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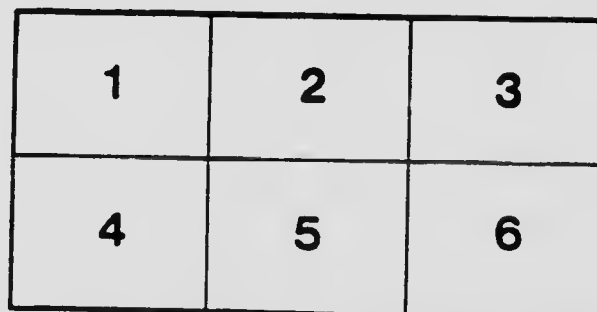
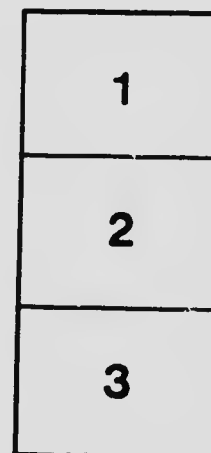
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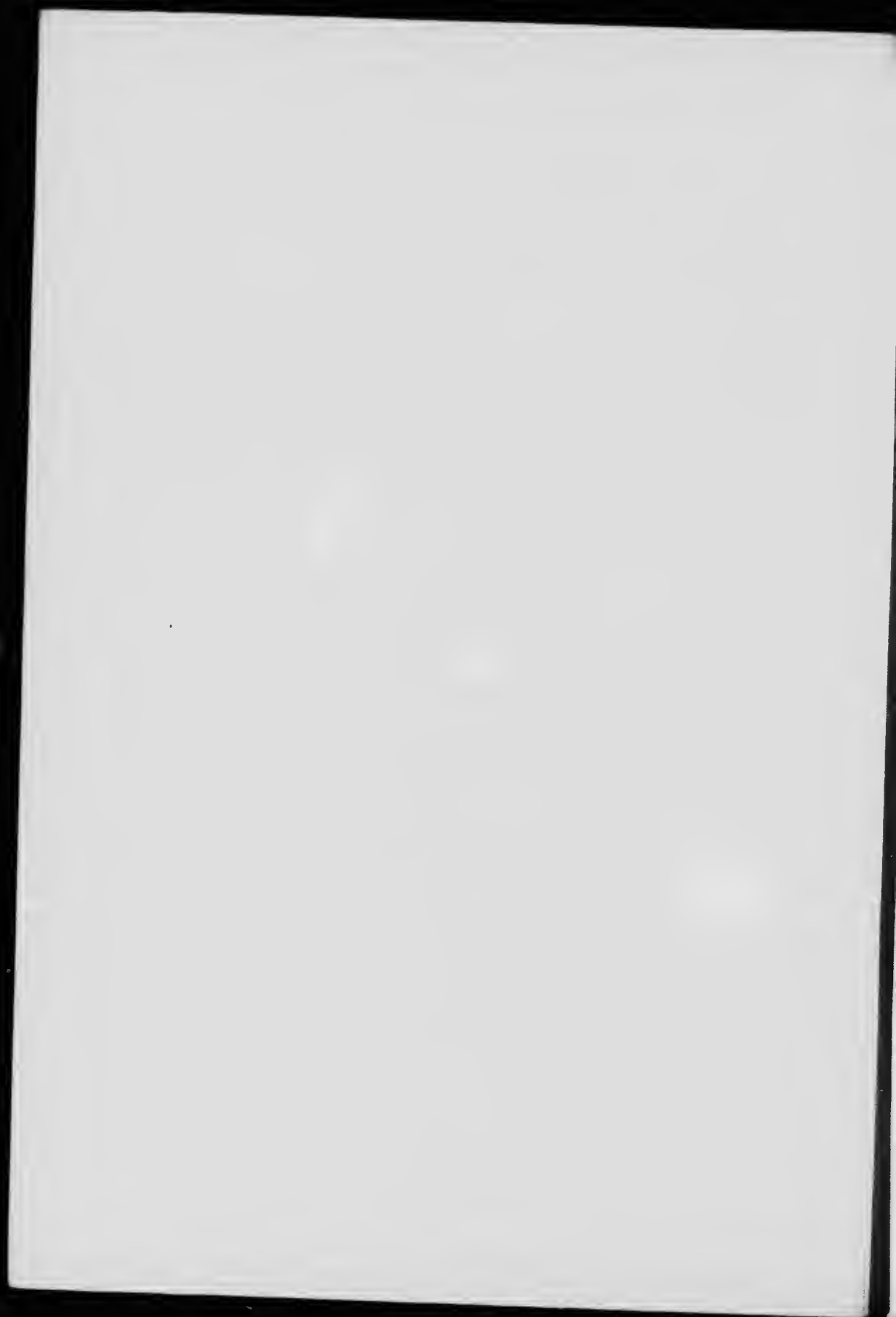
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**UNUSUAL CASES ILLUSTRATING POINTS IN DIAGNOSIS AND
TREATMENT**

