covered. The oval piece of abdominal wall surrounding the fistula and forming the stomach pedicle was rapidly cut away from the rest of the parietes by means of blunt-pointed scissors. As the division of the abdominal wall was made, pads of sterilised gauze were tucked in, quite cutting off the area of operation from the general abdominal cavity. The piece of abdominal wall was then cut away from the stomach, the opening in which readily admitted the index finger. The interior of the stomach was explored and found to be empty, not dilated, and free from disease except in the neighbourhood of the fistula. The pylorus was situated immediately to the right of the fistula; was patent and free from disease. The fistula appeared to be the centre of a large ulcer, situated near the pylorus, on the greater curvature of the stomach. There was much thickening and matting of the great omentum around the ulcer, forming a mass very suggestive of malignant growth. To have excised this, so as to remove all scar tissue, would have been a more serious undertaking than the condition of the patient warranted. The edges of the fistulous opening in the stomach were freshened, and three rows of silk sutures inserted. The first was continuous, and passed through all coats of the stomach. Interrupted Halsted's sutures formed the second row; and a third continuous suture further strengthened the wound. Over all a piece of omentum was drawn and fixed by stitches. The abdominal wound was closed by through-and-through silkworm-gut sutures. The patient was very collapsed at the end of the operation; but, by rectal stimulation and feeding, and after injecting a pint of saline solution under the breast on two occasions, she got over the shock, and was able to take brandy, Brand's essence, milk, and other fluids in small quantities by the mouth. On the third day after the operation she was warm and comfortable, her temperature was 101° F., and her pulse 120. The abdomen was flat and not painful. The wound was dry. She retained rectal feeding, and was taking a fair quantity of fluids by the mouth. She, however, developed pneumonia, and died on the sixth day.

At the *post-mortem* examination there was found pneumonia at the right base. The abdominal wound was dry. There was no peritonitis, and no escape of stomach contents from the wound in the stomach; but the latter was not clean, and there had not been any attempt on the part of the wound to heal. The pylorus was healthy and not narrowed by the ulcer. There was no dilatation of the stomach. The ulcer surrounded the fistula, and was situated immediately to the left of the pylorus on the greater curvature of the stomach. The great omentum was matted and thickened, and formed a large mass which simulated malignant disease. On microscopical examination the ulcer was found by Dr. Eurich not to be malignant.

PERFORATED ULCER OF THE STOMACH.

By WILLIAM H. HORROCKS, M.B., F.R.C.S.,

Surgeon to the Bradford Royal Infirmary.

M. W., an unmarried millhand, was admitted to the Bradford Royal Infirmary on November 16th, 1900.

History.—She said that for several years she had suffered from pain after food, and the pain had never been very severe. At times she had been sick, but had never noticed blood in the vomit. She suffered from headache and palpitation, with shortness of breath on exertion. Her diet consisted chiefly of tea and bread, and very little meat or vegetables. At 12.30 P.M. on the day of admission she ate two slices of bread and butter and drank a pint of tea. She worked after the meal until 3 o'clock without any pain. At 3 o'clock she experienced very severe pain below the ribs on the left side, the pain soon extending over the whole abdomen. She felt very faint and weak, and was sick slightly once. She was taken by her friends in an electric car to the centre of the town, and from there in a cab to her own home. She was seen shortly after her arrival by Dr. Hector Monroe, who correctly diagnosed her condition, and sent her into the infirmary.

Anamnesis.—When seen at the infirmary she was not greatly collapsed; the pulse was 88, irregular, and rather small. Her temperature was 96° . Her nose and ears felt somewhat cold. She complained of pain over the whole abdomen, especially in the left hypochondriac region. The abdomen was not distended, but the walls did not move on respiration. The abdominal muscles were tense, and this was especially marked over the tender area. Hepatic dulness was not diminished; other parts of the abdomen were resonant.

Operation.—At 8.30 P.M. a 4-inch median incision was made above the umbilicus. Turbid milky fluid escaped on opening the peritoneum. The stomach presented in the wound, and on drawing it down a circular hole, about a quarter of an inch in diameter, was found on its anterior surface near the cardiac end and close to the small curvature of the stomach. The thickened edges of the opening were easily brought together by three interrupted catgut sutures. Part of the stomach wall was then inverted, and a row of continuous silk sutures applied. The fluid was mopped up, and care was taken to cleanse carefully the pouches in front of the spleen and right kidney and the upper surface of the liver. A third row of continuous sutures were now inserted in the stomach wall, and the omentum fixed over. On drawing up the omentum the whole of the abdomen was filled with milky fluid and half-digested bread. This was rapidly sponged and washed away, and a Keith's drainage tube, passing down into Douglas's pouch, was inserted above the pubes. The upper wound was closed with a plug of gauze passed down to the wound in the stomach. The operation lasted an hour and ten minutes.

