TRANSACTIONS

OF THE

PHILADELPHIA ACADEMY OF SURGERY

Stated Meeting Held March 7, 1927

The President, DR. CHARLES F. MITCHELL, in the Chair

APPENDICITIS WITH NON-DESCENT OF THE CÆCUM

DR. SEARLE LANYON, by invitation, presented the history of a patient who had been under the care of Dr. Hubley Owen, at the Philadelphia General Hospital. A man was admitted to the Special Surgical Ward of the Philadelphia General Hospital on November 1, 1926, with the chief complaint of abdominal pain localized in the right upper quadrant associated with nausea and occasional attacks of vomiting. Two years prior to his admission to the hospital he had an attack of severe colic in the right upper quadrant of his abdomen. This continued for a day or two and gradually disappeared. Six months after this attack he had a second attack of the same character only more pronounced. Most of his pain was confined to the right upper quadrant with occasional pain in the lower right quadrant. In the beginning the pain was very sharp. Later he described it as being "a dull, aching pain." He did not vomit and felt nauseated. This second attack continued for about two days. One month later he had another attack which was practically the same in its manifestations as the previous two attacks. Following this the attacks became more and more frequent. In August, 1926, he states he had an attack of jaundice. A week prior to his admission he had another severe attack of pain in the right upper quadrant of his abdomen associated with jaundice and persistent vomiting. The pain had no relation to the time and type of nourishment. He frequently took sodium bicarbonate without relief.

The man was white, thirty years of age, well developed, well nourished. His abdomen was soft and flaccid. Liver and spleen were not palpable. No palpable masses. There was subacute tenderness over McBurney's point, also the upper right quadrant in the region of the gall-bladder.

Urine showed no abnormality. Blood count showed 7400 leucocytes. Red count and hæmoglobin normal. Wassermann, negative. Blood sugar was 80. Blood urea, 13. Blood uric acid, 4. Vandenburgh was negative. Icteric index was 6.

X-ray examination showed the greater curvature of the stomach situated 10 cm. below the iliac crest. It was of the fish-hook type. Peristalsis was normal. Conus was normal and no filling defects. The head of the barium column was at the hepatic flexure in six hours. In twenty-four hours practically all of the barium had been evacuated but some was still remaining at the cæcum. The ascending colon was not demonstrable in the lower right quadrant of the abdomen. It appeared as though the ascending colon was in the right upper quadrant of the abdomen. The appendix was not visualized. No evidence of organic lesion of the stomach or duodenum.

November 8, a McBurney incision was made. No large intestine was found in the right iliac fossa. The incision was enlarged upward along the outer border of the rectus muscle by splitting the anterior sheath of the rectus muscle and retracting the right rectus muscle toward the midline. The

cæcum was located below the liver. The appendix was kinked on itself and was bound to the liver and gall-bladder by a number of adhesions. The appendix was removed. The gall-bladder showed no pathology. Following the operation the man returned to the ward in good condition. Temperature, pulse and respiration remained normal. Stitches were removed on the seventh day and the patient was discharged from the hospital November 19, 1926.

Cases of non-descent and non-rotation of the cæcum present a number of interesting features from the clinical as well as from the embryological standpoint. The presence of intra-abdominal pain and tenderness in certain locations is taught as a guide to diagnosis. Unusual cases such as the one herewith reported show a variety of symptoms which are instructive nevertheless misleading.

Since operating on this case the reporters have made X-ray studies after a barium meal in a number of cases of subacute and chronic appendicitis and have found that the cæcum is frequently high in the right upper quadrant due to its failure of descent. This has been useful as a guide for the incision in such cases.

