

FOREIGN BODIES LEFT IN THE ABDOMEN AND IN SURGICAL WOUNDS.*

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MOST of us have read Mr. Dooley's description of his experiences after an appendectomy operation. How after recovery he heard a strange rattling in his abdomen when walking, and how the surgeon finally extracted various instruments, including the nurse's curling tongs, various hairpins, bracelets, etc., left at the time of the operation. Unfortunately, there is more truth than fiction in the story. Nevertheless, there really is a comical side to the thing, as shown by the case where a woman was operated on in America, in Germany and, finally, in France—the last operator finding a pair of spectacles!

Query: Who was most to blame? Evidently the German, for if he did not lose the spectacles himself he should have found them. How anybody could drop off his spectacles into the abdomen without knowing it, is hard to understand.

Another funny case is that of a foreign operator (I will not mention his nationality, as I want to appear neutral) who in fear of such an accident, attached a long tape to his gauze pad, and then a hemostat to that, and ended by sewing in the whole thing.

There have been a large number of cases reported from all parts of the world. From inquiries among some of my surgical friends, I do not believe a single surgeon of large practice in this city has escaped this accident. To some it has happened several times, so that I think that at least twenty-five such cases have occurred in Buffalo alone. From this it could be easily estimated how many there have been in the country at large. It would certainly mount into the hun-

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dreds. Possibly this number could be increased by supposing that many cases have happened of which nothing was known, or even suspected—the grave covering the accident.

Fortunately, not many fatalities have been reported, but much suffering has certainly resulted and no end of anxiety and worry has come to the surgeon, besides heavy damages after very costly law suits. I know of one now before the courts. This particular case looks like attempted blackmail.

Most of these accidents have occurred in operation on the abdomen. Every one who has seen an abdominal operation must recognize the ease with which a sponge, a piece of gauze or a small instrument may be lost among the intestines. Doubtless every abdominal surgeon has sometime or other hunted long and faithfully before he has found a sponge, which he knew to be there. Still, it must not be forgotten that this accident may happen in operations other than laparotomies. I know of a case in which a piece of gauze was left in the axilla in a breast case, and I remember a case which occurred many years ago, where a sponge tent was forgotten and left in a sinus near the knee joint by one of the most distinguished surgeons in New York City. A case has also been reported where a sponge was left after a hernia operation.

Gauze packing has repeatedly been left in the uterus after currettement. Fortunately, the uterus usually expels it, but not always, and there have been some law suits on this ground.

Where a foreign body is left in the abdomen, three very serious results may follow. First and most important, is the death of the patient. Second, long continued suffering, generally followed by the formation of an abscess, with almost always recovery. Thirdly, legal complications, which have always been disastrous to the surgeon, even though he eventually succeeded in successfully defending himself.

It is not now my intention to discuss the fatal cases or the legal aspects of such accidents, but rather to discuss how the accident may be avoided. There is no sure mechanical way. All the various contrivances only tend to lessen the danger or, more properly, to render avoidance easier. They do not prevent. All kinds of pads, sponges, gauzes and towels have been left in the abdomen. The best, in fact the only method, is to have a certain definite number of sponges or pads carefully counted before the operation, and equally carefully counted and the count controlled before the wound is closed. The same rule holds good as regards hemostats and other small instruments. It is a good rule never to put short hemostats or other small instruments into the abdomen.

A good plan is to have large gauze pads for use in the abdomen put up in packages of, say one dozen. They must be carefully counted by the nurse who puts them up, and the count

controlled by someone else. This plan has not always been successful, nevertheless it is good. Wylie reported a case where an assistant in the country at a private house had carried three pads with him, and, without the knowledge of the surgeon, had used these pads and left them in the abdomen. Of course the count was apparently correct. Such a thing could not happen in a well organized hospital clinic. Under no circumstances should small loose gauze pads be used in abdominal work. Anyone who does this may escape for a time, but is pretty certain to come to grief in the end.

Putting long tapes on the pads has been advised, but one case, already alluded to, has been reported where pad, tape and a hemostat attached to the tape were all sewed in. Coe reports three gauze pads with tapes at autopsy, when the tapes were found wrapped around the intestines.

A roll of gauze six inches wide and two yards long is often used. It is a good plan, and makes accident very unlikely, but I know of a case in this city where such a long roll was used to pack the pelvic cavity and forgotten. Boldt had a case in which an operating room towel used in an emergency to hold back the intestines, was left. The count of pads was of course all right. This case was for seven years in the courts.

