body, but we could entertain no doubt it was caused by the halfpenny, and from the large amount of fluid which he regurgitated it appeared that the œsophagus was greatly dilated above it. My first attempts to pass it were fruitless, but at last I managed to slip a No. 3 gum catheter beyond and into the stomach. A large amount of liquid food was poured in through this, and I was very glad to leave it there for a time as a means of feeding the child, and thereby recuperating the vital powers, which had sunk to the lowest ebb—too low, as it appeared, to permit of a severe operation being undertaken. On the following day he pulled the tube out, but his powers of deglutition were then so much improved that for some days afterwards he could swallow liquids quite easily. This preliminary treatment was repeated on two occasions within the next fortnight, when it became impossible to pass the tube any longer.

Operation.—The first stage included the performance of œsophagotomy in the usual way on the left side of the neck. The incision in the œsophagus, which was about an inch and a half in length, was kept as low in the neck as possible, and the subsequent proceedings were facilitated by passing a wire through either edge to serve as a retractor. I then passed my finger down the œsophagus for exploration, and at a spot about an inch below the top of the sternum readily detected an obstruction. This quite corresponded with the edge of a coin as such would be felt obscurely through the œsophageal wall. It seemed to be obliquely in the mediastinum, in front of and to the right of the œsophagus, with the lower edge inclining away from that tube. No metallic contact could be made at any point, so that I presume it was outside the œsophagus, and not simply covered over with a swollen rim of mucous membrane at its upper part. I next very guardedly cut through the covering with a tenotome on to the metal, till this was sufficiently bared to afford a good hold to a strong pair of forceps. The coin was firmly fixed and required a good deal of force for dislodgment. When disturbed a rush of air into the œsophagus occurred, showing that a communication existed between this tube and the trachea or a bronchus, though it appeared as if the coin when *in situ* served to close the opening. The coin was withdrawn first into the œsophagus, and then out through the wound in the neck. It was black and tarnished, but not otherwise altered.

As it appeared imperative to permit no attempt at swallowing for several days, on account of the fistulous communication, I tried to pass a tube from the mouth into the stomach for feeding purposes, but found it impracticable. No sutures were employed either in the œsophagus or outer wound. Alimentation was effected solely by the rectum at the outset; but on the fourth day the temperature had fallen to 96° F., and as he was obviously on the verge of dying from starvation, I let him try to swallow a little milk by the mouth. He managed to suck down 3 or 4 ounces during the day, but of this half regurgitated through the wound in the neck, and, in spite of his care, some got into the air-passage, producing a perilous attack of dyspnoea. After this, he steadily swallowed more and more each day; but the amount regurgitated through the wound seemed to increase rather than lessen, and it consequently made but little progress in healing. On the fourteenth day he managed to swallow a soft rubber catheter, which served as a feeding-tube; this he continued to do twice a day, taking a good meal through it each time. The wound now rapidly began to heal, and was quite sound at the end of six weeks. With the healing of the wound all the chest symptoms gradually disappeared. Up to this time he had only gained one pound in weight.

During the seventh week, he had an alarming attack of obstruction of the bowels, attended with great abdominal distension, tympany, and fullness in the right iliac fossa. I suspected intussusception at first; but soon came to the conclusion that it was due to large accumulation in the intestines. This proved to be the case, for under strict abstinence and the use of enemata it speedily disappeared with copious evacuations. There had been no obvious neglect of the bowels, though they had been persistently torpid; but there is no doubt that his powers of assimilation were greatly reduced, and that he was unable to cope with the large amount of nutriment suddenly thrown into him. After this attack he rapidly gained flesh, and in the next six weeks had made an advance in weight of 11½ lbs.—from 25½ to 37 lbs.