Progress.—The patient had a somewhat restless night, and on the following evening the pulse had risen to 136 per minute, but after this time it gradually improved. The temperature rose to 101° on the night following the operation. Some milky fluid was pipetted from the Keith's tube on the day after the operation, but on the second day only clear serous fluid escaped, and the tube was removed. The patient made a good recovery.

The points of interest in this case are:

1. The absence of any indication of gastric ulcer before perforation. The position of the ulcer bears out Mr. Mayo

Robson's observation that latent ulcers of the stomach are generally situated near the cardiac end, and close to the lesser curvature.

2. The absence of any apparent exciting cause for perforation is notable in this case.

3. The pain and tenderness correctly localised the position of the ulcer, and the marked tension of the abdominal wall at this part made the diagnosis more certain.

4. The repeated movements of the patient spread the extravasated material over the whole abdomen.

5. The cleansing power of the peritoneum over its lower zone was markedly shown in this case, but it is doubtful whether the result would have been so good had the food not been of so simple a nature, or the ulcer near the pyloric end of the stomach.

A CASE OF SUBPHRENIC ABSCESS: OPERATION: RECOVERY.

BY

H. J. CAMPBELL,

M.D., F.R.C.P.,

Physician to the
Bradford Royal Infirmary.

and T. JASON WOOD,

M.D.,

Surgeon to the
Bradford Royal Infirmary.

The following case is of interest when compared with those described by Mr. Horrocks and by Mr. Althorpe.

S. T., female, aged 25, unmarried, weaver, was seen in consultation with Dr. Hibbert, on November 28th, 1900, and subsequently sent into the infirmary for operation. The previous medical history was unimportant except that for some months before the onset of the present illness the patient had been anæmic and ailing, with a poor appetite and a general feeling of *malaise*. There had been no symptoms pointing directly to the stomach, no pain after food, no vomiting, and no tenderness on pressure over the epigastrium. Three weeks before admission she came home from her work feeling generally ill but with no pain, and sat down to her tea. In the middle of the meal she was suddenly seized with acute pain in the left hypochondrium, which rapidly extended across the whole of the upper part of the abdomen. Poulitices were applied almost continuously for three days, and then as the pain, though somewhat relieved, still remained severe, Dr. Hibbert was sent for. During this time she was not seen by a doctor, and the only treatment made use of was poulticing. When Dr. Hibbert saw the patient he found her a good deal collapsed and complaining of acute pain in the left chest; there was a loud rub in the left axilla, and the breathing was somewhat shallow. There was no cough or expectoration; the temperature was high and there was great restlessness.

The condition remained much the same for the next fortnight, except that the pain extended across the abdomen, being most intense in the epigastrium; the dulness at the left base became more marked, and the patient wasted considerably. The temperature during this time was very irregular. Dr. Hibbert tapped the left chest and drew off a pint and a half of clear serum; this relieved the dyspnoea somewhat, but otherwise had no effect. Three days later Dr. Hibbert again aspirated, but on this occasion only obtained a few ounces of clear serum.

The following were the conditions present two days after the second tapping: There was dulness and deficient entry of air at the left base behind up to the seventh rib and on the right side up to the ninth rib; in the left axilla there was absolute dulness as high as the fifth rib, and the lower costal margin was slightly bulged; in the epigastrium there was a prominent swelling over which the note was tympanitic, the skin in this region being somewhat boggy. A bell note was obtained in this region. Immediately below the tympanitic area the note was impaired but not dull. About 3 inches below the rib margin and running almost horizontally across the abdomen, from the left anterior axillary line to an inch to the right of the middle line, a very hard prominent edge could be made out, which was tender to palpation. The liver dulness was diminished. The heart apex could be seen to be in the fourth left space close to the sternum. The respirations were shallow, 26 to the minute, and there was very little movement of the lower portion of the chest. The patient was much wasted, and had a markedly abdominal expression. The so-called "diaphragm phenomenon" was not observed. The temperature was 103° , and the pulse was 110, small and somewhat thready. The diagnosis of subphrenic abscess on the left side was made, and, as the home conditions were such as to render operation in her own house out of the question, it was decided to remove her to the infirmary. The patient came into the hospital the following day, and was then seen by Dr. Wood, who agreed with the diagnosis, and arranged to operate as soon as she had somewhat recovered from the shock of her removal from her home.