By **THOMAS S. CULLEN, M.B., Baltimore**

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UNUSUAL CASES ILLUSTRATING POINTS IN DIAGNOSIS AND TREATMENT¹

- I. A CALCIFIED LYMPH-GLAND PRODUCING SYMPTOMS SOMEWHAT SUGGESTIVE OF GALL-STONES.
- II. AN OLD AND INFECTED ABDOMINAL PREGNANCY WITH EXTENSION OF THE LONG BONES INTO THE BLADDER AND INTO THE BOWEL.
- III. A FURTHER CASE OF ADENOMYOMA OF THE RECTOVAGINAL SEPTUM.
- IV. OPERATION FOR THE RADICAL CURE OF AN UMBILICAL HERNIA IN A PATIENT WEIGHING 464 POUNDS.
- V. REMOVAL OF A LARGE TUBERCULOUS CYST OF THE MESENTERY OF THE JEJUNUM, TOGETHER WITH THE CORRESPONDING SEGMENT OF BOWEL; RECOVERY; LATER DEATH, APPARENTLY FROM TUBERCULOUS MENINGITIS.

By THOMAS S. CULLEN, M.B., BALTIMORE

I. A CALCIFIED LYMPH-GLAND PRODUCING SYMPTOMS SOMEWHAT SUGGESTIVE OF GALL-STONES

MRS. C. S. was referred by Dr. S. Denny Willson and operated upon at the Church Home and Infirmary on June 9, 1914.

In December, 1913, she had had sharp pain in the right lower abdominal quadrant and had been confined to bed for three days. There had been no vomiting at this time. In February, 1914, she had had a second attack and ten days before admission a third. During this last attack there had been vomiting and fever. Her previous history was unimportant save for the fact that there had been a slight tenderness in the right lower quadrant. In other words, the patient gave a definite history of a mild appendicitis and on one occasion there had been a yellowish tinge to the eyes.

Operation: I made a right rectus incision, not being absolutely certain whether the gall-bladder was involved or not. We removed the appendix, which was twice the natural size and contained a concretion. I examined the gall-bladder region and felt what appeared to be a stone. I accordingly lengthened the incision and then saw a stone beneath the junction of the cystic and common ducts (Fig. 1). This was irregular in outline, about 1.5 cm. in diameter and embedded in a little scar-tissue. It was gradually peeled out.

Dr. Paul Wegefath, who was standing by my side, suggested that we were possibly dealing with a calcified lymph-gland. Both ducts were of normal caliber and free from induration. Neither the common nor the cystic duct was opened. A small drain was carried down to the point of removal of the stone. Examination of the so-called stone tended to show that it was really a calcified lymph-gland.

Dr. Wegefath examined the stone chemically. With hydrochloric acid and also with nitric acid the stone substance dissolved completely, giving off carbonic acid. The test for bile was negative. A portion of the stone was ground up and then mixed with alcohol and ether. Examination of the residue was made for cholesterol with negative results.

