sooner or later must come out, but he is fearful of recurrence of the stricture.

DOCTOR LILIENTHAL, in closing, expressed his belief that tubes in the common duct are apt to cause necrosis and consequent scarring which results in the persistent fistula. It seemed to him that these fistulæ are much more rare now than they used to be when the gall-bladder was left in. With the removal of the gall-bladder the common duct is more carefully explored and all stones removed. If the gall-bladder is left in there seems to be a more persistent fistula than if it is removed. In his case, the fistula transplanted into the stomach is a safety valve. If the epithelium should reëstablish itself in the common duct the bile may run through the natural passage. The operation is easy, and in suitable cases it may be well worth trying rather than to make a difficult and dangerous dissection. It does not prevent one from operating again if it should be thought best to make another attempt to reëstablish the choledochus.

OPERATIVE REMOVAL OF BRAIN TUMORS

DR. CHARLES A. ELSBERG presented a patient from whom he had removed a large endothelioma from the right parieto-frontal region, in June, 1922. The patient had suffered from severe headaches and failing vision. He recovered completely from the operation and was presented perfectly well.

A second patient from whom he had removed a large endothelioma from the anterior part of the left temporal lobe in August, 1922, was also presented. The tumor had given her mainly mental disturbances and subjective sensations of numbness in the left hand. At the operation a large endothelioma was removed from the fronto-parietal region. The patient recovered completely and was presented perfectly well.

DOCTOR ELSBERG also presented a third patient who was seen in status epilepticus, and from whom he removed a large endothelioma ten days before. Excepting for slight weakness in the right hand, the patient had recovered entirely.

In connection with these cases, all of whom were operated upon under local anæsthesia, Doctor Elsberg spoke of its advantages in many operations for brain tumor. He also spoke of the difficulties in characterizing the histological structure of these tumors which were derived from the membranes and were usually adherent to the dura. They had been called by different names; most often they have been called endothelioma, and on account of the diversity of opinion, Doctor Cushing has recently taken a backward step in a forward direction by calling them meningioma. The tumors can clinically be divided into two

groups, those that have a well-marked capsule which is often vascular, and those that have a thin or ill-defined capsule.

DR. J. S. RODMAN stated that endothelioma was the best type of tumor of the brain in which to obtain favorable results. One of the difficulties in operating for brain tumor is the matter of increased intracranial tension, and the speaker asked Doctor Elsberg how he managed cases of hypertension and what he thought of intravenous injections of hypertonic salt solution. The idea of this is, of course, to decrease brain bulk and Doctor Rodman said he had used it in a few traumatic cases, where he believed it to be of value. He also asked Doctor Elsberg what he thought of radium and X-ray treatment in inoperable tumor of the brain.

PROLAPSE OF THE RECTUM

DR. A. V. MOSCHCOWITZ presented the history of a patient with prolapse of the rectum whom he operated upon three or four months ago. The patient had been suffering from symptoms of this prolapse for about a year. The case was one, however, of much gravity. She was practically bedridden, as only in the recumbent position did the prolapsed rectum return to its normal position. The sphincters were so stretched and atonic, that they did not give any support whatsoever to the rectum. The operation was the one done as a routine measure by Doctor Moschcowitz. The patient made an absolutely uncomplicated recovery and was discharged from the hospital three weeks after operation.

DR. GEORGE P. MULLER had done this operation five times, the first two in 1914 and the third in 1915. The others had been done more recently. As far as he knew no patient has had a recurrence, and the condition of the earlier ones is known. The only objection to Doctor Moschcowitz's operation is that it is very hard to perform; it is difficult, especially in the male subject, to keep the intestines sufficiently out of the way to place the first purse-string suture.

DR. WILLIAM JOHN RYAN said that the first case he operated on was five years ago and he saw the patient three years afterward, and there had been no recurrence. In two other cases operated on two years ago, there was no recurrence one and one-half years later. A technical difficulty mentioned by Doctor Muller can be overcome by anæsthetizing the patient in the Trendelenburg position. When the abdomen is opened it will then be found that the intestines have gravitated upward and can easily be packed out of way.