For a long time I was anxious about possible contraction of the œsophagus, and carefully watched him for evidences of its appearance. While in hospital he had two or three attacks of choking, with inability to swallow, each of which I was able to refer to attempts to bolt pieces of bread-crust or other solid food which he had stolen from the other patients' supplies. This induced me to keep him restricted in his diet as long as possible, he being so greedy in his eating. I was never able to pass a bougie with facility; but this seemed more owing to angular bend than contraction, as he could

always himself swallow with perfect ease a flexible rubber tube equal to a No. 12 or 13 catheter. He has since remained perfectly well, and has experienced no difficulty in swallowing, with one exception only; on this occasion he had vainly attempted to swallow an entire quarter of an orange, which I fished up from the œsophagus two days afterwards.

REMARKS.—I believe this case is quite unique in the length of time intervening between the impaction of the foreign body and its successful extraction, and also in the situation from which it was removed. Monro records a case of impaction of a halfpenny in the œsophagus for three years, fatal by consumption without operation; and numerous cases are recorded of retention of foreign bodies of various kinds in the œsophagus for long periods, which terminated fatally by various accidents; but, as these are detailed in most text-books of surgery, I need not particularise them. Mr. Durham's table of cases of œsophagotomy for foreign body is probably the most complete list of operations up to the date of its publication (Holmes's *System*, 1870). This list gives a total of twenty-one, four only of which were fatal, and mostly from causes existing before the operation. In most of them the foreign body was cut directly down upon, but in one (Syme's case) a coin had passed below the top of the sternum. This case, too, had the longest interval (two months) intervening between the accident and the successful operation of any in the list.

SUCCESSFUL OPERATION IN A CASE OF ACUTE INTESTINAL OBSTRUCTION.

By G. E. WILLIAMSON, F.R.C.S.,
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ON Friday, August 27th, 1886, my friend, Dr. Drummond, asked me to see with him and Dr. Walker a patient suffering from intestinal obstruction, as he thought it was a case for abdominal section. The patient was a groom, about 22 years of age. He did not look so anxious or distressed as I had expected, but this was probably due to the effect of the morphine and belladonna he had been taking. His tongue was very foul, and there was an evil fœcal odour about his breath. The abdomen was tense, somewhat tender, and coils of distended intestine were distinguishable through the abdominal wall. Except for a little dullness in the right iliac region, the abdomen was resonant to percussion. There was no sign nor history of any hernia. It appeared that he had had two attacks of severe pain in the abdomen two or three years previously, but the accounts of these were somewhat vague. His present attack dated from Friday, August 13th. On that day he ate a large dinner of pork in great haste, and then rushed off home. He was suddenly seized with severe pain in the belly and with vomiting. Dr. Walker saw him on the following day, and gave him a dose of castor-oil. The vomiting ceased, but it began again after two days, and on Thursday, August 19th, it was fœcal. Dr. Drummond saw him on Saturday, August 21st. The pulse was small and quick, and the man was almost in a state of collapse. The temperature was not raised, the tongue was dry. A large quantity of fœcal matter was produced, which he had vomited. The abdomen was distended, and tender about the umbilicus and cæcum; no tumour could be found. The rectum was examined, but without result. On Sunday, August 22nd, a large enema of fat mutton broth was given, which passed distinctly into the cæcum. It was retained for two to three hours, and then returned void of fœcal matter. After this the vomiting ceased, the pulse slowed, and the temperature was normal. One-sixth of a grain of morphine was given by the mouth. The vomiting began again, and on the 25th he was put under chloroform, and the abdomen thoroughly examined, but without throwing any further light on the case. The vomiting continued fœcal, and on Friday, the 27th, a fortnight after the onset, we met in consultation, and after again carefully examining the patient under chloroform, we decided upon abdominal section. The urine was drawn off with a catheter, but only a little flowed, although—as is common in these cases—he had complained of difficulty in passing urine for some days previously. An incision was made over the outer margin of the right rectus abdominis, and the edge of the muscle was exposed with very little bleeding. The remaining tissues were slit on a director, and when the slight hæmorrhage ceased the peritoneum was opened. My reason for making a lateral, and not a median, incision was that it seemed probable that the seat of obstruction was in the region of the cæcum. The bleeding could scarcely have been less had the incision been median, as there was not a vessel requiring ligation.

