

ABDOMINAL SECTION FOR DIAGNOSTIC PURPOSES.

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IN the excellent book of J. Greig-Smith on *Abdominal Surgery*, he says, in speaking of exploratory incisions of the abdomen, "no incision ought to be merely exploratory." "The exploratory incision of the skilled surgeon is widely different from that of the tyro. Where the former will make a correct diagnosis in ninety-nine out of a hundred cases, the latter will fail over his tenth case."

However skilful the surgeon may be, I do not believe he can make an accurate and correct diagnosis in more than nine out of ten cases of abdominal disease by any method of external examination, if we leave out of consideration cases of ovarian cysts and uterine fibroids.

Therefore, I think that the author quoted is in error, and that his quoted statement should not be allowed to stand unchallenged.

In spite of the fact that great progress has been made in later years, there still remain a considerable number of cases of abdominal disease of a serious character, the nature of which equally skilful and intelligent surgeons will disagree upon. This statement applies to cases of obstruction of the bowels, to disease of the vermiform appendix, to affections of the liver and gall-bladder, and of the kidneys, and to pus collections in any part of the abdominal cavity.

The real facts in many cases of ruptured extra-uterine pregnancy are only clearly made out at a post-mortem examination.

Exploratory incision is looked upon by Mr. Smith as a serious operation followed by a trying illness.

In my hands it has not proven so; the serious part is the disease that warrants the operation, and not the operation itself, for with due care and cleanliness there is not one chance in a hundred that

any bad result will follow the opening of the peritoneal cavity for the purposes of diagnosis.

I would not have it understood that I am an advocate of careless or reckless work, but where the symptoms are grave and growing steadily worse and the life is at stake, if the symptoms point to some obscure disease of the abdominal cavity, there should certainly be no hesitation in clearing up all doubts by an exploratory incision if there be strength and vitality left to withstand the slight shock that attends the opening of the peritoneal cavity. During the past few years a number of cases have come under my observation that warrant me in these opinions, and I select from among them a few typical ones by way of illustration.

In November, 1888, I was asked to take charge of a lady from Austin, Nevada. She was twenty-seven years of age, mother of two children, youngest four years of age. She had suffered for many years a good deal of pain in region of ovaries and uterus, and when I first saw her she was confined to bed and had a temperature of 102°. The symptoms were those of a mild attack of pelvic peritonitis, but a careful bimanual examination showed the pelvic organs to be freely movable although tender to the touch. The uterus was retroverted.

Under the use of opiates, rest, and hot-water vaginal injections and the free use of quinine the symptoms mended, and at the end of a month the temperature was normal and she was allowed to get out of bed. The digestion was poor, and she complained of a feeling of distress in the region of the stomach and liver. At the end of ten days the fever returned with increased violence, and the repetition of the treatment gave only negative results. Manifestly I had to deal with some serious malady the nature of which could not be clearly made out. She was now much emaciated, and I advised an exploratory incision, giving as my reason that there was probably a small collection of pus in one or both Fallopian tubes. Prof. L. C. Lane saw the case in consultation, and agreed with me as to the propriety of the abdominal section, and the operation was done on January 31, 1889. Upon opening the abdomen the tubes were found to be normal. I then enlarged the incision and, introducing the whole hand, began a systematic examination of all the abdominal organs. Finally I discovered on the under side of the liver a hard, rounded tumor firmly fixed, about the size of a turkey's egg. While manipulating it between the thumb and finger I found movable masses within, and at once concluded that I had to deal with an enlarged and inflamed gall-bladder filled with gall-stones. I at once

sutured the retroverted uterus to the anterior abdominal wall and closed the incision in the abdomen. I then laid open the abdomen by a free incision near the lower border of the ribs, and with the fingertips loosened the adhesions of the gall-bladder from the surrounding structures, and drew it up and stitched it to the edge of the abdominal wound, laid it open and removed a small handful of biliary calculi, leaving in the viscus a small drainage-tube for one week. The improvement was remarkable; the fever and pain immediately left her, and in six weeks she had regained her normal weight. A small biliary fistula remained for three months, which healed at once upon removal of another gall-stone which had been left in the bladder at the time of the operation or had worked its way down from the ducts subsequently. The gall-bladder contained also purulent matter, and this, together with the local peritonitis, was doubtless the cause of the fever. The only symptom that would lead to the suspicion that such disease existed was the indigestion and the sense of uneasiness and pain in the region, but this was no greater than is often seen in those who have suffered from habitual dyspepsia. The external examination gave no clue, for the gall-bladder was firmly fixed high up under the border of the liver. One year after the operation the uterus retained its normal position, and she remained in good health.

Mrs. W. F., aged twenty-four years, one child and one abortion, came to San Francisco from Honolulu in the summer of 1891, and for three months was under the care of two competent medical gentlemen, who treated her for some obscure and painful affection of the pelvic organs. But little good attended their efforts, and I was asked to take charge of the case. Upon examination, the abdomen was found to be distended with gas and very tender on pressure. The uterus was moderately fixed, retroverted and sensitive to the touch, cervix slightly lacerated, bladder irritable, and urination painful. Temperature 105°. A purge of 10 grains of calomel was given, which acted freely but without relief to symptoms. Manifestly there was some serious trouble in the abdominal cavity, probably a pyosalpinx, and an exploratory incision was advised, and after setting forth the facts in the case the plan was agreed to, and the patient was removed to my private hospital and the abdomen opened. It was then found that the patient was suffering from general peritonitis. The vermiform appendix was enlarged, contained several small particles of hard fecal matter the size of small peas, and two openings or ulcerations existed extending from the cavity of the appendix into the peritoneal cavity. The appendix was slightly adherent to the adjacent structures by bands of lymph. The right Fallopian tube contained two ounces of pus. The appendix and Fallopian tube were

ligated and removed, the abdomen washed out with hot water, and a drainage-tube left in for forty-eight hours. Recovery was uninterrupted, and she returned to her home on the twenty-first day following the operation. In this case there was no suspicion of disease of the appendix before the exploration, and had the operation been delayed she would doubtless have died promptly, whereas from the moment of opening the abdomen I was master of the situation, and recovery was at once almost a certainty.

