TRANSACTIONS

OF THE

PHILADELPHIA ACADEMY OF SURGERY

Stated Meeting Held May 2, 1921

TRANSPLANTATION OF UTERINE FIBROID TO THE OMENTUM WITH FORMATION OF A LYMPHANGIOMA OF THE OMENTUM

DRS. JOHN H. GIRVIN and JOHN SPEESE reported the history of a woman, thirty-nine years of age, who had noticed a lump in her abdomen for nearly three years, and within the past three months had had two severe and several slight attacks of abdominal pain which were supposed to be caused by a twisting of the pedicle of the intraabdominal mass. She was operated on at the Presbyterian Hospital on February 1, 1921, by Doctor Girvin.

Upon opening the abdomen, the omentum presented and was somewhat thickened and almost rigid. This was due to some engorgement of the vessels, especially on the right side where one was almost as large as one's little finger. The vessel was surrounded by a series of lymphatic cysts; those at the lower end as large as a small egg and grading down to the size of a large pea at the border of the stomach. These were under high tension and so closely arranged that they gave the stiff feeling to the omentum. At its lower edge, the omentum was attached to a pedunculated subserous fibroid growing from the left side of the fundus uteri. The tumor about the size of a grape fruit (Fig. 1) had a pedicle about one inch long that had become twisted nearly three times so that the circulation was practically cut off and it was entirely nourished by the omental attachment. The omentum was detached and ligated by three ligatures and the largest cysts punctured. The tension was so great that the fluid spurted five or six feet.

The omentum was wrapped in pads and replaced in the abdomen and a supravaginal hysterectomy performed, with the removal of both tubes and ovaries, which were distinctly cystic. The body of the uterus was irregular, enlarged but rather soft. At the conclusion of the hysterectomy the omentum was examined, and, as the majority of the cysts were collapsed, it was replaced and the abdomen closed without drainage. She left the hospital in good condition on February 27th. She has had no abdominal symptoms since and her physician reports her now in very good condition.

One of the cysts removed for study shows, on microscopic examination, the wall to consist of the characteristics of omental tissue, in which numerous thin-walled vessels appear. These are uniformly lined with a layer of flat endothelial cells. Many of the vessels are collapsed, others are distended and contain homogeneous material, characteristic of lymph. The picture corresponds to that usually seen in lymphangiomatous formations.

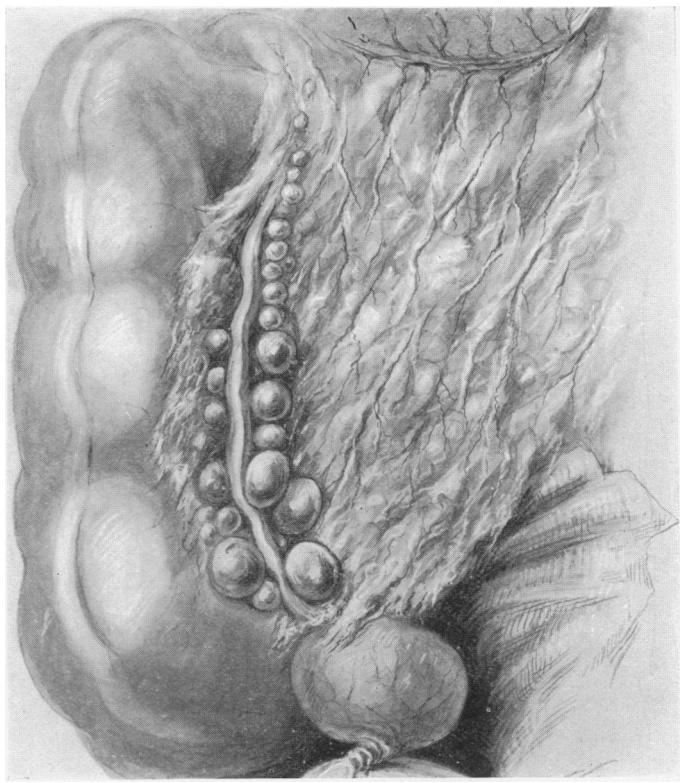

FIG. 1.—Lymphangiomatous cysts of the omentum.