There is no doubt that this apparent calculus represented an area of calcification. Its size, shape, and situation tend to show that it was a calcified lymph-gland. The chemical examination demonstrated conclusively that it bore no resemblance whatsoever to a gall-stone.

¹Reported at the meeting of the Southern Surgical and Gynecological Association, Asheville, North Carolina, December 16, 1914.

II. AN OLD AND INFECTED ABDOMINAL PREGNANCY WITH EXTENSION OF THE LONG BONES INTO THE BLADDER AND INTO THE BOWEL.

Gyn. No. 13,806. L. S., aged 33, colored; admitted to the Johns Hopkins Hospital, May 3, 1907; discharged, June 26, 1907. Apart from the fact that the woman had never been strong the early history was unimportant.

The menses began at 13 and were regular. She married at 18. Two years later she had a miscarriage at the third month, and three years later a second at one month. Ten years after marriage she had a child. The labor was instrumental and there was much tearing. She was in bed two months with high fever, and had a great deal of vomiting and abdominal pain. After this the periods became too frequent, coming on practically every two weeks. Since a supposed miscarriage (three years before admission) the menses have occurred at irregular intervals of four to eight weeks; they have been profuse and have lasted from two to three weeks. The last period began April 7, 1907, and persisted for fourteen days.

Present illness: For the last five years the patient has had pain in the right lower abdomen, usually dull in character and occasionally accompanied by nausea. There have been no chills, no fever, and no vomiting. The abdominal discomfort is not present every day. It is aggravated by exertion.

Three years ago the patient was supposed to be pregnant. The periods ceased; there was morning sickness and later the perception of fetal move-

ments. There was colostrum in the breasts and abdominal enlargement. She developed severe abdominal pain which was labor-like in character. This lasted for five minutes and then suddenly ceased, but the patient passed only blood. Immediately after she noticed a hard tender lump in the right lower abdomen. This lump has gradually become smaller, as has also the abdominal enlargement. The patient has not lost in strength. There is no swelling of the feet, but dyspnoea has been noted on exertion, and for two months last winter there was a cough and occasionally night sweats. The patient has had a good deal of indigestion but no jaundice. She complains of burning in the urethra, micturition is frequent and scanty and the urine at times is mixed with blood. She has a profuse odorless but irritating vaginal discharge.

On admission to the hospital the patient did not look acutely ill. Her tongue, however, was furred. The pulse was a little rapid but of good volume. The abdomen was distended on the right side by an irregular nodular mass, which on palpation gave a peculiar feeling of crepitus differing from anything that I have ever felt. The mass was irregular but hard, like a myoma. On pelvic examination the cervix was found to be firm, the uterus slightly enlarged and in retroposition. On the right side was a mass which was apparently connected with the body of the uterus. The structures on the left side could not be palpated.

From the history and examination the condition was diagnosed before operation as an abdominal pregnancy. The patient was catheterized when under ether, and a large quantity of thick tenacious urine was obtained. In the bladder the catheter also encountered something which felt very much like a stone.

Operation, May 4, 1907: I made a median abdominal incision. The peritoneum was opened and at once disclosed a large irregular mass in the right lower abdomen, with the omentum densely adherent to it. After the omentum had been doubly ligated and severed, the upper portion was pushed back out of the way and the parts were carefully walled off. The large and small bowel were found to be densely adherent to the sac. The small bowel was dissected away as carefully as possible, but the outer coat was torn about 12 inches above the ileocecal valve. This tear was immediately repaired with a continuous Pagenstecker suture.

On opening the sac I found it contained a large number of fetal bones, as indicated in Fig. 2. After removing the greater number of the bones I attempted to enucleate the sac. The left tube and ovary were now removed and the sac on the right side was gradually loosened up. The bladder was found densely adherent and connected with the extra-uterine mass. After being freed by blunt



Fig. 1. A calcified lymph-gland embedded in adhesions and lying against the cystic and common bile-ducts. (Case 1.)



