but slight. She vomited once a little during the night, and complained of pain in the back. The next day she was more comfortable, and the temperature varied between 98.6° and 99°. From this time onwards she progressed very favourably, with one exception. On the eighth day after the operation she had an attack of pain and sickness, which was apparently due to an excess of food, and which was rapidly recovered from when the amount was lessened. The highest temperature reached was 99.2°; it occurred on the evening of the sick attack. She left the hospital cured on July 31st, scarcely six weeks after the operation.

Food.—During the first twenty-four hours she had the yolk of an egg, two ounces of brandy, one small tin of Brand's essence, ice, and a little water. Second day, the same, but a little more in quantity, and a little beef-tea. Third day, the same. Fourth day, the same, with a small cup of tea and more beef-tea. Sixth day, two rusks allowed. Eighth day, food lessened. Tenth day, increased again. Twelfth day, sherry whey added. Thirteenth day, arrowroot and rusks. Then gradually put on to light solid diet.

Bowels.—Flatus passed freely after the operation, but the bowels were first moved with glycerine enema on the seventh day; next naturally on the sixteenth day, and subsequently at intervals of every two or three days, often with the help of an enema. No trace of the bone tube could be discovered in any motion.

I think from the three cases which are now on record that it may be conceded that the operation is rapid, safe, and successful, and that the ultimate condition of the bowel is, so far as we can judge, perfect. This patient is now, six months after the operation, in as good health as she has enjoyed for many years, and is at work daily as a nurse amongst poor people. This makes the third time I have done the operation. The first patient recovered as well and more rapidly than this. The second was a "too late" case of intestinal obstruction, and died in thirty-six hours, but with a water-tight union. I have previously been careful, and still wish only to recommend this operation for the small intestine; most parts of the large intestine are too fixed to permit of a sufficiently free manipulation of the bowel, and are, therefore, unsuitable for it.

EXCISION OF INTESTINE FOR MALIGNANT DISEASE: CIRCULAR ENTERORRHAPHY BY PAUL'S METHOD.

By WILLIAM HORROCKS, M.B., F.R.C.S.,
Honorary Surgeon to the Bradford Infirmary.

THE choice of operation in the following case was determined by its suitability to maintain the continuity of the bowel, without increasing the number of intestinal, wounds. As was anticipated, the gut above the stricture was more dilated than that below. On this account it would have been difficult to invaginate the upper into the lower bowel. In this case, and in one of Mr. Paul's cases just recorded, the lower was invaginated into the upper without ill-effect. The tearing of the mesenteric attachment is one of the difficulties of the operation. It was avoided by the use of a small-sized tube, which fitted easily into the intestine, and by the application of two stitches along the mesenteric attachment to prevent tearing or stretching. The invagination of the intestine required care, and was accomplished, partly by pushing the bone tube, partly by drawing the intestine over it.

I must express my thanks to Mr. Paul for the useful information, which he promptly gave me.

C. H., a married woman, aged 38, was admitted to the Bradford Infirmary on August 29th, 1893, with obstruction of the bowels. She had been an in-patient in October, 1892, with similar symptoms, which were relieved by starvation and opium. She suffered almost constantly from severe abdominal pain, shooting round the loins to the back. The pain was spasmodic, sometimes lasting several hours, and when very severe caused emesis. The bowels were usually relaxed, but during and after the severe attacks of pain they were confined, sometimes for several days. She had had four children, the youngest being 14 years old. Menstruation was painless and regular. She was a spare woman, who showed no signs of general wasting. A systolic *bruit* was heard at the apex of the heart, which was not displaced.

The abdomen was somewhat full at the lower part, with the umbilicus everted, and the skin marked with atrophic scars. The percussion note was normal over the abdomen. Above Poupart's ligament on the right a solid tumour was felt; it consisted of two parts, divided by a vertical groove.

By vaginal examination the uterus was found displaced downwards, with the cervix pointing towards the sacrum. Occupying the right fornix, and extending in front of the

uterus, was a rounded swelling, which was continuous with the tumour felt above the pubes. This mass felt hard. It was divided into two parts by a groove, and moved independently of the uterus.

OPERATION.

On September 29th an exploratory abdominal operation was performed to ascertain the nature and connections of the growth. As the tumour was found to implicate a considerable portion of the small intestine, the wound was closed. This operation was performed by Dr. Rabagliati, gynaecologist to the infirmary. The wound healed without complication.

On October 19th, at the request of the patient, I operated with the assistance of Dr. Rabagliati, Mr. Althorp, and Dr. Wood. The operation lasted an hour and twenty minutes with anaesthesia by chloroform during the first twenty minutes, by ether for the remainder of the time. The incision, 3 inches in length, was made in the median line rather above the umbilicus. The tumour was adherent to the abdominal wall, along the line of the old scar, which was below the fresh incision. These adhesions were partly broken down, but the most adherent part of the abdominal wall was cut away with the growth. The tumour was then drawn out of the abdomen, and the opening packed with antiseptic cloths. The intestine beyond the growth on each side was emptied, and an elastic tube was passed through the mesentery around the gut. A V-shaped piece of mesentery, containing enlarged glands, was separated, and the bleeding vessels tied. The bowel was now cut across transversely on each side of the growths, and the implicated intestine with its attached mesentery removed. A Paul's bone tube was now inserted into the open end of the intestine of smaller lumen, and the free margin of the bowel stitched to the end of the tube with continuous silk suture. The thread was passed through the holes in the tube and the muscular and peritoneal coats of the intestine. Additional stitches were inserted at the mesenteric attachment. The other cut end of the bowel was now brought into apposition, after the threaded needle, connected with the tube, had been passed through the intestinal wall from within out, about 3 inches from the incised extremity. The two ends of the bowel were now stitched together by a continuous Lembert silk suture. By traction on the thread and manipulation of the bone tube the bowel was invaginated for about three-quarters of an inch. It was fixed in this position by a continuous silk suture, which included only the peritoneal and muscular coats. The needle was now cut from the traction thread, which was drawn into the gut. The margins of the mesentery were stitched, partly by interrupted, partly by continuous sutures. The extremity of the vermiform appendix was inflamed and adherent to the tumour. The appendix was ligatured near its proximal end, the distal end removed, and the stump closed in by three silk sutures. The abdomen was cleansed and a glass drainage tube inserted with its lower end reaching the bottom of Douglas's pouch. The abdominal wound was closed with silkworm sutures, the end of the drain projecting at the lower end of the wound.

DESCRIPTION OF GUT REMOVED.

The intestine removed was about 39 inches long. At two places its wall was invaded by growth. The larger mass of growth was about the size of a large orange, consisting of tumour and convoluted intestine, fixed by firm adhesions. The lumen of the intestine at this part was much narrowed, and the mucous membrane ulcerated. There was a second growth of smaller size, separated from this by healthy intestine. The mesentery showed several enlarged and infected glands. The growth was a large round-celled sarcoma, growing from the submucous tissue.

AFTER-HISTORY.

The patient rallied quickly from the operation. The pulse shortly after her return to bed was 76, good and regular. The wound healed without trouble, and the patient was discharged on November 23rd, 1893.

BEQUESTS AND DONATIONS.—The Royal Hospital for Diseases of the Chest, City Road, E.C., has just received a donation of £500 from a lady who takes a keen interest in its work, but does not wish her name to be known.