URETERO-COLONIC FISTULA

Dr. Lloyd B. Greene, by invitation, reported the case of a woman, age thirty-eight, who was admitted to the Pennsylvania Hospital, April 19, 1926, with the chief complaint of pain in the back. Ten years ago the patient had an attack of acute pain in the right lumbar region. This lasted one hour, during which time she passed cocoa-colored urine. The pain subsided and the urine became clear. There were a few strands of material that she thought were blood. One month later, there was a second attack similar in every detail and the third attack one month later. The only treatment consisted in diuretic pills. Three months after this onset she had a fourth attack of pain, after which she passed a brown stone about ⅛ inch by 1¼ inches. The stone resembled a date stone. Following this she was free from symptoms for a period of six years when right lumbar pain recommenced. The pain was now dull in character, lasted about twenty-four hours, and radiated to the right anterior portion of the abdomen. Following the painful attacks she noted a heavy feeling in the bladder which lasted two days. For the three months preceding admission to the hospital the painful attacks and the heavy feeling in the bladder were followed by the passage of cloudy urine. The urine clears up promptly and she is again quite comfortable until the pain in the right lumbar region recurs. The pains have never been referred to the groin and they have always been on the right side. The attacks have been irregular, sometimes weekly and sometimes once in four or five weeks. The last attack was four days before admission. The patient gave a history of having had three abdominal operations; the first for pelvic inflammatory disease; the second for some unknown condition; the third for a tumor of the right upper quadrant. She has not menstruated since the first operation, five years ago. Following her marriage she had fifteen miscarriages in a period of four years and then three normal children. Routine examination revealed nothing unusual. The urine was loaded with pus. The phenolsulphonephthalein test showed elimination of 25 per cent. of the dye in the first hour and 15 per cent. in the second. Cystoscopic examination revealed the following: Bladder contained slightly cloudy urine. Capacity normal. Bladder very tolerant. There was some slight cystitis. The right ureteral orifice appeared ragged, swollen and œdematous. There was no ulceration in the ureteral area, but considerable inflammation. The left ureteral region was normal. No. 6 F. catheters passed to the normal level

of each kidney pelvis without any difficulty. Normal flow of urine from the left catheter—urine slightly blood-tinged but otherwise grossly normal. Nothing was obtained from the right catheter until after the injection of sterile water, when a large quantity of pus was aspirated. The pus was too thick to come away spontaneously, and had an exceedingly foul odor. The differential phthalein test showed appearance time from the right kidney—none in twenty-five minutes, and from the left—four minutes—full concentration. Percentage output: Right—none in one-half hour period; left—17.5 per cent. in fifteen minutes. Pyelogram—right kidney—syringe method. After extracting as much pus as possible, 100 c.c. of 12.5 per cent. solution of sodium iodide was introduced without pain. Stereoscopic plates taken. The specimens of urine obtained by ureteral catheterization showed: Right—cloudy, acid—loaded with pus, few red blood-cells, few organisms, culture shows streptococcus indifferens. Left—clear, acid—few red blood-cells, no pus cells, no organisms, culture sterile. X-ray of the genito-urinary tract revealed a shadow which is properly in line for the position of the right ureter and on about a level with the lower border of the fourth lumbar vertebræ. This is of considerable size, some 7 or 8 mm. in diameter, and fully 2 cm. in length. There is good reason to suppose that this shadow may be in the ureter.

In a right pyelogram the same shadow is seen closely contiguous to the catheter. There is a hydronephrosis with a defect on the lower, renal aspect of the pelvis, which indicates the pressure of some body pressing upward and outward into the pelvis, or against it. The most striking feature of the examination, however, is the entrance of the iodid solution directly into the cæcum and ascending colon. There can be no question as to the presence of a reno-colonic fistula.

After a barium injection no abnormality of the fillings of the colon could be seen under the fluoroscope; but, after the fluoroscopic examination, the patient was removed to the table and stereoscopic films made which show a very distinct dilation about the cæcum, and it would appear that the fistula must connect with the posterior aspect of either the cæcum or the very lower portion of the ascending colon. The colon enema was accomplished without any unusual feature of any kind.