Fig. 2. Foetal bones contained in the abscess sac of an old abdominal pregnancy. These have been roughly placed together. One end of the long bone (at the bottom of the picture) is much thickened. This is due to the fact that it had ulcerated through into the bladder, where it had become encrusted with phosphatic deposits. This bone has been photographed on a larger scale than the others.

dissection, it was noted that one of the long bones projected into the bladder and that the portion within the bladder was covered with a thick de-

posit of urinary salts (Fig. 2). The bladder opening was closed with catgut and with a continuous Pagenstecker suture. The enucleation of the sac was continued until it was delivered from the abdomen. The large bowel was then examined. There were two openings in the cæcum, one at the junction of the ileocaecal valve. The vermiform appendix was thickened and indurated. It was situated 2 cm. from this hole in the cæcum. The appendix was removed and the hole in the bowel closed in with two continuous Pagenstecker sutures. The second opening in the cæcum was 6 cm. from the ileocaecal valve. This was drawn up into the wound and sutured in a similar manner with two continuous Pagenstecker sutures. The holes in the bowel had been made by the ends of the long bones which had ulcerated through and were projecting into the lumen.

A parovarian cyst was also removed from the right side. A cigarette drain was placed in the lower angle of the incision and carried down to the cæcal region and also into Douglas' cul-de-sac. Owing to the difficulty in getting adequate exposure at the beginning of the operation the right rectus muscle was cut through.

The patient was returned to the ward in a very weakened condition. She had a quiet night, but was much nauseated and saline infusions were given. On May 6 the retention catheter which had been left in the bladder was removed. On May 7 a note was made that the nausea still continued. The patient gradually improved, although the abdominal incision broke down over a considerable area. After several days a small amount of urine commenced to escape from the abdominal wound. On June 25 it was noted that the wound looked very well. The leakage of urine had ceased. On the day of her discharge, June 27, the following note was made: "The abdominal incision has healed well. There is no tenderness, but still a little thickening of the incision. The patient has gained in weight and has generally improved. A No. 9 cystoscope was introduced into the bladder. No reddening was found. The mucous membrane was everywhere white, glistening, and smooth and the bladder-vessels were not injected. The urine was perfectly clear."

Path. No. 11,534. Sections from the wall of the sac show that it consists partly of omentum, partly of granulation tissue, which is very oedematous. The right ovary is oedematous and cystic and measures 6.5 x 5.5 x 3 cm.

In this case the uterus had evidently ruptured at the time of the patient's severe pain and the foetus had escaped into the right lower abdomen. A slow inflammatory process had gradually developed, and eventually the ends of the long bones had been forced through into the bowel and bladder.

III. A FURTHER CASE OF ADENOMYOMA OF THE RECTOVAGINAL SEPTUM

At the last meeting of the Southern Surgical and Gynecological Association I reported two cases of this character. At that time I referred to two instances recorded by Cuthbert Lockyer and also mentioned two specimens sent me by Dr. D. S. Jessup.

Dr. Jessup has since reported his two cases in full in the Section on Pathology and Physiology of the American Medical Association, 1914. Recently another patient with adenomyoma of the rectovaginal septum has come under my care.

Miss K. T., aged 30, was referred to me by Dr. Alexius McGlannan, October 16, 1914. I first saw this patient at the Johns Hopkins Hospital on November 10, 1906. At that time I removed the left tube and ovary and resected a portion of the right ovary. The appendix was also removed. When I saw her again she complained that she was incapacitated for two days before and after her period and that her suffering was almost unbearable. She was well nourished, weighed 170 pounds, and for the previous two or three months she had been having about six bowel movements a day. The stools had been normal in color. Her discomfort had been so great that she insisted on having something done.