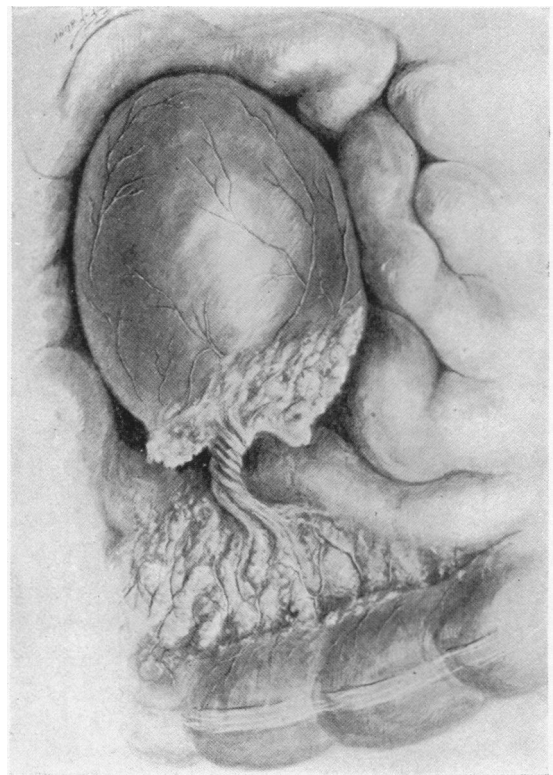

FIG. 2.—Outerbridge's case of cyst omentum

The reporter said the subject of cystic lymphangioma of the great omentum was brought to the attention of the Academy in 1914 by Outerbridge, who then thoroughly reviewed the etiology of the condition. At this time about fifty cases of this comparatively rare disease were recorded in the literature. The case now described bears a striking resemblance to the one recorded by Outerbridge, the omentum being adherent to the uterine fibroid, the cystic tumors appearing in the free margin of the omentum and in close association with the omental blood-vessels.

If it is assumed that in the omentum the chief lymph channels follow the larger blood-vessels, Outerbridge believes by this anatomical condition can be explained the production of the more or less continuous chain of cystic structures around the entire edge of the great omentum. Any factor leading to obstruction of the lymphatics, inflammation, adhesions, etc., may cause cystic dilatation, and through proliferation of the endothelium give rise to true lymphangiomatous formation.

Jacobi states that all true omental cysts are lymphatic in origin. According to Stillman, it is significant that the swelling of the abdomen was first noticed at some period between the ages of one and ten in fifteen of twenty-one cases operated upon, and in ten of these, or nearly half of the cases he collected, the swelling was noticed between one and four years of age. While such facts point to the congenital nature of the cysts, and the possibility of a congenital origin from embryonic rests or from the surface peritoneum cannot be denied in certain cases, in the majority, however, it must be admitted, as proven, that the origin of such growths is to be found in the lymph-spaces.

Of the total of forty-six cases of omental cyst formation of all kinds, Stillman found but twenty-two to be true serous cysts; of these nine occurred between one to four years of age, six between five to eleven, the others at the ages of seventeen, nineteen, twenty-two, thirty and forty-two. Sixteen occurred in females and six in males.

The majority of the cases are discovered by accident in the course of operation for other abdominal conditions. In certain instances the large size of the cyst has brought about symptoms suggestive of ovarian cyst or ascites. In certain of the larger cysts complications develop which make surgical intervention necessary. Among these conditions are twisting of the pedicle with symptoms of appendicitis as reported in a boy of four by Speese; suppuration and gangrene of omental cysts have also been reported.

The operation consists in removal of single cysts, or as much of the omentum as may be necessary when this structure is involved by multiple cysts. In the case reported complete extirpation of the cyst-bearing area of omentum, as recommended by some authors, was not undertaken because it was thought that with removal of the adhesions and detachment of the omentum from the uterus, obstruction of the lymphatic channels may have been sufficiently overcome to permit a return to a normal state of the omental

lymphatics. So far there has been nothing in the post-operative history of the patient to suggest that such has not been the case.