The patient was operated upon by Dr. Leon Herman and Dr. Charles F. Mitchell on April 29. The incision extended from the lumbar triangle to a point one inch below umbilicus and one inch to the outer side of the semilunar line. Relatively small kidney palpated rather low in position and surrounded by thickened and very dense organized scar tissue. The outer border of the kidney and its upper pole were rather easily mobilized, but the lower pole and the pelvic area were densely adherent. The ureter was felt as a greatly thickened, rigid cord about one and one-half inches in diameter. The tissue around the ureter was broken through, but it was found impossible to mobilize the tube. The lower pole of the kidney was freed but could not be brought up into the wound. This prevented visualization of the fistulous tract which was apparently situated at the upper end of the ureter at or near the uretero junction. It was at first thought necessary to amputate the kidney from the pelvis, but a line of cleavage was found between the peri-pelvic scar tissue and the thinned-out pelvic wall which permitted the placing of clamps so that most of the pelvis could be removed with the parenchyma. On the surface of the tissue that had been separated from the anterior surface of the pelvis, a small necrotic area suggestive of a sinus was seen, but this would not admit a probe and the operators finally concluded that it was not the fistulous opening. The area was surrounded by a purse-string suture

and oversewed. The pedicle was transfixed under each clamp and tied. On examination of the kidney, which represented a pyonephrosis, not any larger than, if as large, as a normal kidney, the parenchyma was found to be intact. On the anterior surface of the pelvic wall was a small round hole which was taken to be of traumatic origin. The final conclusion was that the kidney with the major portion of the true pelvis had been removed and that the fistulous communication was situated below the level of amputation, that is in the very lowermost portion of the true pelvis or in the ureter. The major part of the inflammatory reaction as evidenced by the great mass of scar tissue especially around the proximal portion of the ureter, tends to support this view.

Pathological report: The kidney is small with irregular pale granular surface. The specimen weighs 60 grams and measures 9 x 4 x 3.5 centimetres. The pelvis is dilated, walls thickened and mucosa hemorrhagic and covered with slight purulent exudate. Considerable fat is present in the renal parenchyma and a few small abscesses are present throughout. Practically no normal architectural arrangement is noted and homogeneous pallor extends throughout.

Microscopical Examination.—The glomeruli are hyalinized. The tubules are few in number, epithelium is narrow. Diffuse fibrosis extends throughout with obliteration of renal substance. The vessel walls are thickened. Foci of round cells, the centres of which are necrotic and many clumps of polymorphonuclear cells are scattered throughout. In a few places there is proliferation of blood-vessels in loose infiltrated granulation tissue. A few pleomorphic bacilli are scattered in the midst of infiltrated areas.

Diagnosis.—Extensive pyelonephritis.

The post-operative convalescence was somewhat prolonged as would be expected. Five days after the operation, there was noted some fæcal discharge from the wound. This was of very short duration. The patient was discharged to the dispensary on June 2, 1926. She was readmitted to the house on September 9, 1926, because of the unusually large quantity of purulent drainage from the sinus. She was feeling quite well and had no other symptoms.

The sinus was injected with an opaque solution and stereoscopic plates were taken. The capacity was 15 c.c. Doctor Bowen reported as follows: "The fistula followed to the depth of the normal kidney pelvis, where there is an ampulla one and one-quarter by two cm., densely filled. There is a small diverticulum from this, extending inward and backward for about two cm. Somewhat further down, in the line of the ureter and at the level of the lower half of the fourth lumbar vertebra, there is a semi-dense oval shadow, some three cm. in length, which would appear not to be due to injected fluid. Under ordinary circumstances we would first think of a large ureteral calculus containing a rather small amount of calcium.

The patient was finally discharged October 13, 1926. The sinus was less than an inch in depth and the discharge had practically ceased.

DR. J. L. HERMAN called attention to the relationship of the ureteral catheter to the shadow cast by the injected medium. In the flat plate it would seem that the tip of the catheter had entered the colon, but this is only apparent. As seen in stereoscopic films, the tip of the catheter is situated at least one-half inch from the diverticulum of the cæcum, which latter was placed over the renal pelvis, this being in all probability the site of the fistula.

Stereoscopic films alone are of major importance in the diagnosis of these conditions. The speaker rarely makes flat plates in pyelographic work.