Operation, October 19, 1914: On opening the abdomen we found adhesions everywhere in the

pelvis, and the rectum was almost completely obstructed just posterior to the cervix. We found it necessary to do a complete hysterectomy. This was accomplished with much difficulty. The ureters on both sides were outlined and the uterus was removed. The cervix was so densely adherent to the rectum, over an area about 2.5 cm. in diameter, that it was necessary to cut through this tissue, which was almost as hard as gristle. The rectum was carefully examined and found to be almost completely obstructed. It was then brought up as far as possible. Its peritoneum was severed but its vessels were not disturbed. After the rectum had been freed for about eight inches the pelvis was packed with gauze and the anal margin all the way around was incised just as for an extensive Whitehead operation. About eight inches of rectum were then drawn through the anus and removed together with the growth. The rectum was then attached to the skin. The patient did not lose very much blood considering all that was done.

After she was returned to the ward her pulse steadily increased, although there was no evidence of hemorrhage. About seven hours after operation signs of sudden cardiac dilatation developed and the patient soon died.

The growth, situated between the cervix and the rectum, was intimately blended with both. It was



Fig. 3. Adenomyoma of the rectovaginal septum. The upper dark ribbon is rectal mucosa, which is intact. Intimately blended with the rectum is a well-defined and relatively circumscribed growth. Scattered throughout it are isolated glands surrounded by stroma and large islands of typical uterine mucosa. For the appearance under the high power see Fig. 4.

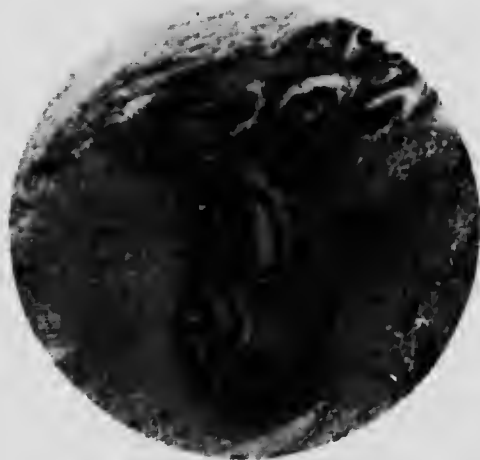


Fig. 4. Adenomyoma of the rectovaginal septum. This is one of the islands of mucosa seen in Fig. 3. The glands are identical with those of the uterine mucosa, and they lie embedded in the characteristic stroma of the mucosa. This shows some small round-cell infiltration. Surrounding this island is the usual diffuse myomatous tissue.



Fig. 5. An umbilical hernia and a markedly pendulous abdomen in a patient weighing 464 pounds. This is a sketchy outline of the condition found. With the patient standing the dependent portion of the abdomen reached the knees. As the omentum was adherent to the hernial sac the transverse colon was markedly drawn downward. The dotted line indicates the line of dissection, the fat of the abdominal wall being removed down to the fascia. The hernial sac was divided into numerous secondary cavities. This is particularly well seen in the upper sketch of the hernial sac, which was drawn after removal.

about 3 x 2 cm., very dense in texture, and projected into the lumen of the bowel. The rectal mucosa itself was intact, normal, and showed no evidence of ulceration or inflammation. In some places the muscle of the myoma was continuous with that of the bowel. At other points a little adipose tissue intervened or lobules of fat were surrounded by nonstriated muscle.

Scattered throughout this myomatous growth, which was diffuse in character, were islands of uterine mucosa (Figs. 3 and 4). In some places just a triangle of the typical stroma of the mucosa was visible. At other points were isolated glands, surrounded by stroma; or a small cavity was seen lined with cylindrical epithelium, which had glands extending into it. In other places there were large areas of uterine mucosa surrounded by the char-

acteristic stroma, or there was a long drawn out ribbon-like mass of stroma with one or two long and tortuous glands lying in it. In some sections there was a definite area of mucosa, at least 8 mm. long by 3 mm. broad. Here, with the low power, the mucosa occupied more than one field, no muscle being visible. Such areas are really miniature uterine cavities.

