ENTERECTOMY FOR GANGRENOUS HERNIA :

WITH AN ACCOUNT OF TWO SUCCESSFUL CASES.

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THE interest which the question of the treatment of gangrenous hernia is now exciting makes the following successful cases of resection and primary suture worthy of record. They were both operated on in the Manchester Royal Infirmary, and I am indebted to Mr. Hardie and to Mr. Southam, for whom I was respectively acting at the time, for permission to publish them.

CASE I.

History.—Mrs. E., aged 29, was admitted on May 2nd, 1898. She had a femoral hernia on the right side of two years' duration, but it had been always reducible until three days before admission. After an attack of vomiting and diarrhoea which lasted twenty-four hours, the hernia came down and could not be returned. The diarrhoea ceased, but for thirty-six hours the vomiting continued, and twelve hours before admission became faecal. Taxis had been unsuccessfully tried.

Condition on Admission.—A right femoral hernia was found, 3 inches in its longest diameter, very tense and with no impulse. The tongue was dry and furred, and there was slight abdominal distension. The pulse was fair.

Operation.—The sac contained half an ounce of faecal, blood-stained fluid, and 3 inches of small intestine, much congested and with sloughy gangrenous patches. The gut was very tightly nipped at Gimbernat's ligament, and a linear perforation was found there. There was no omentum in the sac. The wound was enlarged upwards and the coil brought well into view. The mesentery was in good condition. The gut was clamped widely above and below with rubber tubing, and 7 inches removed with a small V-shaped portion of mesentery. The divided mesentery was first "tacked" with a continuous silk suture, and the same thread was made to unite the peritoneal and muscular coats of the mesenteric half of the circumference of the gut. Then the mucous membrane was sutured with another continuous suture. A third suture was used for the peritoneal and muscular coats of the remaining half circumference. The gut was reduced, the sac ligatured and cut away, and the wound drained by a strip of gauze. The operation lasted fifty minutes.

After-History.—The after-progress was quite uneventful. Flatus was passed during the night, and there was never any abdominal distension nor sickness. Warm water and tea were given during the first twenty-four hours, and then the fluid diet gradually increased. An enema was given on the eighth day, and then bread and milk allowed. The drain was removed on the third and the sutures on the tenth day. The wound healed without suppuration, and the patient was allowed up in three weeks, and went home in four. I saw her nine months later. There was some bulging of the wall near the scar, and she was advised to wear a light truss.

CASE II.

History.—Mrs. R., aged 35, was admitted on February 7th, 1899. She had had a small right-sided reducible femoral hernia for six months. Symptoms of strangulation had existed for forty-eight hours, and faecal vomiting for twenty-four hours. No flatus had been passed for forty-eight hours. Her general condition was fair, but there was considerable abdominal distension.

Operation.—A small knuckle of gut was found, gangrenous and perforated at its apex; the sac also was gangrenous. Four inches were resected and sutured in the way described in Case I. As there was much distension the upper segment was allowed to empty itself as completely as possible before suture. The wound was drained by a strip of gauze. The operation lasted 50 minutes.

After-History.—Flatus was passed during the first twenty-four hours. The bowels were moved naturally on the fourth day. The wound healed without suppuration, and the patient was discharged in a month.

The plan of suture adopted in these two cases seemed most convenient. If the mucous membrane is first united there is a little difficulty in accurately suturing the peritoneal coats at the mesenteric angle. As Mr. Barker has lately pointed out,¹ cases of gangrenous hernia fall into three groups. In the worst class of case simple incision of the gut is alone possible. In the others the choice is between primary and secondary suture after resection.

Juillard's secondary suture will be the safer plan if the upper segment of the gut be much distended, or the condition of its walls doubtful. The operation time will be probably eight to ten minutes shorter than if primary suture be attempted. But the mortality of the second part of the operation is considerable. Makins put it at 5 per cent.² If the intestine be not much distended, and if the patient can bear a few extra minutes on the table, the suture should be primary.

Wallace,³ analysing the cases in St. Thomas's for the ten years 1888-97, notes that resection and primary suture was performed eleven times for gangrenous hernia with two successes. Of the nine failures, in only two was the suture

ine found defective *post mortem*. In the others the death was due either to exhaustion or to gangrene and perforation of the gut higher up.

No doubt more careful selection of the cases with regard to distension and disease of the gut wall of the upper segment will much improve the operation mortality.

During the last two years 9 cases of gangrenous hernia were operated on in the Manchester Royal Infirmary. In 4 the loop was simply incised. They all died within forty-eight hours. One case was successfully treated on Juillard's plan, the secondary suture being carried out eight days after the resection. Four cases were treated by resection and primary suture with three successes. This includes the 2 cases here reported. The one death followed the resection of a gangrenous cecum.

The button, probably with a certain amount of reason,⁴ was not used in any acute case.

REFERENCES.

¹ BRITISH MEDICAL JOURNAL, December 23rd, 1899. ² St. Thomas's Hospital Reports, vol. xiii, p. 181. ³ St. Thomas's Hospital Reports: new series: vol. xxvi. ⁴ Mr. J. Hutchinson, jun., in discussion at Clinical Society (BRITISH MEDICAL JOURNAL, December 2nd, 1899) says that 7 per cent. of recoveries followed the use of the button, against 40 per cent. following direct suture.

VALVULAR DRAINAGE TUBES IN EMPYEMA.

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THE accompanying diagram represents an apparatus for draining or pumping out an empyema which I invented in 1887 with the aid of Dr. R. Jackson, now of St. Helens, but who at that time was house-surgeon at the Royal Southern Hospital.

It is fully described in an article which I published in the BRITISH MEDICAL JOURNAL of May 18th, 1889. I have since made a slight alteration, but in detail only, in the air-tight joint at the back of the shield. The sketch shows the modification. A short bit of rubber tubing here overlaps the metal tube at the back of the shield, and also overlaps the drainage tube passing through the shield, so making a very secure joint.

The sketch shows the mechanism put together—complete. When being applied all the parts are, of course, separate; the drainage tube is first introduced into the chest, next the shield is passed up over it—the short rubber tube at the back of the shield already alluded to having been turned back on itself to allow of this being done—next this portion is returned and the joint secured. The best valve is made by flattening a tube of thin rubber, and such a one is that shown above.

I wish particularly to point out that indiarubber valves cannot be depended upon to act properly in these cases unless, when in use, they are immersed in water, the adhesive and the drying qualities of the purulent discharge rendering them liable to be glued up. I consider, therefore, that Drs.