FOREIGN BODIES ACCIDENTALLY LEFT IN THE ABDOMINAL CAVITY DURING THE COURSE OF CŒLIOTOMIES.*

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I shall confine myself to those cases in which the foreign body was not known to have been accidentally left in the peritonæal cavity at the conclusion of a respective operation, limiting the cases to such, in which the mishap was discovered subsequently.

It is not at all unusual that foreign bodies are accidentally left in the abdominal cavity after cœliotomies, and that such bodies are afterwards removed by secondary operation, or cause death without the fact of their presence having been recognized or suspected, until at the time of the autopsy.

The two instances which I have observed in my practice are the following: Total extirpation of the uterus and adnexa for cancer of the uterus. A gauze strip was lightly packed in the pelvis, which was ordered to be removed by the house surgeon per vaginam, three days subsequently. This I was informed had been done, but it was not noted that another had been replaced. The patient, however, made an uninterrupted recovery from the operation. A few weeks after leaving the hospital she began to complain of much pelvic and abdominal pain of a griping character, and persistent constipation. About two months later she brought me a strip of gauze which was passed with a fæcal evacuation. Her constipation and pain disappeared entirely after this.

The only explanation which I can make is that the doctor had replaced another gauze strip after removal of the first, beyond the edges of the vagina; that the vagina closed below the gauze and that he thought it had been removed.

Case 2.—During the early part of 1897 I did an abdominal hysterectomy for a myo-fibroma. The convalescence was protracted on account of an abdominal wall abscess and phlebitis. After healing of the wound the patient was discharged; still there was a complaint of constant pain midway between the umbilicus and epigastrium. I saw the woman again in October, 1897 and found a swelling at the seat of pain,

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which impressed me as being a mass made up of omentum and coils of adherent intestines; the abdominal parieties were indurated, due to inflammatory changes and moderate suppuration. Operation was again proposed, and on November 3, 1897, the abdomen was reopened.

The diagnosis, so far as could be seen, was correct, but unfortunately, owing to the condition of the patient, who was rapidly sinking as the disentanglement of the intestines progressed, the operation could not be completed, and the wound was closed. An abdomino-intestinal fistula resulted, and her condition, if anything, was worse. It was evident that a fatal issue would certainly follow is relief was not obtained. The condition having been fully explained to those most concerned, I reopened the abdomen on January 10, and after unusual difficulties, during which the tortuously agglutinated intestines were injured five times, a portion of bowel presented itself, distended to an unusual degree, with what felt like fæcal matter of clayey consistency. On looking into a rent of the intestine near the distended portion of gut, a gauze webbing discolored by fæces was seen, which, at first thought, I considered to be a pad which I had placed behind the intestine, but on looking more carefully over the field of operation, it was found that the small corner of gauze appearing was in the calibre of the bowel. On withdrawal it was found to be this large gauze serviette, such as is used to hold back intestines during abdominal sections; the distended bowel then collapsed, showing that it was the foreign body causing the distension. It is saturated with thin fæces from the small intestine in which it was impacted.

The operating nurse in some way to me not clear made an erroneous report at the time of the first operation. The protracted convalescence was due to the inflammatory changes caused by the foreign body gradually perforating the bowel. This inflammation, however, also caused the dense agglutination and tortuousness of the intestines, so that the foreign body, being lodged in the small bowel, could not be expelled in the natural way, and therefore caused chronic intestinal obstruction, from which the patient suffered so long.

The portion of intestines which had been injured several times was resected and the anastomosis made with sutures, the abdomen thoroughly cleansed and the wound closed. Despite, however, of various therapeutic measures employed, the woman did not rally from the shock, from which she died between two and three hours after removal from the table.

A. MacLaren, Annals of Surgery, September, 1896. After an oöphorectomy and hysteropexy the patient had obstinate constipation. On the

tenth day the bowels moved, and in the evacuation a gauze pad was found. After this convalescence was uninterrupeted.