The growth is a typical adenomyoma of the recto-vaginal septum, evidently starting in or near the cervix and gradually invading the rectum by continuity, but respecting the rectal mucosa at all points. The bowel was so nearly obstructed, however, that we were forced to remove at least 8 inches. The ideal method would have been to excise the area of the growth and then close up the defect.

IV. OPERATION FOR THE RADICAL CURE OF AN UMBILICAL HERNIA IN A PATIENT WEIGHING 464 POUNDS

Mrs. C. J., aged 35, was admitted to the Church Home and Infirmary, February 11, 1914. She had had five children, the youngest being eight months old. At the time of her marriage she weighed 225 pounds. Her weight on admission was 464 pounds. She complained of an umbilical hernia which was about 10 cm. in diameter. When on her feet, her abdomen hung down to the knees. The dragging sensation caused thereby was so great that she was forced to keep off her feet as much as possible.

Operation, February 12, 1914: I was unwilling to operate and explained the danger to her husband. The patient, who is still a relatively young woman, said she was becoming a semi-invalid and insisted that she be relieved. On account of the marked redundancy of the abdominal wall, we decided to remove a large quantity of fat with the hernia, as advocated by Dr. Howard A. Kelly. Accordingly a large transverse, elliptical area was outlined (Fig. 6). This area, when measured after removal, was 36 inches from side to side and 19 inches from above downward. The adipose tissue of the tremendous flap was dissected from the fascia of the abdominal wall all around as far as the neck of the hernia. Then, with the finger in the abdomen as a guide, the neck of the sac was cut at its approach to the abdominal wall. The dotted line in Fig. 5 indicates the line of dissection. The omentum in the sac was so intimately blended with the walls of the sac that this portion was cut off and removed together with the sac and redundant tissue.

In the upper sketch in Fig. 5 Mr. Brödel has clearly shown the neck of the sac and the numerous chambers passing off from it. The hernial opening was closed by the Mayo method of sliding the fascia of the lower margin of the opening up under that of the upper margin. We used kangaroo tendon for the mattress sutures and, after the first row had been placed and tied, the edges of the upper flap were

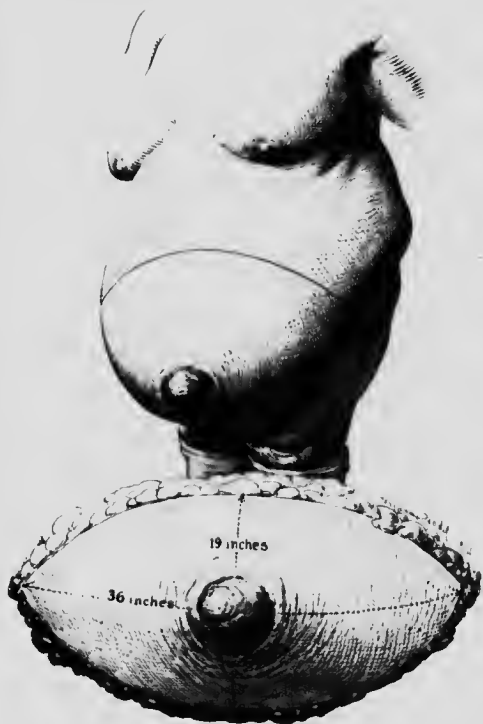


Fig. 6. An umbilical hernia associated with marked prolapse of the abdominal wall. The umbilical hernia was about 10 cm. in diameter. The elliptical transverse incision is indicated by the black line. The lower figure indicates the shape and size of the piece of adipose tissue removed.

fastened down with a second row of mattress sutures. The abdominal wound was now approximated by interrupted silver wire and silkworm-gut sutures. Accurate skin approximation was obtained by continuous black silk thread. At each end of the incision a protective drain was introduced.

The patient made a speedy recovery and the abdominal wound healed perfectly. When the stitches were removed the abdominal incision had contracted until it measured only 27 inches from side to side. The patient, eight months later, was in excellent health.