The operation was difficult chiefly because of very dense adhesions at the uretero-pelvic region, and very great thickness of the upper ureter, which facts indicate the site of the fistula as being in the lower portion of the pelvis or upper ureter. Following the operation, a small temporary fecal fistula developed, probably due to trauma rather than to exposure of the fistulous tract at the time of operation. The kidney and major portion of the renal pelvis were removed, but it is questionable if the site of the fistula was disturbed. The patient has made a satisfactory recovery, but it may be that the ureter and cæcum are still connected by a fistulous tract. Cystoscopic findings seemed to rule out the presence of stone. Whether the fistula resulted from injury at the time of the abdominal operations cannot be determined with certainty.

PULMONARY ACTINOMYCOSIS

DR. P. A. MCCARTHY, by invitation, reported the case of a woman, aged twenty-eight, who was admitted to the Mental Department of the Philadelphia General Hospital, August 29, 1925, with a diagnosis "manic-depressive insanity." She died March 26, 1926. In September, 1925, there was first noted a small tumor overlying the fifth rib in the right mid-axillary line. The tumor was painless and was attached to the rib. On October 1, 1925, excision was made. A pathological diagnosis of "chronic suppurative inflammation" was made. X-ray of ribs and lungs showed no abnormal findings. The wound did not heal. On November 4 smear from the wound discharge was positive for actinomycosis. On January 2, 1926, she came under the care of Dr. Hubley R. Owen. The patient was extremely emaciated and complained of severe pains in lower abdomen and lower extremities. Over the fifth and seventh ribs mid-axillary line and tenth rib mid-scapula line, were small scars at the centres of each of which was a small sinus exuding a gray glutinous material. The infected tissues were adherent to the underlying chest wall. The neurological symptoms became rapidly more severe, including pain in the abdomen and lower extremities. The left leg became gradually paralyzed. The right leg manifested a progressive weakness; marked hyperæsthesia over both extremities. X-rays of chest and vertebræ negative. Ray fungi were demonstrated from the skin lesions. During subsequent weeks, patient's condition became progressively worse. Pain in lower extremities became so excruciating that she begged for operative interference.

Operation.—March 25, 1926, by Doctor McCarthy, after transfusion of 500 c.c. citrated blood. A laminectomy was done involving the eleventh and twelfth thoracic vertebræ and first lumbar. The laminæ of the twelfth thoracic vertebra were very friable and rough. The dura was thickened, densely adherent, very tense and covered with tissue resembling granulation tissue. When the dura was opened, a large quantity of cerebrospinal fluid escaped. The cord was not involved. At close of operation, patient was in fair condition. Death supervened suddenly twenty-four hours later.

At post-mortem: The most marked pathology was found in the right lung, which was infiltrated with fibrous tissue toward its base. In the centre of this fibrous tissue was a necrotic area about size of a walnut containing gray, red glutinous material with flocculent granules. The necrotic process extended down to and involved the diaphragm. This necrotic process also involved

the parietal pleura from the fifth to the tenth ribs and extended along the eighth, ninth and tenth ribs posteriorly and involved the lateral processes and bodies of the vertebræ and the dura. In the necrotic area of the lung, actinomycotic fungi could be demonstrated. No fungi were found in the liver or diaphragm. The brain was negative; spinal cord tracts normal; spinal meninges infiltrated with round cells.

Doctor McCarthy was of the opinion that this case probably originated in the lung and extended by contiguity to the pleura, ribs, skin and vertebræ while the affection of the meninges produced the compression symptoms noted.

Pulmonary actinomycosis is usually not recognized until the chest wall is penetrated and the fungus is found in the discharge. Primary involvement of the nervous system by actinomycosis is rare. Every inflammatory swelling of the thorax wall, subacute or chronic, with persistent and recurring sinus formation, should be carefully investigated for the presence of actinomycosis.