On November 16, 1891, I saw, in consultation with Dr. B. F. Clark, a woman, twenty-one years of age, one child and one miscarriage, who was suffering from some obscure and painful disease of the abdominal cavity following an attack of pelvic peritonitis. From the history, symptoms, and examination it was concluded that it was a case of pelvic abscess—such a case as, in former years, I would have punctured through the roof of the vagina, but it was decided to make an exploratory incision and clear up all uncertainties. On the following day the plan was carried out, and in addition to a double pyosalpinx we found near the umbilicus a mass the size of the closed fist, consisting of omentum and small intestines firmly agglutinated together. I began cautiously to break up the adhesions and dissect the various layers apart with my finger-nails, and in the centre of the mass I came upon an abscess containing two ounces of ill-smelling pus, the walls of which were gangrenous in appearance. The tube and ovaries were removed and the parts thoroughly washed, a drainage-tube inserted for three days, after which recovery was uninterrupted.

In this case any procedure short of abdominal surgery would have been of little use.

On June 15, 1892, I was asked by Dr. Myers, of Union Street, to see a case with him. She was twenty-seven years of age, had been married ten months and eight days before I saw her, had suffered a miscarriage of six weeks' pregnancy. Following the abortion, fever developed, and when I saw her her temperature was $104\frac{1}{2}^{\circ}$. She was bathed in perspiration, the abdomen greatly distended, and she suffering intense. The expression of the face was the peculiar pinched, anxious look so familiar to those who have much to do with cases of abdominal surgery. Upon examination it was found that a large solid tumor the size of a child's head occupied the pelvic cavity. An offensive discharge was escaping from the os uteri, and the uterine cavity measured six inches. An important question at once presented itself: Was the woman suffering from septicemia due to absorption from a decomposing placenta, or had she already a general peritonitis from extension of

the disease along the Fallopian tube into the peritoneal cavity? If the former, the curetting of the uterine cavity might prove of service; if the latter, it would do no good. An exploratory incision was decided upon, and the following day I opened the abdomen and at once found purulent general peritonitis and a large, sloughy-looking uterine fibroid. During the examination pus was seen flowing freely into the peritoneal cavity from the free opening of the Fallopian tube. I at once tied off the broad ligaments, ligated the uterine arteries, removed the tumor, tubes, and ovaries, leaving the stump of the cervix closed in by flaps and a whip-stitch of catgut after the method of Schroeder. The abdominal cavity was washed and drained, the temperature at once went down to 100°, and there was but little shock.

The recovery was uneventful, except that the abdominal wound did not unite, owing to the infection during the operation by the purulent discharge, and that in order to secure more perfect drainage on the fifth day I passed a rubber tube from the abdominal wound through the stump of the cervix into and out of the vagina. The patient was out of bed in five weeks, and walking about a week later, having gained very materially in weight during her confinement to bed.

With these facts before us, can there be any question in the mind of any intelligent surgeon of the proper course to pursue? Certainly courage and prompt action are necessary if good results are to follow.

On July 26, 1892, an Italian woman, aged twenty years, was brought to my private hospital in a greatly emaciated condition; her temperature was 102° and pulse 130. She had borne one child two years before. Eight months before I saw her she had an attack which, from the history, I should judge was pelvic peritonitis, since which time there had been steadily failing health and progressive emaciation, accompanied with much abdominal pain, fever, and profuse perspiration. She had been having for several weeks a discharge of pus daily from the rectum. A bimanual examination showed the pelvic organs firmly fixed and tender, the abdomen not distended, and no marked thickening at any point that would indicate a circumscribed pus collection.

With the assistance of Dr. B. F. Clark, the abdomen was opened on the following day, and we found the peritoneum enormously thickened. The moment the cavity was opened a gush of pus occurred, and this was followed by the discharge of fully three quarts of yellow and grumous pus of very fetid odor. The sac was now washed out with

several gallons of hot water and the whole surface mopped over with a mixture of equal parts of compound tincture of iodine and carbolic acid.

An examination showed that the pus cavity extended from the Douglas pouch to the ensiform cartilage. No pelvic or abdominal organs were anywhere in sight, all being buried in lymph and pushed in every direction by the encroaching pus-sac. Two drainage-tubes were fastened in, and every twenty-four hours the cavity was thoroughly washed out with half an ounce of compound tincture of iodine to a gallon of hot water. Rectal injections of whiskey and milk, and five grains of quinine every five hours administered by the mouth, produced a marked effect. At this writing convalescence is fully established, with every prospect of return to health.

Had tentative measures been employed here, or some imperfect system of drainage, I believe the result would have been disastrous. There was no way of learning, from the external examination, the great extent of the disease, and the wonder is that any poor human being could live and carry about such a dreadful load of filth.

It might be said that the cases reported are exceptional. In answer, I would say that similar cases are coming under my observation constantly, and every year add strength to the conviction that in properly selected cases exploratory incision of the peritoneal cavity is one of the most valuable additions to surgery that has been made in later years, and that when a patient dies after an abdominal section the fault lies with the disorder that warranted it, and not with the operation—provided, of course, that the surgical work has been done properly and with the strict observation of cleanliness.