V. REMOVAL OF A LARGE TUBERCULOUS CYST OF THE MESENTERY OF THE JEJUNUM, TOGETHER WITH THE CORRESPONDING SEGMENT OF BOWEL; RECOVERY; LATER DEATH, APPARENTLY FROM TUBERCULOUS MENINGITIS

Baby R., a frail girl, 2½ years old, was referred to me by Dr. Julius Friedenwald and Dr. Harry Goldberg on May 27, 1914.

Two weeks before her admission to the Church Home and Infirmary a tumor was first noted in the upper abdomen. This was globular, appeared to

be about 10 cm. in diameter and could be pushed from one side of the abdomen to the other. It lay somewhat to the left of the median line.

There was a leucocytosis of 15,000. The urine was normal. The history gave absolutely no clue as to the probable character of the growth. The majority of those who saw the patient thought that the tumor was probably an enlarged left kidney, but no one ventured a positive diagnosis.

Operation: I made a median abdominal incision, commencing a short distance below the xiphoid and ending near the umbilicus. The tumor lay below the transverse colon and was covered over by a greatly reddened, thickened, and adherent omentum (Fig. 7.) The omentum was cut across near the transverse colon and we gradually loosened up the cystic tumor, freeing it from several loops of small bowel and separating it from the adherent mesentery. After getting good exposure, we found that the tumor sprang from the mesentery of the jejunum. We continued our dissection, hoping that it would be possible to completely enucleate the cyst without injuring the blood supply of the jejunum. When this had been almost accomplished, the tumor having been freed except over an area of about 3 x 3 cm., a little pus commenced to escape. Fortunately, the tumor was at this stage of the operation mobile enough to be partially lifted out of the abdomen. It was slit open and evacuated into a large basin with little or no contamination to the abdominal contents. The sac contained about 700 ccm. of a rather thin greenish yellow, odorless pus. When empty it was clamped off and removed. It was then found that the blood supply of a large area of the jejunum had been cut off, as the same vessels that supplied the tumor also supplied the bowel. It was further seen that no matter in what manner the sac had been removed the blood supply of the bowel must of necessity have been cut off. The portion of the jejunum which had lost its blood supply was clamped and cut (Fig. 7). Both ends were closed and a lateral anastomosis was made. It had been necessary to cut off the jejunum about three inches from the point where it passed to the left over the vertebral column. This short end naturally made the anastomosis rather difficult. A cigarette drain was carried down near, but not to, the point of anastomosis and the abdomen closed.

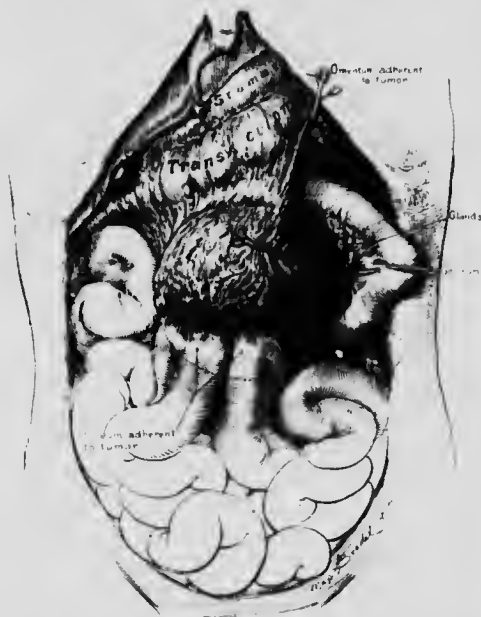


Fig. 7. A tuberculous cyst springing from the mesentery of the jejunum. The cyst was globular, occupied the center of the upper abdomen and was partly covered by adherent, red, and greatly thickened omentum. Below it was adherent to several loops of small bowel. The omentum was severed near the transverse colon and the loops of small bowel were liberated. The cyst was then gradually loosened, as far as feasible, from its attachment to the mesentery. The loop of jejunum here shown was thickened, but at operation seemed to be normal. A glance at Fig. 8, however, demonstrates that its mucous coats are much thicker than usual. In the mesentery of the jejunum are markedly enlarged lymph-glands.