The fingers of the left hand were introduced into the abdomen as the peritoneum was cut, and the coils of distended intestine came under them. It was necessary now to introduce the whole hand, and the wound was enlarged downwards between the slightly separated fingers. The whole hand was then introduced, fitting somewhat tightly into the wound, so plugging it and preventing the escape of gut. The cæcum was first carefully explored, but without result. Next the umbilical region was examined, and here a cord about as thick as an ordinary lead pencil was found, attached at one end to the back of the umbilicus, and at the other running down into the pelvis. My first impression was that there was a band running from the umbilicus into the pelvis, round which the gut had become twisted. I brought it out at the wound, however, before doing anything further, and it was at once seen to be a piece of collapsed intestine. It was replaced and followed up, or rather down, as it turned out afterwards, by drawing the gut between the finger and thumb, a tedious and difficult matter with only one hand; it was followed up to its continuation into ordinary gut, containing gas. I now thought that the obstruction was due to a loop of intestine adhering to the back of the umbilicus, and probably twisted there. I tried to find the upward continuation of the part collapsed, but I was unable to do so. The difficulty in handling the intestine increased considerably. The coils were at first slippery, and slid almost too readily between the fingers, but now the peritoneum was curiously sticky, and it was very difficult to pass the finger and thumb along the gut.

It was, however, clear that the seat of obstruction was found, and it was suggested that a second incision should be made in the linea alba, so as to come more directly upon it. I was loth to make another opening, as I thought I should succeed in carefully detaching the adhesions from the interior. First, a cord about as thick as a crow-quill was felt, brought out at the wound, and cut between two catgut ligatures. The remaining adhesions were carefully separated until the surface seemed to be free. I asked Dr. Drummond to introduce his hand; and it was fortunate he did so, as he discovered another band lower down. It was brought out and cut between ligatures, like the other. The finger could now be swept freely along the back of the abdominal wall without meeting any obstruction. The wound was closed with sutures of silkworm-gut, passing through the whole thickness of the abdominal wall, including the peritoneum. A piece of dry Gangee tissue was laid on the wound, with a large pad of the same material over it. The abdomen was firmly bandaged, and in addition a broad binder was pinned round. The patient was in good condition at the end of the operation, though he vomited a little fluid faecal matter just when we were leaving. This was rather discouraging, but we comforted ourselves that it might be only chloroform-vomiting, and it turned out subsequently to be so. During the operation the intestines were freely handled, and everything about which there was a doubt was brought out into daylight and examined. Portions of intestine escaped now and then, but they were easily reduced.

The question of antiseptics in these cases is a difficult one to decide. In this instance I rejected the spray and the carbolised dressings. The skin was sponged over with a very weak solution of perchloride of mercury, and the sponges were wrung through the same fluid. The greatest care was taken to prevent the escape of blood into the peritoneum.

The after-history of the case was short and simple. There was no further vomiting. A dark liquid motion was passed a few hours after the operation, and a second copious motion a few hours later. Twenty-four hours after the operation the temperature was 99°, the pulse 100, respiration 24. The patient was kept under the influence of morphine, and for a few days he was limited to taking a little ice. He then had a little weak beef-tea; and, as he took it well, his diet was gradually improved, until one day, about a week after the operation, he took the matter into his own hands, and ate very freely of chops, cranberry-tart, and cheese. Later on he followed this up with hot cakes and tea. No bad results followed, and afterwards he simply took his ordinary diet. It was six days before his bowels were again moved, when a smooth consistent motion was passed; it was in one piece, and about a foot and a half long. The wound was untouched for a week, when the pad was lifted, the stitches were removed a few at a time, and in a fortnight the wound was healed.

As to the nature of the case, it seems pretty clear that the small intestine had become adherent to the back of the umbilicus in some previous attack of inflammation, and then that the gut had either become twisted or that it had been constricted by a band, and so strangulated. It is now eight months since the operation, and there has been no bulging of the scar, and no intestinal disturbance. He wears a broad pad with a strong belt, and has taken up light work.

