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RECURRING APPENDICITIS:

Is Excision of the Appendix during a Remission a Justifiable Operation? If so, When and How?

BY

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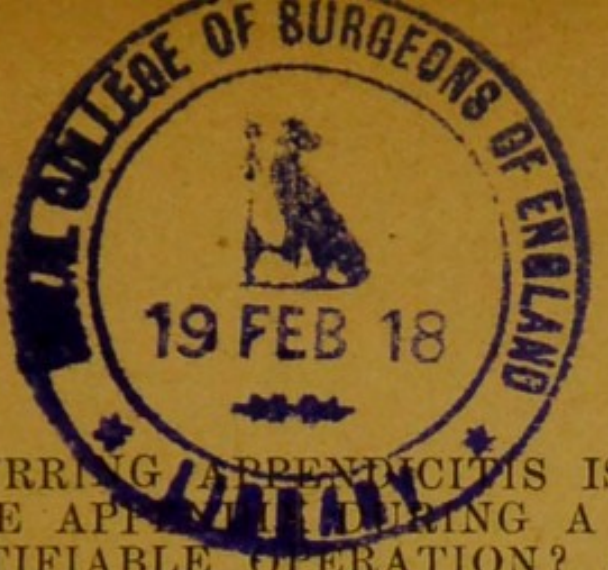

IN RECURRING APPENDICITIS IS EXCISION OF THE APPENDIX DURING A REMISSION A JUSTIFIABLE OPERATION? AND IF SO, IN WHAT CLASS OF CASES, AND HOW, SHOULD IT BE DONE?[1]

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For the past few years probably no subject has received more attention from the medical and surgical mind than that of inflammation of the appendix vermiformis. The ablest and best physicians have written almost exhaustively on its various and varying aspects. I do not wish in this paper to consider the subject of appendicitis except in its relapsing form. Mr. Treves, February 14, 1888, read before the Medico-Chirurgical Society of London on "Relapsing Typhlitis treated by Operation." This is the first case in the literature on this subject that I have found; though I believe Dr. Thomas G. Morton had previously advocated it. Since that time a number of papers by Robert F. Wier, Dr. W. T. Bull, Dr. N. Senn, Dr. Fred S. Dennis and others have been given to the profession. Some are in favor and some against operative interference in the quiescent stage between attacks. This array of writers on this subject shows that surgeons are considering earnestly the propriety of operation in the period of quiescence. It seemed to me that a collection and analysis of these cases in which the operation had been done might help to a decision in what class of cases the surgeon should interfere. It is con-

[1] Read before the Boston Society for Medical Improvement, November, 24, 1890.

ceded in the first place that because a patient has had one or more attacks it does not necessarily follow that he will have another. It has been shown by Fitz [2] and others that the percentage of cases in which appendicitis recurs is from seven to thirteen, and analysis of the reported cases in which this operation has been done shows a tendency to increasing severity in each succeeding attack. The length of the period of quiescence varies from intervals so short as to result in chronic invalidism, to months, and in one or two instances to years. The remission stage was marked by almost recovery in some in a short time, and in others extending from weeks into months, resulting in a condition of invalidism. Before reading an abstract of the cases I have been able to find I should like to refer for a moment to some of my own.

About a year ago I reported a case of excision of the appendix for relapsing appendicitis during a remission. The case at that time was too recent to judge of the advantage to the patient or to determine whether it would result in permanent relief. It is now a pleasure to record that there has not been the slightest recurrence of any of the previous symptoms which invalided him a large part of the time for a year previous to the operation, and which made him afraid to spend a night away from home on account of their frequent occurrence and severity. He is now robust and hearty, attends to his business as well as ever, and so confident of permanent relief that during the last summer he has taken a sea voyage of a number of weeks.

Within a few weeks of my first operation another case presented itself to me with the following history: Frank B., aged twenty-six, entered the Massachusetts General Hospital, December 7, 1888; four days previ-

[2] Dr. Fitz, in a more recent article, gives percentage of recurrences as 44. Boston Med. and Surg. Jour., June 19, 1890, p. 620.