Fig. 8. Tuberculous cyst of the mesentery of the jejunum. Resection of the jejunum together with the cyst. Temporary recovery. The right half of the drawing showing the mesenteric cyst and the jejunum is an accurate portrayal of the specimen removed. The left half gives a more or less schematic representation of the relation of the cyst to the body. The cyst was spherical, had a definite basal mesenteric attachment, about 3 x 3 cm., and was covered with greatly thickened indurated omentum. The cyst walls varied from 2 to 3 mm. to 1 cm. or more in thickness. The inner surface presented a fri-

able, worm-eaten appearance and the pus was odorless, rather thin, and greenish yellow in color. At the cut ends of the jejunum the mucosa is practically normal, but a section near the center of the loop shows marked thickening of the bowel wall, together with much narrowing. As shown in the illustration, the glands in the mesentery are considerably enlarged. The ends of the bowel which were held by forceps were closed and a lateral anastomosis was then made. This was a rather difficult procedure on account of the shortness of the remaining portion of the jejunum.

Within a few hours after operation the child was carried out on the veranda and there she remained throughout her sojourn in the hospital. She steadily improved and had no abdominal complications whatsoever. About two weeks after operation a partial facial paralysis was noted on the left side, but this did not interfere with her recovery.

Path. Nos. 20,246 and 20,287. Sections through the wall of the sac show that the outer surface is composed of fibrous tissue poor in nuclei. In some places it has a laminated arrangement. At other point the fibers run in all directions. There is a good deal of hyaline transformation. As one approaches the inner surface there is a tremendous amount of

small round-cell infiltration and the tissue at certain points looks like ordinary granulation tissue, having a very abundant blood supply. Where this granulation tissue exists, the inner surface of the sac is covered with fibrin, which has in its meshes small round cells and polymorphonuclear leucocytes. At other points scattered through the granulation tissue are giant cells. Some of these resemble tremendous plaques of protoplasm with rather deeply staining nuclei scattered throughout it. At other points are round or oval areas of protoplasm with oval or vesicular nuclei arranged chiefly around the margin of the large cell. At other points are tremendous giant cells surrounded by

small round cells or separated from the round cells by a zone of epithelioid cells. In other words, the picture is that of typical tuberculosis. In some places ten to fifteen giant cells are visible in one field. This is without doubt a tuberculous cyst of the mesentery of the jejunum. Sections from the growth in the small bowel failed to show any evidence whatsoever of tuberculosis.

In four or five weeks the patient was walking well and was going from her home to the Johns Hopkins Hospital to receive electrical treatment for the facial paralysis. She came to see me at the office shortly before the summer vacation.

Dr. Goldberg tells me that during the summer her appetite was good and that she gained four pounds. Suddenly, about two months after the operation, she was taken with severe headache, which at first was occipital, but which later extended all over the head. On the next day, when Dr. Goldberg saw her, she was in a semi-comatose condition, was irritable and cross and wished to be let alone. The light seemed to hurt her eyes and she did not care for food and water. The pupils were dilated and gave little or no reaction to light. The respirations

were rapid, the pulse was quick, the temperature 99.4°. The heart and lungs were normal, the abdomen was scaphoid. The child lay with her limbs flexed and with her face away from the light.

She remained in this condition for several days. She was obstinately constipated. After the bowels had been emptied she showed some improvement for a few hours, but soon lapsed into her former condition. Some difficulty was noted in swallowing. This gradually increased and during the last two days the child refused all nourishment. Finally she became comatose and died. Three days before death partial opisthotonos was noted. There was backward traction of the head, but the knees were not drawn up.

Dr. Goldberg was unable to get an autopsy, but the clinical picture, coupled with the abdominal findings at operation, strongly suggested tuberculous meningitis as the cause of death. A tuberculous condition of the meninges is little to be wondered at when we remember the massive primary focus of tuberculosis in the mesenteric cyst.