For some reason, unknown to me, marine sponges have been almost entirely given up. As far as I can see, there is no good reason for this. Undoubtedly, fashion and prejudice have much to do with it. In my own practice I have never discarded them, especially in abdominal work. One reason which is urged against them is the difficulty of sterilizing them. Here the conclusion has been arrived at without good grounds. It is just as easy to sterilize a marine sponge as it is to prepare and sterilize a gauze pad or a gauze roll. The cost on the whole is less, and the trouble no greater, if as great. Marine sponges have two advantages. They are much better absorbents than gauze, and as only a small definite number are used, it is much easier to keep track of them during an operation.

I firmly believe that if marine sponges had not been so largely given up, there would not have been nearly so many cases of sponges (gauze) left in wounds. I have mentioned this matter to a number of surgeons. They always meet me with an incredulous stare—as much as to say, are you so old-fashioned as that? But when I pin them down they are forced to confess that there really is no good reason why marine sponges should not be used.

Let us consider the matter more at length. First, as to sterilization of marine sponges. The sponge is only the skeleton or frame-work of the animal. The soft parts are left to rot away, so that a new sponge, before it has been cleaned, is full of all uncleanness. As they come in the market, they have usually been bleached, which

means sulfurous acid or chlorine, both of which are antiseptics, chlorine a very powerful one. So that, as we buy them, they are not dirty. Still they must, of course, be carefully sterilized.

The method I have used for twenty-five years is simply this. New sponges are beaten, and then washed and squeezed in plain water to get out the sand. Afterwards they are put into strong hot soapsuds made with a powdered soap. The powdered soaps are much more strongly alkaline than bar soap, which is an advantage, and a suds is much more quickly made. They are left in this soapsuds, which in itself is antiseptic, for 48 hours. This dissolves out all blood, pus or other organic matter. They are then put into a pail, and fresh water from the tap is allowed to run on them for 24 hours, or until all traces of the soap are removed. After this they are squeezed dry and put into a 1 to 20 solution of carbolic acid. They must be kept in this solution for 48 hours, and may be left in until used, or they can be dried in cotton bags and kept dry. If the surgeon is doing much work, it will be necessary to have a number of sets, so as always to have enough ready for use.

Careful laboratory tests have shown that when prepared in this way the sponges are perfectly sterile, and never in over 4,000 laparotomies in which I have employed them, have I seen an infection which could in any way be traced to their use.

I use the same sponges over and over again—even when infected, I never throw them away. I have had such sponges tested in the laboratory before and after cleaning, and found that, though full of germs before, after the carbolic acid bath they were absolutely sterile. I use always one dozen sponges at each laparotomy—nine round and three large flat. They are carefully counted beforehand by two persons and counted again before the operation is finished.

The method of counting is of importance, and this applies to any kind of sponge or pad. The sponges are all placed in a dry basin, and are then counted as they are taken out, one by one, and put into another basin. The count is made out loud, so that the operator can hear it. Never but once, so far as I know, did I sew up an abdomen with a sponge in it. This was a case of colloid cancer operated on about ten years ago, in which the abdomen was enormously distended and filled with quantities of glue-like material. A very large flat marine sponge was overlooked in our hurry, as the patient was getting weak, and we were afraid she would die on the table.

The error was discovered almost as soon as the patient was in bed, but, owing to the severe shock, it was not deemed advisable to disturb her then, but to wait until reaction had taken place. The next morning she was all right, and I took out a few stitches under a little ether and removed the sponge. The patient recovered and lived some time.

In another case, twenty years ago, I left in a hemostat. I removed it two hours later, and came near leaving in a small sponge at that time. Had it been gauze, I certainly should have left it. If I have had any other cases, I do not know it.

The small number of sponges employed, and the consequent ease of keeping track of them is the great advantage I claim for sea sponges. With a reasonable amount of care with these sponges, it is impossible for an accident to happen.

I may perhaps be laughed at as old-fashioned and behind the times; but results are what we are all after, and I claim mine, in this respect, are about as good as any others. If I can be shown that sea sponges have ever done any harm, then I will at once give them up.

One reason perhaps why marine sponges have been given up is the difficulty of getting the proper kind. Good round sponges cannot be gotten in Buffalo, and I am obliged to go to New York to the large dealers to get the right kind. I buy round sponges by the box or half-box, at 15 cents apiece. About one-third of them are too soft, but this does not make a prohibitory price. The flat sponges are more expensive. I never use a sponge after it gets so that it will tear easily. Nurses are not allowed to wring the sponges, but only to squeeze them with gloved hands.

As to instruments, only the greatest care will prevent accident. They should be carefully counted before and after use, and only long-handled instruments used in the abdomen.

To conclude, I wish to impress it upon you that nothing but eternal vigilance will prevent this accident, and it will sometimes happen in spite of one's best efforts. Its possibility should be ever in the minds of every operator, and no one should be blamed if after taking reasonable care the accident happens in his practice.

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