OBSCURE CASE OF INTESTINAL OBSTRUCTION (?VOLVULUS): LAPAROTOMY: RECOVERY.

By C. STONHAM, F.R.C.S.ENG.,

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ELIZABETH H., aged 18, a laundress, came under my care on March 17th, 1884, with the following history:—

On the previous Friday morning, March 14th, she had gone to her work as usual, feeling quite well. Between 12 and 1 o'clock she felt slight pains in her abdomen, "like stomach-ache." The pain gradually increased in severity, and during the afternoon became suddenly so acute that she had to leave work and go home to bed. She says the pain was much worse just to the left of the umbilicus, was constant in character, and describes it as feeling as if the intestines were "all tied up in a knot behind the navel." The pain continued to increase in severity until I saw her. The bowels had acted well on the morning of the seizure, and had done so each day previously; there had been no action since, and no flatus had been passed since March 15th, the day following the first appearance of symptoms. At 7 P.M. on March 15th she vomited, and also again the following afternoon. Since the seizure she had not taken any food with the exception of an egg and some tea on March 15th.

State on Admission.—The patient was complaining of intense abdominal pain, more especially felt just above and to the left of the umbilicus; she was writhing in bed, and evidently suffering acutely, but got much relief from a hypodermic injection of morphine, one-third of a grain. There was no noticeable alteration in the shape or fullness of the abdomen. There was general tenderness on pressure, but this amounted to acute pain just above and to the left of the umbilicus. Both recti were tight and contracted, and this was especially noticed to be so with the upper half of the left one. No abdominal tumour could be made out, nor was there any evidence of an external hernia. Vaginal and rectal exploration and examination under chloroform revealed nothing further. The pulse was 110, small, and wiry; the temperature 99° F. Since admission she had been sick, and nothing had passed by the rectum. The tongue was rather over-clean and irritable, and there was a rim of frothy saliva on each side. The conjunctivæ were very slightly bile-stained. Hot fomentations were ordered to be applied to the abdomen, and a grain of opium to be given every four hours, and an enema of a pint of warm oil was administered.

March 18th. She had vomited five times since the previous day. The vomited matter was from the small gut, but was not stercoraceous; there was a constant feeling of nausea. The enema brought away one or two small hard scybalous masses. The abdomen was a good deal distended, more especially above and to the left of the umbilicus. She was under the influence of opium, and so the pain was less. The tongue was dry, brown, and cracked: the patient was nervous and anxious, the pulse was 120, and the temperature 100°.

As nothing further could be elicited by abdominal examination, after consulting with Dr. Sainsbury, it was decided to perform abdominal section.

Operation.—The patient being under the influence of chloroform, the abdomen was opened in the usual way, and the greatly distended transverse colon immediately protruded through the opening. The peritoneum was in a state of acute inflammation, and recent lymph coated the coils of gut, one or two of which were loosely united by it. On tracing up the gut from the rectum I found the sigmoid flexure and descending colon empty, but on arriving at the splenic flexure there was suddenly a large escape of flatus by the anus, and the distended transverse colon collapsed at once. I was not conscious of having undone any twist of the gut, but that was the only explanation I could offer to account for this occurrence. I passed all the intestines through my fingers, but found nothing except quite recent adhesions between one or two coils; these I separated. There was a little turbid fluid in the abdomen. The operation was done under the spray, and when the abdominal wound was closed it was noticed by all present that the abdomen was much smaller. Opium was ordered to be given in grain doses every hour.

March 19th. Since the operation flatus had passed freely, and the bowels acted twice this morning. Vomiting had occurred each time food had been given, but not at other times. The general condition had much improved, although she was still in a weak and prostrate state. The pulse was 120; the temperature 99°. Fairly firm pressure over the abdomen did not cause pain. In the evening the bowels were opened for the third time.

March 20. She had passed a very good night, and was very much improved. The bowels were opened once in the night, the stool was