Operation.—Gas and ether, followed by chloroform, were given on November 30th, 1900. An exploring needle was introduced into the seventh intercostal space, in the posterior axillary line, and a syringe of bloody serum readily obtained. This collection of fluid was not evacuated at once, as it was thought desirable, owing to the patient's grave condition, to avoid shock as far as possible. An incision 2 inches long was made in the epigastric region in the middle line. The peritoneum was seen to be oedematous, and on opening it there was a rush of gas, followed by a quantity (about a pint) of very fetid pus. The abscess cavity was well shut off from the peritoneal cavity by strong adhesions. The heart could be felt beating through its roof; to the left were the lower ribs, while the floor was formed by the liver and adherent stomach. The

cavity was washed out with hot water and some iodoform emulsion injected into it. A large rubber drain was inserted.

Immediately after the operation the temperature, which had been 103.8°, fell to normal, and the patient rapidly became convalescent. She was discharged on December 27th. On the fourth day after operation the left chest was aspirated and half a pint of serum evacuated. At the time of discharge the heart had regained its natural position, and air was freely entering the base of the left lung.

REMARKS BY DR WOOD.

It is interesting that the abscess drained so perfectly through the epigastric incision, as it seemed likely at the time of operation that it might be necessary later on to make an opening at a more dependent spot. The patient's very grave condition prevented this being done at the time.

FOUR CASES IN WHICH THE MURPHY BUTTON WAS USED.

By G. P. NEWBOLT, F.R.C.S.

Honorary Surgeon, Royal Southern Hospital, Liverpool.

DURING the last three years I have used the Murphy button in four cases. In three of these the result was all that could be wished for; in the fourth the patient died so soon after the operation that it had no trial. My limited experience, therefore, is in favour of the button, for these cases comprise the only instances in which I have used the appliance.

CASE I.—A boy, aged 4, was admitted to the Stanley Hospital under my care on January 7th, 1898, suffering from an intussusception. He had been ill for two weeks and was very much collapsed: his pulse was 110, his abdomen distended, his pupils were contracted, and he was drowsy from the opium which he had been taking. I could feel the intussusception both *per rectum* and through the abdominal wall. He had vomited for several days and had passed blood and mucus *per anum*. I opened the abdomen in the middle line, but was unable to get at the tumour without turning out some of the distended intestines. Being unable to reduce the last portion I resected the gut and put in a button. I had, however, to open and evacuate the distended intestines before I could return them into the abdomen. The patient rallied at first from the operation, but died twelve hours later. An examination of the resected intestine showed that the approximation was perfectly good; but, as I have said, the button had no trial. I cite the case as one in which I used the button without success.

CASE II.—B. G., aged 70, a widow, was admitted to the Royal Southern Hospital on May 15th, 1900, suffering from a strangulated femoral hernia on the left side. She was an old woman of spare habit, and had been taken ill on May 12th with vomiting and pain in the abdomen. No motion or flatus had passed for three days. To her knowledge she had had no rupture before, but she had been working hard previously. On examination there was found a tense globular swelling both tender and painful in the left femoral region. Her abdomen was slightly distended, her pulse 94, small and irregular, her respirations 24. There was a trace of albumen in the urine. Altogether the case did not look a very favourable one. I cut down on the swelling, and on opening the sac exposed a piece of black, dull-looking, cedematous gut. I next divided the stricture, which was very tight, and drew down the bowel until a healthy part was exposed. The wound being packed off with gauze, my house-surgeon held the bowel on each side of the gangrenous portion with his fingers whilst I removed the damaged piece of gut. There was very little bleeding from the divided parts, as I removed hardly any mesentery. The button was now inserted in the usual way, and the two ends of the intestine brought together. Some Lembert sutures were passed after drawing together the ends of the bowel so as to take tension off the button. After irrigating the parts the bowel was returned into the abdomen, but before doing this the ring had to be enlarged. The sac was next removed and the stump tied up to Poupart's ligament, the wound being closed. The after-progress of the case was quite satisfactory. The patient was kept on water, brandy, and beef-tea for a week: her bowels acted on the seventh day after an enema, and the button passed on the eighteenth day. There was slight suppuration in the external wound. Patient went home seven weeks after her admission, and is at present working.