DOCTOR OUTERBRIDGE referred to a case which he had presented before this Academy seven years ago, which very closely resembled the case of Doctor Girvin's. The case was a colored woman of thirty-four or thirty-five years of age, who had a fibroid tumor. She was operated on by Doctor Beyea. When the abdomen was opened a large mass which resembled grapes presented in the wound; on further examination this proved to be the omentum, around the entire edge of which were grapelike masses, ranging in size from that of a Malaga grape down to a pinhead, with a string of small ones running down through the centre of the omentum. These masses were filled with a clear fluid. The whole omentum along its free border was attached firmly to the upper surface of the subserous, pedunculated fibroid tumor growing from the fundus of the uterus. There were very extensive evidences of inflammation throughout the pelvis, the tubes and ovaries being bound down by adhesions to the tumor. In this case Doctor Beyea did a complete hysterectomy and also resected the omentum up to the transverse colon, ligating just below its attachments, so that we had the entire specimen for pathological study.

A careful microscopical study was made of a number of the cysts of varying sizes. In all instances the picture was practically identical—a fibrous wall containing more or less intense round-cell infiltration, lined on the side of the cyst cavity by a single layer of flat cells, similar to those seen lining the peritoneal cavity. In the substance of the walls of many of the larger cysts were seen numerous irregular spaces of varying sizes, lined by similar cells, and containing a small amount of homogeneous material, taking a pinkish stain in hæmatoxylin-eosin preparations. These represented, obviously, dilated lymphatic spaces. Owing to the unbroken transition between these and the smaller cysts, and from them to the largest cysts, and also owing to the position of the cysts along the course of the larger blood-vessels with their accompanying perivascular lymph-spaces, he came to the conclusion that the specimen represented a lymphangioma, originating from the perivascular lymph channels, and due probably to the interference with the lymph current resulting from the extensive adhesions.

In medical literature a number of very similar cases have been reported, arising in conjunction with omental adhesions to fibroid tumors.

CHONDROFIBROMA OF THE FIBULA

DR. ROBERT G. LE CONTE reported the history of a woman, twenty-one years of age, who sought advice of Doctor Le Conte in November, 1919, for a swelling below and to the outer side of the left knee. She could not remember when this first appeared, but stated that it had been present for some years. Neither could she recall any injury to this region. The tumor caused no pain and practically no disability. The examination showed a large, firm, painless, non-inflammatory swelling over the upper part of the left fibula. The general examination was negative. The X-ray showed a tumor, apparently cystic, arising abruptly from the upper end of the fibula,

which possessed a clear-cut bony capsule within which were several spicules of bone. The tumor, together with the head and upper third of the shaft of the fibula, were resected. The muscles were adherent over the tumor and there was slight attachment to the external lateral half of the tibia, corresponding to the shadow shown in the X-ray picture. The peroneal nerve was held in a groove in the tumor, and was separated with difficulty. After removal the bony capsule was found to be 5 mm. thick, and the contents white and shiny, cutting like cartilage. The cortex of the fibula was very thin at the point of attachment. The wound was closed without drainage and primary union resulted. A diagnosis of sarcoma was made at the time of the operation. A histological diagnosis of myxofibroma was made by the laboratory. The recovery was uneventful but a definite degree of toe-drop resulted. Recent physical examination, March, 1921, shows that the toe-drop has definitely improved and there is elevation of the foot to about two-thirds of the normal motion and the patient states that she is able to do rhythmic dancing. The X-ray taken at this time showed definite recurrence of bony tissue in the soft tissues of this area and an enlargement and increase in the density of the shadow first noted in the tibia before the operation. Doctor Bloodgood, who saw the patient in consultation, considered these shadows an evidnce of ossification at site of operation, and not a recurrence of the tumor.

A final histological study of the specimen, which has been confirmed by Dr. Allan J. Smith, shows the body of the tumor composed of a relatively small number of spindle-shaped fibrous-tissue nuclei, approximately normal in appearance, but haphazard in arrangement, and a much larger proportion of fibroglia fibrils. Small masses of cartilage are present throughout. A moderate number of small, thin-walled vessels can be seen. This structure is enclosed in a capsule composed of small bony fragments, separated by a fibrous structure. This connective tissue is like that within the tumor, except that it has an orderly arrangement about the bony spicules and contains a few giant cells with from six to twelve nuclei. This fibrous process penetrates entirely through the bony capsule and comes in contact with muscle tissue. The body of the tumor is doubtless neoplastic, while the capsule suggests a chronic fibrous osteoperiostitis. There is nothing, however, to suggest a malignant process. Diagnosis: Chondrofibroma of the fibula.