ous to entrance he was taken with severe pain in the umbilical region, violent nausea, retaining nothing on his stomach except brandy and cracked ice. There was tenderness in the umbilical and epigastric regions, and also in the right iliac fossa, general but not marked tympanites. The vomitus was green and bilious in character at times; at others brownish like coffee grounds; temperature had not risen above 99 8°. Morphine was given subcutaneously and nutritive enemata. Hot fomentations to the abdomen. On the second day after admission a small lump could be felt in the right iliac region, and, by the rectum on the right, a hard mass crowding the anterior wall just above the prostate. A small area felt soft, and in its centre a spot so soft as to suggest pus. On the next day the mass in the iliac region was larger and it was decided to operate. An incision two inches long was made over the outer portion of Poupart's ligament and an inch above it. This was carried down to the tumor, which was aspirated, but no pus found. An assistant then with the finger in the rectum pressed the mass upwards and outwards, and with my finger protecting the iliac artery behind I again introduced the aspirator and withdrew about two ounces of pus. This cavity was opened, and drainage-tube inserted. The case progressed favorably, and was discharged from the hospital about five weeks after operation, the wound closed. In little less than a year from his discharge he entered the hospital again, in the middle of another attack. When asked how many attacks he had had during the year, his answer was, "So many that I have not kept count." His condition was as follows: Pains severe and localized in the right iliac fossa. Tenderness there, but only slight resistance on palpation.

Above the old cicatrix, however, there was a slightly enlongated mass, size of a small plum, tender on press-

ure. His condition was not such as to demand any active treatment, and in ten days he was practically convalescent. In view of his numerous attacks and his invalidism therefrom, the operation for the removal of the appendix was explained to him, and he was asked to consider it. The next day he requested that it should be done if there was any hope of his recovery.

On December 20, 1889, the operation was done, as follows: An incision parallel with the linea alba, and half way between it and the right anterior superior spine of the ilium, was made, three inches in length and extending to within one and a half inches of Poupart's ligament; all hæmorrhage was controlled by hæmostatic forceps. On opening the peritoneum and turning up the omentum, the latter was found attached to the appendix, which was firmly bound down by adhesions and was with difficulty brought up to the incision. A stitch was passed through its tip to lift it and control it while the omental adhesions were ligated and divided. The proximal end of the appendix for about an inch was firmly adherent to the cæcum, and its walls so thin that in separating the adhesions it ruptured. A ligature was tied between the opening and the cæcum, and the appendix cut off. The lumen of the stump was cauterized with the Paquelin cautery. The omentum was stitched to the cæcum in such a manner as to cover the stump. The edges of the peritoneum were united by continuous silk suture, the muscles and fascia by interrupted sutures, the skin by interrupted buried sutures. Dry antiseptic dressing applied with swathe. An enema of black coffee was given immediately after the operation, and again in four hours. He made a rapid recovery with no complications. The temperature on the day following rose to 100.8°, and on the next night fell to normal and remained there.

Examination of the appendix by Dr. Whitney: "The outer part of the appendix, 3.25 cms. long, attached to a bit of omentum by strong adhesion. Generally thickened. The outer surface rough, the inner surface smooth. Thickening was shown by the microscope to be in the sub-mucous, muscular and peritoneal coats. The mucous coat normal, chronic periappendicitis.

This case is especially interesting from the fact, that a year prior to the radical operation for removal of the appendix, he had been operated upon for abscess due to periappendicitis from which he recovered in the ordinary manner.

The cases of this operation which I have been able to find are as follows; arranged chronologically according to the date of their publication, because the dates of operation were not always given:

CASES BY MR. LAWSON TAIT.[3]

Male, aged twenty-seven. Had had three attacks; in each one the characteristic egg-shaped tumor was present, increasing during the acute stage and diminishing in the quiescent. Operation by an incision over the cæcum about three inches long and about one inch from the anterior superior iliac spine; opened a suppurating cavity outside the cæcum, separated from an indurated mass, the appendix about three times its normal size. Mr. Tait slit open the appendix, and drained it with a No. 6 celluloid catheter. Placed a drainage-tube in the deepest part of the abscess and closed the wound around the catheter and tube. Recovery. Mr. Tait had operated in two other sim ilar cases by removing the appendix, both recovered. He says, "I shall continue to follow the new plan of opening the appendix and draining it independently

[3] British Medical Journal, 1889, p. 763.

until I find some reason to revert to my former practice of removing it."

