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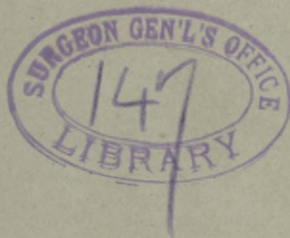
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REMARKS ON
ABDOMINAL SURGERY.

Cyst of Broad Ligament.
Laparotomy, Recovery.

BY
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ABDOMINAL SURGERY.

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It is difficult, I dare say impossible, to utilize medical associations for purposes of scientific investigation, but by a proper exchange of experience and views they can be made efficient agents in the dissemination of scientific results; and it is with this object in view that I penned the following remarks upon a subject so full of interest and so very important, which is as yet barely emerging from that first epoch in the history of every great advance in surgery.

The deplorable fatality which formerly attended wounds of the peritonium was a sufficient reason for the older surgeons to dread this class of injuries more than all others, and we are therefore not surprised to hear from John Bell the terse observation: "Hence it comes to pass that in one short sentence we announce the general principles of such wounds, and in one short and general prognostic we declare them to be fatal." Nor is it difficult to picture to ourselves the despair of Abernethy, to whom is attributed the quaint remark that Nature would have nothing to do with these cases, but stood by and shook her head and left the patient to his hopeless fate.

How very different is the opinion held by surgeons of our day! We are told, and the assertion is strengthened by an array of successful results which seems to defy contradiction, that wounds of the peritoneum are not at all dangerous; that the peritoneum may

be subjected to insults of all kinds with impunity; that it may be pierced, cut, torn, bruised and burned without danger—provided only a watchful eye be kept upon infection. (Schroeder.) In our day feats are accomplished in abdominal surgery of which the older surgeons never dreamed in their most fanciful reveries: tumors weighing fifty and sixty pounds are removed from the cavity of the peritoneum and the patients recover without any great rise of temperature or an alarming increase in the frequency of the pulse; and I need only remind you of the many lives which have been saved by enterotomy, which, under the old regime, were consigned to a premature grave, and to the great alleviation of suffering by the timely performance of gastrotomy.

Hence the idea at once suggests itself that the older surgeons were certainly very much mistaken when they considered injuries of the abdomen so exceedingly dangerous, whereas they have proved themselves comparatively harmless. The audacity of this view we shall presently show and at the very outset, we will say, that in spite of our increased knowledge of the causes which effect their great mortality and therefore our increased success in combating them—for an enemy whose strength and position is known is easily conquered—abdominal injuries are and always will be dangerous lesions.

What then are the dangers attending these injuries and how may we avoid or at least combat them?

The first great danger which arises on opening the abdominal cavity consists in the exposure of the peritoneum to a lower temperature. The peritoneum as you know is a very large serous sac, the surfaces of which are continually moist and glide smoothly over each other. A sudden cooling of this immense surface may result in reflex paralytic conditions of the heart and in death.

In the next place, the power of absorption of the peritoneum is so great, that any exudation which may have undergone putrefactive changes, and which will be most rapidly absorbed, will produce rapid and serious septicæmia.

Add to this the peristaltic motion of the bowels, by which everything which enters the peritoneal cavity is carried over the entire surface; and the descent of the diaphragm and the small intestines

occurring during respiration, and which are augmented by the pressure of the abdominal parietes—and you have additional important factors to increase the power of absorption of the peritoneum.

Again, the numerous convolutions of the intestines and their relation to each other and to the other abdominal viscera, result in numerous lacunæ in which secretions may lodge and be unable to escape, thereby offering the most favorable opportunity for their decomposition and subsequent absorption.

The fact that intestinal gases impart their peculiar odor to adjacent collections of pus and secretions is so well known, that I need only remind you of the sickening smell of abscesses in the neighborhood of the bowels, the cavity of which does not communicate with the intestines, to bring this danger of septicæmia home to your minds. And in cases of severe injury to the intestines in which the process of exosmosis has been paralyzed, so to speak, not only the gases, but also the fluid contents of the bowels find their way through the intestinal walls.

These then are the dangers—the knowledge of their nature suggests their remedies, and it is to this knowledge that modern surgery owes its triumphs in abdominal surgery.

To meet the first danger we perform our operations in an atmosphere of about 80° ; we wrap our patients warmly, and have everything that is to come in contact with them, before and after the operation, of a proper temperature. The shock to the peritoneum, and through it to the system at large, is thereby greatly diminished. The efficacy of the noxious ingredients of the atmosphere which are said to cause the putrefactive changes in wounds we attempt to destroy by saturating the atmosphere of the room with antiseptics, whereas the operation itself should be performed under what are termed antiseptic precautions. The power of absorption, which the peritoneum possesses to so great a degree, can, of course, not be destroyed, but we can remove, with scrupulous care, everything which could possibly be the source of irritation, or which could possibly be absorbed, and therefore too much time cannot be spent upon the toilet of the peritoneum.

On the other hand the peristaltic action of the peritoneal organs should be diminished by large doses of opium before the per-

formance of an operation, and afterwards it is our sheet-anchor.

The firm, large bandage which is used after operations about the abdomen assists in no small measure in diminishing abdominal and diaphragmatic respiration, whereas the insertion of drainage tubes in proper localities prevents the lodging of secretions in the numerous lacunæ for a sufficient length of time to undergo putrefactive changes. Even the intestinal gases can be counteracted to a certain extent by a proper dietetic preparation of our patient for the operation, and by the administration of large and frequent doses of potass. chloras.

I have thus briefly, and, as I am aware, most imperfectly, sketched the dangers of abdominal wounds and their antidotes, not because I do not deem them of great importance, but because I wished only to suggest the discussion of this important subject; and, in conclusion, I will report, with your permission, a case of laparotomy for the removal of a cyst of the left broad ligament.