Doctor Le Conte added that these cases are of interest in the light of the studies by Platou, Barrie, Coley and Bloodgood on ostitis fibrosa cystica and giant-cell tumors of the long bones. The purpose of these studies has been to place in the benign category certain osseous tumors formerly considered malignant, namely the so-called giant-cell sarcomas of the epulis type, and to establish a differential diagnosis between them and the malignant form of giant-cell sarcomas. These authors show that there is a close relationship between ostitis fibrosa cystica and giant-cell tumors, and suggest the possibility of their constituting a single progressive process. Barrie further suggests that they be considered as chronic inflammatory processes rather than neo-

plastic lesions; and advocates their treatment by conservative means. Bloodgood has reported thirty-five cases diagnosed bone cyst, or ostitis fibrosa cystica, and eighteen with the diagnosis of giant-cell sarcoma. The great majority of these were treated by curetting the cavities and swabbing them with carbolic acid and then alcohol. A few were treated by amputation. They were followed over a period of years, the longest fourteen, and in none did metastasis occur. A few developed local recurrence, which was cured by a second curettage or by amputation. Further evidence of the benign nature of the tumors of the long bones is furnished by Bloodgood, who reports that he has successfully curetted or resected several which had broken through or destroyed their capsule. All these authors, however, emphasize the difficulty of differentiating the benign from the malignant type in every case and agree that at present it cannot be done. Those cases from the Pennsylvania Hospital are placed on record for the purpose of aiding the study.

OSTITIS FIBROSA CYSTICA OF THE FEMUR

Dr. Waler Estell Lee and Dr. W. P. Belk presented a man aged twenty-two years, who in October, 1918, while on duty at League Island Naval Station had a mild attack of influenza and following this he first suffered with pain in the middle third of his right thigh. After about a month's convalescence, and while running across the parade ground, he fell and fractured his right femur at the point where he had previously felt the pain. An X-ray examination of the fracture disclosed a bone cyst, and at the operation performed at the Naval Hospital necrotic and diseased bone was removed. The pathological diagnosis of this tissue was ostitis fibrosa cystica. Unfortunately they had been unable to obtain sections of this tissue from the hospital. The wound healed by primary intention and the patient was later seen by D. J. Chalmers DaCosta, and he recommended his discharge from the service with a diagnosis of bone cyst of the femur and a disability of 80 per cent.

He entered the Pennsylvania Hospital in March, 1920, where he was referred by the Public Health Service. The examination showed a well-nourished young man walking with a limp. A large scar was found over the outer surface of the right thigh and there was a thickening of the middle third of the right femur and some tenderness. This extremity was one inch shorter than the left. No muscular or cutaneous involvement was found. The X-ray report of Doctor Bowen described a cystic appearance of the femur beginning two inches below the trochanter and extending downward for ten inches. The possibility of sarcoma was suggested. There was hypertrophy and bowing of the bone at the seat of the fracture, which was well healed. At operation a long incision was made on the external surface of the thigh extending from the greater trochanter to the external condyle, exposing the femur for this distance. The medullary cavity of the bone was opened by chiseling a trough from the greater trochanter to the condyle. The bone was found to be very thin and in places barely of the thickness of

an egg shell. There were three distinct cavities more or less separated by fibrous septa. In these cavities a jelly-like substance about the color and consistency of currant jelly was found. The entire medullary cavity was then curetted, which were followed by very free bleeding. Carbolic acid was then applied to the walls of the cavity and finally this was neutralized with alcohol. The wound was closed without drainage. Primary union resulted and the recovery was uneventful. He was discharged from the Pennsylvania Hospital four months later and referred to Dr. William B. Coley at the Memorial Hospital, New York, where radium and Coley's fluid were given. A letter received from Doctor Coley states that recent X-ray and physical examination have failed to show any signs of recurrence. Coley's fluid has been now discontinued because of severe reactions and an alarming loss of body weight.