In a second case Dr. MacLaren did a supra-vaginal amputation of a fibroid uterus, from which the patient made a rapid recovery. However, pain and symptoms of irritation, with occasional elevation of temperature remained. After the lapse of two years a swelling formed in the right lumbar region, directly above the kidney and upon another section, an artery-clamp was found in the bowel, which, with its point, penetrated into the somewhat enlarged appendix. The bowel was opened and the clamp removed. Recovery.

Anonymous. Révue des Malad. des Femmes, April, 1892. Eight months after an abdominal section for fibro-myoma a gauze compress 26 cm. in length and folded four times upon itself was spontaneously voided per rectum. The patient did not begin to complain until four months after operation. The perforation of the pad into the bowel, however, was not accompanied by severe symptoms.

In the case of a young woman upon whom a salpingectomy had been performed, but who continued to complain intensely, a vaginal hysterectomy was done. Still the pains continued, and after a lapse of several months another cœliotomy was made. In attempting to separate the intestinal adhesions, the bowel was injured, and through the perforation a gauze strip 35 cm. in length, also folded four times upon itself, was extracted. A piece of bowel 10 cm. in length was resected on account of the injury. An intestinal fistula which resulted subsequently healed spontaneously.

In two other instances a similar error was detected soon after operation and the patients were returned to the operating room and the foreign bodies removed. In one it was a sponge and in the other a clamp.

M. Salin, in Hygiea, 1891, No. 12, reports an instance in which, one year after he had performed an ovariotomy, the lower portion of the abdominal wound opened spontaneously, an abscess having formed there, from which a large quantity of foul-smelling pus was discharged; on more careful examination a large gauze compress was withdrawn from the cavity. On the following day a considerable quantity of fæces from the small intestine was discharged through the fistula. The fistula finally healed spontaneously. How such mishap occurred in this case is almost incomprehensible, because the counting of the compresses, both before and after operation, is not entrusted to one person; they are counted four times by different attendants.

Dr. H. P. C. Wilson, of Baltimore, in a paper before the American Gynæcologic Society in 1884, on foreign bodies in the abdominal cav-

ity, cites altogether thirty cases which he had been able to collect, the majority of which were European cases, but of these only five instances had been published, showing that members of the profession are reluctant to make their mishaps in this direction known to their colleagues. Dr. Engelman, in discussing the paper, reports an additional case of death from a sponge accidentally left in the abdominal cavity.

Dr. L. Elsner, of Syracuse, reported a case to the State Medical Society of New York in 1895, in which an abdominal hysterectomy had been performed by a prominent gynæcologist of this city in one of our largest and best equipped hospitals, in March, 1893, and after an uneventful recovery from the operation various symptoms began to manifest themselves the following July, finally increasing to such degree as to cause complete intestinal obstruction, for which operation had been contemplated and preparation made for, but shortly before the intended operation flatus passed, and soon afterward a fæcal evacuation ensued; with the next movement from the bowels, on September 26, a large gauze pad was evacuated, just six months subsequent to the hysterectomy.

Dr. Henry C. Coe, in an article on the tolerance of the peritonæum to aseptic foreign bodies, in the New York Polyclinic for April, 1897, remarks that he could have added five cases to those of Dr. Wilson, in which death occurred from septic peritonitis, found upon autopsy to be due to a large flat sponge having been left in the abdomen. These cases were from four different operators and had never been published. He adds another interesting case of a vaginal hysterectomy, in which thirty-six hours after the operation it was discovered that a sponge had been left in the pelvic cavity by slipping off a sponge holder. A cœliotomy was performed, and after a long search it was finally found under the liver. The patient recovered.

Dr. W. T. Bull also published a fatal case from a sponge, in report on operative surgery in New York Hospital, page 8.

The pathologist of one of our leading hospitals informed me of two additional instances of foreign bodies left in the abdominal cavity; one a clamp and the other a sponge, neither of which had been reported, and in fact the clamp, which had been placed in the pathological museum, was ordered removed, because of its stain on surgery.