CASE OF DR. N. SENN.[4]

Male, aged twenty-two. Six attacks attended by excruciating pain in the ilio-cæcal region. Vomiting and constipation continuing from one week to twelve days. At Dr. Senn's first examination pain was referred to the ilio-cæcal region, and directly over the location of the appendix a circumscribed area of tenderness could be mapped out. No appreciable swelling, but on deep pressure while the patient's chest was elevated and thighs flexed, a firm cord-like body could be felt behind the cæcum over a point corresponding to the location of the appendix. Operation: Chloroform, an incision four inches in length was made directly over the centre of the cæcum and parallel to the ascending colon. The lower angle an inch above Poupart's ligament. The appendix was found behind the cæcum, non-adherent, its mesentery shortened and exceedingly vascular. Its peritoneum appeared healthy. The appendix was uniformly enlarged, and imparted a sensation of unusual hardness. It was ligated with silk, cut off and the pedicle buried by stitching the peritoneum over it by a continuous suture. Recovery interrupted. Patient is now in perfect health.

CASE OF DR HOEGH.[5]

Male, aged thirty-seven. Five attacks in fifteen months. In earlier attacks general abdominal pains and diarrhœa. In the latter ones pain has been localized in the ilio-cæcal region, severe in character, accompanied by chilliness, no vomiting, but more or less retching, constipation. Abdomen often distended and

[4] Journal American Medical Association, November 2, 1889, p. 630.
[5] Loc. cit., p. 632.

always tender on pressure over a limited space at a point where the pain always seemed to start. Since last attack unable to resume business. Suffered constantly from pain in the ilio-cæcal region, loss of appetite and increasing debility, Operation: Chloroform, incision through the right linea semi-lunaris, appendix came at once into view lying free in the peritoneal cavity two inches long, remarkably firm to the touch and its serous surface quite vascular. It was ligated and removed. Stump covered by stitching peritoneum from each side with continuous suture. Recovery. The appendix contained a very offensive purulent fluid, consistency of cream, of brownish color. No concretion or foreign body. Two ulcers involved the whole thickness of the mucous membrane. Serous coat near the cæcum was considerably thickened.

CASES OF DR. MCBURNEY.[6]

CASE I. Young lady, who in the course of a little over a year, had had no less than twelve attacks of so-called perityphlitis. The attacks were severe, giving rise to great pain with rise of temperature. The operation was done during the period of complete health after careful consultation to prevent recurrence. The appendix was found rigidly swollen, the mucous membrane mildly inflamed, the other tissues of its walls greatly thickened, not the slightest evidence of peritoneal inflammation or adhesion existed. The appendix was readily removed, and the patient made a rapid recovery. Since that time the patient has enjoyed unbroken health.

CASE II. A young lady had had on four different occasions attacks of abdominal pain accompanied by vomiting, exquisite tenderness in the right iliac fossa, and considerable elevations of temperature. Subse-

[6] New York Medical Journal, December 21, 1889, p. 677.

quent to the last attack, and during a period of complete health the appendix was removed. The condition of the disease was somewhat in advance of the case last given. The appendix was quite firmly bound down by old adhesions to the under surface of the intestinal mesentery and cæcum. The mesentery of the appendix had been nearly obliterated. The organ was dark colored, swollen and soft and enclosed some fine fæcal grains. Two partial strictures existed which produced retention. This patient made a rapid recovery, and four months afterwards was in perfect health.

Dr. McBurney further says, "These two cases show that comparatively slight conditions of inflammatory disease in the appendix may give rise to threatening illness. There can be little doubt that both of these cases were preparing for abscess or general peritonitis."

CASE OF DR. WYETH.[7]

Male, aged nineteen. Had had fourteen attacks with an interval of about two months between seizures. Vomiting was a constant symptom in all the attacks, and in about half of them a tumor could be made out, while in the remainder a marked sense of resistance on palpation over the right iliac region was present. Highest temperature reached in any attack was 104° F. At that time pain and vomiting were most distressing, and rectal examination disclosed a tumor occupying the right upper side of the pelvis. Operation: An incision six inches long, the centre opposite the anterior superior spine along the right rectus. After a prolonged search the appendix was found low down in the pelvis below and adherent to the iliac artery and pelvic fascia. Adhesions

[7] International Journal of Surgery, May, 1890, p. 104.

carefully broken up. The appendix separated from its attachment ligated with silk, removed. Wound closed with silk sutures except at lower angle where it was packed with iodoform gauze so as to shut off the stump from the peritoneal cavity. Reactionary temperature 100° F. Soon fell to normal and remained so. Recovery.

CASE OF DR. CLARKE AND MR. GREIG SMITH.[8]

Female, aged twenty-two. Previous excellent health. First attack very severe, colicky pain about the abdomen, not localized. Nausea, slight diarrhœa, headache. She was pale, with sunken eyes and anxious expression; knees drawn up. The least movement gave pain; respiration shallow; abdomen distended, excessively tender, especially in umbilical region; nowhere any dulness nor ascites; stools loose and dark in color; pulse 108, small and weak; temperature 101.5°; convalescence very slow, covering months, and never complete. A second attack about five months after the first, similar to first, but pains were localized in the right iliac fossa. Convalescence protracted for weeks, when Mr. Greig Smith agreed with Dr. Clarke that operation was advisable.