The histological study confirmed by Professor Allan J. Smith of the material removed at the second operation shows small fragments of bone and blood which crepitate and break up like egg shell. Histologically small, irregular islands of bone are surrounded by loose, cellular and fibrous tissues, which in places look much like normal bone-marrow. Elsewhere there is much fibrous tissue which in places is rather cellular but has the appearance of chronic inflammatory process. A few giant-cells containing from six to eight nuclei are seen near the bone fragments. Considerable blood is present, but this could have easily been caused by the trauma of the curette. Blood-vessels are numerous, but their coats are well formed. The picture nowhere suggests a malignant process but rather a chronic fibrous osteomyelitis. Final diagnosis: Ostitis fibrosa cystica.

THROMBOSIS OF THE SUPERIOR MESENTERIC ARTERY

Dr. Leo B. Reed reported the history of a woman, aged fifty, who was admitted to the Polyclinic Hospital at 3.15 A.M., April 10, 1921, on the service of Dr. George P. Muller, suffering with intense, acute and paroxysmal abdominal pain. The pain radiated from the right umbilical region to the lower abdomen—especially on the right side. One year ago she had a similar attack and a second one, one month ago, both attacks however affecting her left side and lower left abdomen. Neither of these attacks was so intensely severe as the one which brought her to the hospital.

When admitted she had been suffering severe pain for three hours; she was in collapse with subnormal temperature, increased pulse-rate and respiration. Temperature, 96.4°; pulse, 100; respiration, 32. Skin was cold and clammy. She was nauseated and vomited frequently. Complained of pain in the right and lower abdomen which was paroxysmal and progressively increased in intensity.

The abdomen was flaccid on admission but half hour later had become boardlike; most marked in the right iliac fossa. Generalized abdominal tenderness, also most marked in the right iliac fossa but not increased by deep palpation. Abdomen was tympanitic throughout and peristalsis normal but

not visible. No history of blood in her stools or painful defecation or tenesmus. Slight grade of constipation.

Laparotomy was immediately performed by Doctor Ravdin under ether anæsthesia.

The lower ileum was found collapsed with slight injection of the blood-vessels. The upper ileum and jejunum were distended and bluish in color, the picture resembling an intestinal obstruction. Upon removing the intestines from the abdominal cavity there were found one large thrombus about two inches in diameter and several smaller ones, all in the mesentery of the small intestine, therefore involving the superior mesenteric artery. There was no involvement of the mesentery of the large intestine. No evidences of any effects from lack of blood supply could be detected except the bluish discoloration of the jejunum and upper ileum. In the ileum, opposite the largest thrombus, was a definite constriction. Above this point there was distention and below collapse of the intestine. Appendix was found to be very greatly elongated and obliterated but not congested. It was removed. No free fluid was found in the peritoneal cavity.

The abdomen was closed by the usual method without drainage. The patient was put in the semi-Fowler position with continuous enteroclysis of 5 per cent. solutions of sodium bicarbonate and glucose for forty-eight hours. Patient's condition to date is very favorable.

Doctor Reed remarked that this is a mesenteric thrombosis of moderate grade which was not diagnosed previous to operation. A review of the literature shows that the following symptoms should always call to mind this condition: (1) Age—most common between ages of twenty to sixty. (2) Abdominal pain—sudden, severe and colicky. May be paroxysmal or continuous. (3) Tenderness—extreme throughout whole abdomen. (4) Abdominal distention is a constant sign and increases as the disease advances. It is usually quite general, but there may be an occasional area of dullness due to œdema of the intestine which is common and early. This may per se largely contribute to intestinal obstruction. Accumulation of fluid in the flanks may give dullness. (5) Palpable tumor, due to the formation of a hæmatoma between the layers of mesentery. This may be hard to find on account of the extreme tenderness and rigidity. (6) Rapid and excessive fall of temperature with weak and rapid pulse. (7) Diarrhœa—due to irritation. (8) Results of acute intestinal obstruction: (*a*) Painful defecation; (*b*) obstinate constipation; (*c*) vomiting and nausea. (9) History of an injury or some previous condition which might cause embolism.