Cystic tumors of the broad ligament so closely resemble unilocular ovarian cysts as to be diagnosticable only by a chemical and microscopical examination of their contents, obtained by aspiration, and they rarely attain so large a size as this one. They form between the layers of peritoneum which envelop the broad ligaments, and are supposed to arise from an increased secretion from the walls of the numerous tubes which compose the parovarium.

Tillie H., the young lady from whom the tumor was removed, consulted me for the first time on the 12th of January, 1880. She is seventeen years old, single, but remarkably well developed for her age, and presents the appearance of a woman in the ninth month of pregnancy. At the age of thirteen she began to menstruate and has always had a regular, although somewhat copious menstrual flow. She has always enjoyed good health except during the last year of her attendance at school, when she suffered from chlorosis. About two years ago she noticed a hardening and gradual swelling of her abdomen which has since continued to enlarge but annoys her only by its size. She is not perceptibly emaciated nor is her general health implicated. Axillary temperature 99° , no glandular enlargements, no varicose veins and no œdema of the lower extremities, nor have any perceptible changes been wrought in the mammæ or the areolæ. Mensuration from the

umbilicus to the right and left ant. sup. spinous processes of the ilia respectively, shows one inch and a half in favor of the left side. On palpation a movable, regular but somewhat dense tumor is discovered over which the abdominal walls roll freely; the abdominal parietes are not œdematous nor are the abdominal veins enlarged. Fluctuation of the tumor is very distinct and superficial. Percussion elicits a dull sound, upwards to the epigastric region on the right side to about middle of lumbar region and inguinal, below to the symphysis and over the whole left side. The uterus is of normal depth and freely movable. Occasionally she suffers from a frequent desire to micturate, but this annoys her only for a few hours. A chemical and microscopic examination of the urine furnishes only negative results. Her tongue is clean, appetite good and bowels regular. She sleeps well. Her respiration is frequent but not embarrassed; the respiratory murmur and heart sounds are normal; pulse 120 per minute; aspiration was not permitted; Unilocular cyst—probably of left ovary was diagnosed.

As the patient was comfortable and her general health not involved she was advised to wait. From time to time she was seen, but no marked change occurred until the latter part of February, when she experienced some difficulty in ascending stairs, and her health began to fail as evinced by a loss of appetite and emaciation. At her urgent request, and I may here say in parenthesis, that a more heroic and confiding patient cannot be imagined, she was prepared for the operation which I performed on the 9th of March, assisted by Drs. Gregory, Wesseler, Bernays, Atwood, Hickman, DeCailhol, and Fuhrmann. Listerism with all its numerous details was carefully observed. Dr. Atwood kindly took charge of the anæsthetic. At first ether was administered, but it was found that the time required to produce anæsthesia was too much prolonged, and chloroform was substituted. The chloroform narcosis was, however, attended with that much dreaded symptom—vomiting, and during the operation it became necessary a number of times to cease all further proceedings until the vomiting was controlled, which was always successfully done by pushing the chloroform. After the patient had been placed on the table a pint of clear straw colored urine was drawn off and an incision was made in the linea

alba, under the spray, about four inches in length. Before the peritoneum was reached two veins were ligatured and one small artery was tortioned. When all hemorrhage had ceased the peritoneal cavity was opened and the large cyst, which had all the appearances of the bladder, at once completely closed the abdominal incision. Adhesions were sought for with a sound and as none were discovered the cyst was transfixcd by Dr. Borck's ingenious cyst elevator which was entrusted to Dr. Hickman, whilst Dr. Bernays gently yet firmly pressed the abdominal parietes against the tumor. The trocar was then introduced between the prongs of the elevator and as the contents of the cyst, a clear straw colored, albuminous liquid to the amount of thirty pints escaped, the cyst was gradually drawn from the abdominal cavity by Dr. Hickman. When the long broad pedicle came outside of the parietes, it was found that the cyst grew from the broad ligament. The pedicle was secured by a clamp, two carbolized silk ligatures were made to transfix it under the clamp and then the cyst was removed with the knife above the clamp. During the whole procedure neither the hand nor an instrument, except the sound, nor a sponge were in the abdominal cavity, nor, were the intestines or ovaries seen. The pedicle, which was very long was sewed into the middle of the abdominal wound. The wound, after being united with deep and superficial silk sutures was dressed antiseptically. Slight vomiting occurred during the afternoon, but the patient slept well during the first night, and next morning I found her with a temperature of 99°, pulse 108, and not complaining of pain. Drew off half a pint of urine.

I consider it unnecessary to detail to you the various ranges of the temperature and pulse, suffice it to say that the highest temperature 100 $\frac{3}{4}$ °, occurred on the evening of the third day after the operation. On this day there was a slight show of the catamenia. On the fifth day an injection of lukewarm water was followed by a copious evacuation. The dressings were removed for the first time on the fifth day, under the spray, and the wound above and below the insertion of the pedicle was found united by first intention. The superficial and two deep sutures were removed. Four days afterward the wound was again dressed and all the sutures were

removed. A small abscess had formed in the left abdominal wall, it contained about a drachm of laudable pus. One of the ligatures of the pedicles was by mishap cut off near the knot and will no doubt become encysted. The wound is entirely closed. The patient is entirely well. Six weeks after the operation she menstruated.

P. S.—Contrary to my expectations, the ligature which remained in the abdomen did not become encysted, but the wound opened and suppurated for a few days, after which the patient extracted the projecting ligature with her fingers. The wound is again healed. The patient is growing perceptibly stronger.

JULY 15, 1880.