Incision two inches in length, its lower extremity being at the level of the anterior iliac spine and about an inch further inward. The operation was complicated and difficult. Appendix so thickened that it seemed that it would have stood erect without support; appendix removed. Adhesions prevented the invagination of the stump, so the peritoneum was gathered together over the mucous membrane by a continuous silk suture. The appendix contained dark, grumous fluid, with three bodies, which turned out to be orange pips covered with fæces and mucus. The

[8] London Lancet, May 3, 1890, p. 956.

mucous membrane much thickened, highly vascular, and numerous hæmorrhagic spots, nowhere ulcerated; muscular coat considerably hypertrophied.

Patient immediately improved; temperature normal; recovery. Five months later, in excellent health. No return of pain.

CASE REPORTED BY DR. NORMAN BRIDGE,[9]

in which the operation was done by his surgical colleague, Dr. Parkes.

A lady who had had from childhood slight pain in the right groin and thigh, aggravated by exercise, had had some months previously, what appeared a dysenteric attack with pain in the abdomen and especially the right side, with fever. She recovered and resumed active life, to be again within a few weeks seized with abdominal pains, vomiting and constipation. The abdomen was tender on the right side from Poupart's ligament to the ribs; no tumefaction discoverable. Daily rise of temperature to 100° or 101°. Thighs kept flexed; tenderness in abdomen persisted for weeks and became more marked over the cæcal region. Tentative efforts at sitting up were followed by rise of temperature and return of pain. Laparotomy for exploration of the appendix was decided upon and executed by Dr. Parkes. The appendix was found enlarged, hard and tense, projecting forward in an erect position and deeply congested. It was extirpated and found to contain three small enteroliths, and a quantity of thick tenacious mucus. Its walls were thickened. Recovery excellent, and disappearance of all symptoms.

CASE OF DR. MURRAY.[10]

Male, aged twenty-one. Life and habits regular, slight of build, and, at time of operation, very anæmic.

[9] Medical News, May 24, 1890.
[10] New York Medical Journal, May 24, 1890, p. 564.

The first attack of collicky pains in the abdomen, accompanied by vomiting, general abdominal tenderness, some tympanites, abdominal walls fairly tense. Slight pain on pressure over the right iliac fossa. Tongue coated, bowels constipated. Pulse 96, temperature 100°. Afterwards reached 103°. One month later another attack, and for five months a recurrence every three or four weeks. Comparatively free for five months and then a severe attack. Pain intense and localized in the right iliac fossa. A point of exquisite tenderness over the region of the appendix. Operation: an incision four inches long with its centre opposite the superior iliac spine, on the outer side of the right rectus. Omentum slightly adherent to cæcum; adhesions separated; cæcum lifted into the wound and the appendix exposed. It ran upward and inward behind the cæcum; was enlarged, thickened and doubled on itself. Its mesentery was tied in section; the appendix ligated with strong catgut at its base and cut off. The cavity of the stump scraped, touched lightly with the cautery and sprinkled with iodoform. Rubber drainage down to the stump packed round by iodoform gauze. Recovery. Since well. Specimen showed chronic catarrhal appendicitis.

CASE OF DR. MONKS.[11]

A boy thirteen months old. Hernia of the appendix into the scrotum. Inflammation and swelling occupying the whole of the anterior part of the right side of the scrotum, and extending a short distance on to the abdomen and inguinal region. Aspiration and free incision. Two weeks later the swelling, heat and redness having gradually disappeared, a long incision in the direction of the cord was made and afterwards extended up to the ring which was freely laid open.

[11] Boston Medical and Surgical Journal, June 5, 1890, p. 543.

The cæcum was drawn out and the appendix removed. The edges of the stump were inverted, sewed together and the whole returned to the abdomen. Examination of the specimen by Dr. Fitz showed chronic adhesive appendicitis. The result of an appendicitis obliterated the peritoneal pouch in which the appendix lay. Recovery.