Dr. John H. Jopson said that three cases of mesenteric thrombosis had been admitted to the Presbyterian Hospital during the past winter. One of these cases was admitted to the medical service in a moribund state and died in a few hours. Mesenteric thrombosis was found at the post-mortem examination. Two cases were under his care on the surgical service. In one case the condition occurred in a young married woman, twenty-eight years of age. She was admitted to the hospital suffering with what was diagnosed

as an attack of pelvic peritonitis, of very acute onset. Appendectomy had been performed fifteen years previously. Causation of the condition was not to be explained. On opening the abdomen there was found a cavity in the pelvis filled with blood, mixed with a small amount of pus, and not connected with the uterus or adnexa. Its walls were formed by adherent loops of bowel, which in places exhibited patches of gangrene. The cavity was drained, and a few days later the patient developed a complete fecal fistula, and following this improved markedly and rapidly. About six inches of intestine were discharged from the wound as a necrotic mass and the intestines were moved entirely through the wound. One month after the first operation the abdomen was reopened and it was found that the last portion of the ileum had sloughed just above the ileo-cæcal valve, and the remaining ends were lying open at this point, and resembling the double-barrel appearance of a two-stage enterectomy. Anastomosis of the terminal ileum with the ascending colon was followed by recovery.

The remaining case was the most interesting. If it had not been for the influence of Dr. George G. Ross's paper, read before the 1920 meeting of the American Surgical Association, the result would probably have been less fortunate, as he would have felt impelled to do a very radical operation. The patient, a negro cook, about fifty years of age, was admitted with a diagnosis of appendicitis, made by an outside physician, and of acute onset, and about four hours' standing. Morphia had been administered, and immediate operation urged. Before operation there seemed no reason to interpret the history or physical signs differently, the local symptoms being characteristic. The patient showed however a low temperature and seemed somewhat shocked. Operation six hours after onset of pain. The abdomen was found well filled with blood. The appendix was normal. The last four feet of the ileum were swollen, congested, the site in the mesentery, of a thrombosis extending well toward the base of the same. The hemorrhage had occurred from the serous surface of the gut. The latter looked still viable. We recalled that in a similar case of Dr. John B. Deaver's, reported in Ross's series, he had closed the abdomen in the face of similar findings, and that the patient recovered. Also that this was the only operated case which did recover. We therefore wiped out some of the blood and closed the abdomen. The post-operative course was marked by an incomplete intestinal obstruction which yielded to treatment, including repeated gastric lavage. This patient also recovered. In reply to a question concerning the occurrence of intraintestinal hemorrhage, he recalled that the last case had tarry stools, the other two he thought had not this symptom.

Doctor Despard said that he had recently had a case of mesentery thrombosis in a young woman twenty-five years of age, which seemed to be associated with an attack of influenza accompanied with sore throat, followed by diarrhœa which lasted for several days before distinct abdominal symptoms of a serious nature made their appearance. With the decrease in the number of bowel movements, violent peristaltic pains commenced and persisted for

twenty-four hours, at the end of which time she passed a small amount of clotted blood. During the next eighteen hours there were six movements of liquid blood. When admitted to the Methodist Hospital the symptoms were those of obstruction with peritonitis. Upon opening the abdomen he found extensive gangrene of a part of the ascending and the entire transverse colon, as well as a large part of the omentum.

Resection seemed the only possible procedure, which was done as expeditiously as possible. The patient stood the operation well and the following day was comfortable and sanguine of her own recovery. While there were no further abdominal symptoms, her pulse became progressively more rapid and weak, and she died on the second day after the operation, apparently overwhelmed by toxins, as so many obstruction cases do.

MALIGNANT DEGENERATION OF BENIGN TUMORS OF THE THYROID GLAND

A paper with the above title was read by Dr. John Speese, for which see page 684.

To Contributors and Subscribers:

All contributions for Publication, Books for Review, and Exchanges should be sent to the Editorial Office, 145 Gates Ave., Brooklyn, N. Y.

Remittances for Subscriptions and Advertising and all business communications should be addressed to the

ANNALS *of* SURGERY
227-231 S. 6th Street
Philadelphia, Penna