There is no doubt in my mind but what such accidents have occurred very much oftener than anyone knows, but unfortunately, for obvious reasons, the cases are kept secret. Formerly, before the days of strict aseptic surgery, and when sponges were used more than now, deaths from this cause were not a rarity, as anyone can testify who has

investigated the matter. There is absolutely no good reason to endeavor to hide such mishaps; on the contrary, they should be published as a warning, and the lesson derived from such deplorable accidents can only be a gain to operators, calling constantly for the utmost care and control of instruments and sponges, or what may utilized for the latter purpose.

I have been informed, since making inquiries into this matter, of five additional cases occurring in this city, in which the foreign body accidentally left in the abdomen caused death. The cases not having been published, I must refrain from mentioning details.

The perforation of such body into the intestines does not seem to be accompanied by any special symptoms, and unless the substance finds its way into the small intestine, the chances for its eventual expulsion per vias naturalis are favorable. If they do not perforate the bowel, they as a rule, find their way to the surface in the course of time, then produce local symptoms which will lead the surgeon to make an investigation, probably making an incision which will disclose the offending body. In some instances the foreign body will work its way to the scar made by the primary operation, and by the inflammatory process cause a fistula, thus disclosing the nature of the case, if the tract of the fistula be enlarged.

The question which confronts us is: How can such accidents be prevented? We all agree that it is improper to use small pads or sponges as temporary packing; that it is necessary to have the number of sponges or pads and the clamps counted before and after operations, yet it has been shown by experience that this does not give absolute security against the occurrence of the accident in question. Dr. Gerster, who has a very large experience in abdominal surgery, writes me that he believes the mishap is due to haste or loss of coolness when operating in the presence of complications, notably hæmorrhage. This is surely not the case in any of the instances personally known to me, inasmuch as each of the operators referred to are men who work most deliberately, no matter how trying the circumstances may be. A rule followed by him and others, which prevents the occurrence of leaving a clamp or forceps in the abdomen, is to ligate every vessel immediately after it has been secured with clamp or hæmostatic forceps.

Dr. T. G. Thomas, in the discussion of Dr. Wilson's paper, advocates the attachment of a tape to all sponges left in the abdominal cavity for protection, the long ends of which are left externally, thus avoiding the danger of oversight. Dr. W. T. Bull informs me that such plan is pursued by him.

The method which I have lately adopted with utmost exactness in my practice is: Small pads as a temporary tamponade are discarded entirely; in the pelvis, if a small area is to be temporarily tamponed, I use a long strip of gauze, and to its end a long clamp is left attached, or the end is left sufficiently long that it remains externally a distance sufficiently long to prevent it from slipping into the abdominal cavity. For the purpose of protecting the peritonæal cavity in toto, sterilized towels are used in preference to the gauze compresses; for smaller surfaces to be protected, large gauze compresses are used, to which a long piece of silk or tape is attached, to the end of which a pair of forceps is applied. *No pad, of those counted for the operation, is permitted to be torn or cut to meet an emergency,* thus insuring against a double count. *No pads are permitted to be thrown on the floor; they must all be placed in a receptacle for that purpose,* if entirely discarded for further use during the operation. *All pads and forceps are controlled by double count before the beginning and at the conclusion of an operation.* In the event of a large number of small pads being required, they are *never* left in the cavity at all, but *immediately* removed when they have served their purpose. It has been shown in experience that errors are apt to creep in if pads or sponges are cut or torn, of those set aside for the respective case, otherwise it would be impossible to leave one behind, when the count is *accurately* controlled. The attachment of tapes prevents unnecessary handling of the abdominal contents in looking for a missing compress. The use of a receptacle for compresses and pads saves time in the recounting when the operation is completed. The abdomen should never be finally closed until all pads and towels have been accounted for. I prefer to supervise the controlling count personally, or let it be done by a *reliable* assistant. I believe that in the future such experience as I have had will not be apt to occur by the observance of the rules above enumerated.