CASE OF DR. HADRA.[12]

A sturdy German baker, aged fifty-two, had frequent attacks during a period of six months marked by colic and constipation, and usually relieved promptly by opiates and enemata. He became accustomed to treat himself. Seen by Dr. Hadra in a more severe attack six weeks before operation. At that time, in addition to the ordinary symptoms, the cæcal region was resistant to the touch, but no distinct tumor could be felt. There was a spot the size of a silver half-dollar about two inches inside the anterior superior spine of the ilium, which was extremely tender and which was insisted on as the site of the pain in every attack. Operation by crescentic incision of about six inches, convexity to the right. On opening the peritoneum the appendix presented at once; was two inches long, thicker than a common pencil, had a complete mesentery and was nowhere adherent. Its peritoneum seemed slightly clouded. It was tied close to the cæcum and cut off. The stump rubbed with iodoform cotton and closed by three Lembert sutures. Pathological report by Dr. Dock given at length, but summed up in the following sentence: "I look on the specimen as an example of chronic catarrhal appendicitis of mild grade." Recovery. Pain and tenderness disappeared, and four months after the operation there had been no return.

[12] New York Medical Record, March 8, 1890, p. 269.

Now, from a careful study of these cases, I find that the decision in favor of operation was made in all on account of the frequency of recurrence and the severity of the attack, and where the persistent localization of the symptoms in the region of the right iliac fossa lead to the conviction in the mind of the operator that the appendix was the offending organ. All who are familiar with the clinical history of appendicitis are fully aware of the difficulties which surround the diagnosis in some cases. Still there are many so typical in their symptoms as to leave little doubt as to the nature of the disease. In such, it seems to me, the surgeon should be ready to present to the sufferer something more than medical treatment, which means temporary relief from pain or the other alternative, to wait until an attack is so severe and threatening to life as to demand immediate operation, and this at a time when the patient is least able to bear the shock and when a careful preparation for an aseptic operation can be inadequately made. As to the danger to life of this operation it is certainly remarkable that in all the cases which I have been able to find an account of, including my own, fifteen in number, all have made excellent recoveries. The number is too small to draw any general conclusion as to mortality, and there are probably some cases which I have not been able to find which have ended mortally, and also some unfortunate, but unpublished, due to the tendency to suppress unfavorable cases. Nevertheless, it is an encouragement to the surgeon to hold up to a suffering patient a good prospect of relief from operation. It has been urged as an objection to surgical interference that there is a lack of evidence that removal of the appendix brings immunity from the symptoms requiring it. No answer can be given to this except by experience. In my own two cases there has not been the slightest recurrence

of the old symptom since convalescence was established; and in the second case in which relapses had been so frequent as to make them almost continuous, the patient expressed great surprise that, even with the wound in his side, he was absolutely free from all pain or discomfort after operation.

Many of the reported cases are published simply as recoveries, but in four the length of time since operation is stated as four, five, six and seven months each. In my own cases one has had complete relief for more than a year, and the other for only a few days short of that, so that in six cases relief is known to have been given for a period of from four months to a year.

The danger of ventral hernia at the site of wound has been adduced as an objection to the operation. All surgeons are well aware of this danger in all laparotomies, and endeavor to prevent it by the most careful approximation of the peritoneal surfaces as well as the rest of the wound. We do not hesitate to make an exploratory incision to ascertain if we can give relief to many conditions no more threatening to life than appendicitis, and in cases with very little prospect of relief compared with what we might expect in many cases of relapsing appendicitis. The final answer to this operation must be deferred until time sufficient has elapsed to gather data, and until a larger number of cases can determine the per cent. of such acccidents. I hold also that this danger should be plainly stated to the patient before operation, so that his decision can be intelligently made. Certainly a wound made in the period of remission which could be closed in a large percentage of cases immediately and throughout its whole extent with careful approximation of the peritoneal surfaces would be less apt to result in a ventral hernia than one made when the

parts are acutely inflamed and the presence of pus makes an open wound with drainage imperative. I have found in the analysis of the above cases that though many of them presented no very great difficulty, there were some in which the appendix was found after prolonged search, and requiring of the surgeon a refinement of touch, and accurate acquaintance of the anatomy of the region and thorough knowledge of the variable position of the appendix.

Mr. Greig Smith says, in his case: "After minute examination by sight and touch, no sign of vermiform appendix could be made out; the cæcum and adherent bowels were drawn up towards the surface, a minute digital examination revealed somewhere in the depths of the coherent mass a line of increased resistance in which certain hard movable bodies were detected, and this, it was inferred, must be the appendix. Pulling the cæcum towards the upper abdomen, put the appendix, for such it was, upon the stretch, and it was easily followed into the depths of the pelvis. Its apex was attached on the posterior surface of the broad ligament." I will not complete his description, but this much shows what may be encountered. He afterwards mentions two cases which were abandoned on account of the difficulties, and later referring to his case from which I have made the above abstract, says: "I do not hesitate to say that any one who had not some considerable experience in the surgery of the abdomen and full confidence in his sense of touch might have been unable to finish it." Other cases have presented complications that were equally embarrassing.