CASE III.—R. W., aged 49, a cotton porter, was admitted to the Royal Southern Hospital under the care of Dr. William Williams on May 21st, 1900. He had been ill for eight months before admission, complaining of constant vomiting, of wasting, and of pain in the abdomen. Patient was a spare-looking man, much wasted; there were large veins over the abdomen, and a doubtful mass could be felt in the region of the pylorus. On May 22nd, 1900, the patient being under chloroform, I made an incision 3 inches long in the middle line midway between the ensiform cartilage and umbilicus. On opening the peritoneal cavity, the stomach presented, and the pylorus was seen to be involved in a large mass about 3 inches long; the glands were enlarged both in front and behind the growth. The stomach was pulled partly out of the wound, and after dodging the colon a piece of intestine as near as possible to the duodenum was brought out and held near the stomach. An incision having been made into the stomach, one-half of the button was inserted and a suture run around it; a similar proceeding was carried out with the intestine, the parts were brought together, a few sutures being inserted to make all secure. The stomach and intestine were then returned to the abdomen, and the wound was closed. An inch button was used. The man made an excellent recovery, and never vomited after the operation. In a short time he was able to take solid food, but could not digest potatoes, nor was meat always eaten without discomfort. He put on flesh, and though he had some lumbar pain and flatulence at first, he eventually became very comfortable, and considered himself well. We

never saw the button, and I do not think it passed. In October, 1900, the following note was made: "He is well, has no pain, does not vomit, and enjoys his food, but says he does not get stronger, and he is certainly not gaining flesh. As far as the anastomosis goes, the result is good, but of course the relief can only be temporary." He died seven months after operation.

CASE IV.—P. C., a stableman, aged 41, was admitted to the Royal Southern Hospital on September 18th, 1900, suffering from a strangulated femoral hernia on the left side. He had noticed a lump in the left groin for six years. This had gradually increased in size, but was easily reducible until two months before, when it came down, and was only reduced with the greatest difficulty. At 10 A.M. on the morning of admission, whilst working in the stable, the lump came down bigger than ever and he began to vomit. On examination at 4 P.M. there was a hard, tense swelling the size of an egg in the left femoral region, and the patient was vomiting brown fluid, not stercoraceous. I cut down and opened a sac containing a large mass of doubtful-looking omentum and a piece of small intestine. I divided the stricture, drew down and removed the omentum, and then examined the gut. It was shiny, but very black, and did not bleed when incised superficially. In spite of the stricture being freely divided there was no evidence of any circulation going on in the damaged gut. I therefore excised it, as in the second case, with the exception that I removed a V-shaped piece of mesentery, and for my trouble got a good deal of bleeding from the cut edges. The button was put in the gut, being held by the fingers of an assistant, and no clamps were used. I again had to enlarge the opening into the abdomen before the gut and button could be returned. The sac was removed and the wound closed as in the first case. The patient made a perfect recovery, passed flatus next day, and his bowels acted after an enema on the eighth day. On the twenty-third day after an aperient he experienced pain in the rectum, and on examination I detected the button, of which after a glycerine enema he was safely delivered on the twenty-fourth day after operation. There was slight suppuration also in the external wound as in the other case.

My experience, therefore, of the button as far as it goes is favourable. In Cases I and II, in which I was anxious to get my patients off the table as soon as possible, I was able to operate fairly quickly by means of it. I must say that in each instance I used Lembert sutures over the button, though this is not held to be necessary; but it only takes a few minutes, and by so doing a good deal of tension is taken off that portion of intestine which curves over the button. There is no doubt in my mind that this is an additional safeguard. In both cases of hernia I had to enlarge the ring pretty freely in order to reduce the gut containing the button. This is a drawback as it weakens the parts afterwards. I do not think it likely that any patient would get rid of the button without knowing it had passed, as there was in both of my cases in which it came away a good deal of discomfort. In Case III I presume the button fell into the stomach, though an x-ray photograph did not show it.

A CASE OF ACUTE INTESTINAL OBSTRUCTION DUE TO A PAPILLOMATOUS OVARIAN CYST AND A CARCINOMA OF SMALL INTESTINE,

TREATED BY OVARIOTOMY AND ENTERECTOMY: RECOVERY.

BY

HORACE SAVORY, and W. GIFFORD NASH,
M.A., M.B.Cantab. F.R.C.S.,
Bedford. Bedford.

WE have been unable to find any record of a similar combination of tumours, either of which might alone have given rise to the symptoms of intestinal obstruction which occurred in this case.

At the beginning of June, 1900, Mrs. G., a widow, aged 45, believing she was in perfect health, rode a bicycle from Bedford to London, some 50 miles, in one day. On June 26th she rode the return journey against a stiff wind, and when nearing Bedford was seized with severe pain in the abdomen. On reaching home she went to bed, and vomited several times. When seen twenty-four hours later she exhibited all the signs of acute intestinal obstruction. The abdomen was distended, and its lower part occupied by a fluid swelling which rose from the pelvis, reached to the umbilicus, and lay chiefly to the left of the middle line. *Per vaginam* a large solid mass could be felt in the pelvis to the left of the uterus. The tumour was extremely tender, particularly on its left side; the vomiting was not severe; but the bowels had not acted, and no flatus had been passed for twenty-four hours.

A diagnosis was made of a partly solid, partly cystic,