DR. JOHN SPEESE said that during the past winter a girl, seven years of age, was admitted to the Children's Hospital with symptoms suggestive of empyema. The X-ray showed a shadow over the left base which was suggestive of a thickened pleura or fluid. Several exploratory tappings were negative. Finally the chest was opened, no fluid was found, and the sinus which resulted did not heal. It was thought at one time that the child had tuberculosis and the actinomycosis was only recognized when scrapings from the deeper parts showed the fungus. A second exploratory operation revealed the very extensive character of the disease which involved the pericardium and mediastinum; ultimately the child died. The father of the patient was a fruit dealer and the child was accustomed to play about the floor, which contained a great deal of straw. It was believed that the fungus probably gained entrance to the air passages from this infected material.

DR. G. M. DORRANCE remarked that he had seen two cases of actinomycosis during the past year at the Philadelphia General Hospital. One case involved the tongue. The speaker called attention to the fact that this condition is often mistaken for cancer when seen about the jaws or tongue.

CARCINOMA OF THE RECTUM

DR. JOHN H. JOPSON presented a woman, twenty-six years old, who was referred by Dr. George Outerbridge to the speaker's service in the Medico-Chirurgical Hospital, suffering from bleeding from the rectum, pain in the lower abdomen, in the middle of the abdomen and in the back. Her general condition was not good. X-ray examination revealed a napkin-ring construction of the pelvic colon, 5 cm. in width and 8 cm. above the anus. It was patulous to an opaque enema. The pelvic colon was elongated. The patient was subjected to the usual procedure as systematized by Dr. Daniel Jones, of Boston. Recto-sigmoid growths offer a difficult problem and Doctor Jopson believes that this operation offers the best anatomical and physiological approach. The first stage of the operation was done June 1, 1925, and included colostomy, mobilization of the descending colon and peritonealization. The second stage was done June 12 and consisted of removal of the rectum and perirectal tissues from below. Pathological examination confirmed the diagnosis of adenocarcinoma. She was discharged on August 11, 1925, since which time her general health has been excellent. She has returned to her occupation as a secretary and is perfectly well.

CARCINOMA OF THE RECTUM

DOCTOR JOPSON presented a second patient, a man aged thirty-seven, who was admitted to his service at the Medico-Chirurgical Hospital in March, 1926, complaining of bleeding from the rectum and constipation. The symptoms were of several months' duration and were attributed by the patient to a "strain". A physician had treated him for hemorrhoids, but repeated hemorrhages and an increasing amount of blood finally brought him to a proctologist, who at once recognized the condition as carcinoma and referred him for operation. On admission a mass was felt in the rectum about three inches from the anus. The growth was hard and extended on to the anterior surface. There was considerable constriction present. Introduction of a speculum was followed by escape of gas and mucus.

Except for a fairly severe secondary anæmia, the examination was otherwise negative. Careful examination, including X-ray, failed to show evidence of metastases. Operation was performed in two stages, the first stage on January 11, followed by the second stage in one week. The procedure was the same as in the preceding case, *i.e.*, by the abdomino-perineal method of Jones. The mistake was made in this case of completely cutting off the marginal artery at the first stage, which resulted in gangrene of the lower loop of bowel. The gangrenous process was so extensive that the patient developed a large fistulous tract extending from the abdominal wound into the perineum. The tract was "Dakinized" and healing by granulation took place. A large amount of blood was lost at the operation, which prolonged the convalescence, but the final result was excellent. He was discharged from the hospital on March 22, ten weeks after the first operation.

The speaker believes that it is not wise to attempt closure of the large perineal wound in these cases, but prefers to "Dakinize" and allow healing by granulation. The patient is thus saved much in the way of absorption and fever. This patient has a well-functioning colostomy of the "single-barrel" type, due to the sloughing out of the lower loop. He returned to work on May 22, 1926, and has been working ever since.

Both of the patients presented by Doctor Jopson have had careful and systematic post-operative X-ray treatment at the hands of Dr. George Phaler. Both have the simple form of colostomy, the speaker having found that the more complicated fail to give as great satisfaction.

PRINCIPLES UNDERLYING THE SURGERY OF CARCINOMA OF THE RECTUM

DR. DAMON B. PFEIFFER pronounced the annual oration on the above entitled subject.