By some who do not favor the operation, it has been suggested that each recurrence throws around the appendix an increasing wall of inflammatory product, hemming it in, and decreasing with each

attack, the danger of intra-peritoneal rupture. This may be to a certain extent true, but the same mass adds greatly to the difficulty of finding the appendix should the case subsequently require operation either from the severity of the attack, or because other reasons make an operation in a remission desirable. It would therefore seem wise in such cases as threaten the necessity of operation to operate early.

My conclusions then would be:

(1) The operation with its attendant difficulties and possible danger should be presented first, to those in whom a condition of invalidism is produced by the frequency or severity of the attacks; second, to those who are prevented from performing their ordinary duties in life; third, to those whose surroundings are likely to be such that they cannot in time of urgent necessity, command the services of an experienced surgeon (this would apply to those whose home was where good surgical skill was not available and those who travel by land or sea, and are likely to be seized with an attack at a distance from home).

(2) That the surgeon should be sufficiently familiar with abdominal surgery to be able to meet the difficulties which he may encounter.

(3) That in such cases as threatened the necessity of operation, it is better to do it in a remission, when those preparations of the patient, instruments and dressings can be made which are requisite to an aseptic operation.

OPERATION.

An incision should be made along the outer border of the rectus, curved or straight, about three inches long, in such a manner that the centre of the incision shall be over the usual site of the appendix. This can be made larger later if complications arise which

demand it. This can be made with a free hand until the peritoneum is reached. This can be recognized by the præ peritoneal fat. All bleeding points should be tied or controlled by hæmostatic forceps, and the wound made dry before the peritoneum is opened. This should be done the full extent of the wound. The appendix should be sought, and if not seen the finger introduced into the wound. The touch will often determine the location of the appendix, which is usually thickened or feels rounded and tense from the retained secretions.

METHOD OF REMOVAL.

The appendix should, when found, be separated from its attachments — from its mesentery by tying it in sections and division with the scissors, and from surrounding adhesions by gentle pressure with the finger or sponge. Any bleeding is best controlled by pressure with sponges or gauze. Ligature may occasionally be needed. The appendix should be ligated with silk near to the cæcum and removed, great care being used that none of its contents escape into the wound.

TREATMENT OF THE PEDICLE.

I have found in my cases that it was impossible to invert the edges and suture the serous surfaces, and have treated the lumen of the appendix like the cervix uteri in an hysterectomy by the actual cautery, and then stitched a flap of omentum over its top, the stitches being placed in the shape of a horseshoe with the open part towards the centre of circulation in order not to impede it. In this way the pedicle is quickly shut away from the general abdominal cavity by the adhesion of the omental flap. In some cases it has been possible to invert the edges of the pedicle and suture them. That is a good method where

practicable. I believe that the cautery is safer than dusting the cut surface and lumen with iodoform, boracic acid or aristol, and of the three I should prefer the last.

THE TREATMENT OF THE WOUND.

The cavity of the wound should be thoroughly cleansed and in suitable cases should be closed throughout. The peritoneal surfaces should be approximated independently by a continuous or interrupted silk suture, then the rest of the wound by silk sutures. In one case I closed by three sets of sutures: the first closed the peritoneum; the second, the muscular and aponeurotic structures; and the last, the skin, by a buried suture. The wound healed throughout by immediate union, and up to the present time there has been no tendency to hernial protrusion. In cases where pus or the contents of the appendix have escaped into the wound after thorough cleansing, it should be packed with iodoform gauze, and in some cases a drainage-tube is required. The immediate closure of the whole wound averts as far as possible the danger of ventral hernia.

AFTER-TREATMENT.

Immediately after operation a subcutaneous injection of an eighth of a grain of morphine to be repeated p. r. n., a rectal injection of four ounces of black coffee to be repeated in two hours, if there is any shock. Absolute diet for two days. Nutritious enemata during this time, then liquid diet for about a week, if the case is progressing favorably. Dressings should not be disturbed for ten days, unless indicated by the temperature. Stitches removed in fourteen days. The patient then allowed to sit up in bed, and to be about in four weeks, unless there is some special contra-indication.