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,

ovarian tumour, and it was thought that the intestinal symptoms were due either to twisting of the ovarian pedicle or to pressure on the intestine by a tumour which had become impacted in the pelvis by the force used in bicycling.

The patient was advised to submit to an immediate operation, but declined, refusing to believe in the existence of any tumour. A morphine injection, a turpentine enema, and rectal feeding greatly relieved the symptoms, and next day the bowels acted and the vomiting ceased. The tumour remained extremely tender, and increased to double its size in a week. There was also a considerable amount of griping colicky pains.

On July 8th—twelve days from the onset of symptoms—ovariotomy was performed. During the preparation of the abdomen a large thin-walled cyst was felt to rupture. The tumour was a large multilocular papillomatous cyst arising from the right ovary, with a large solid mass the size of a foetal head, firmly adherent to the bowel, and when separated leaving at one spot a large white plaque the size of a penny.

In making a final examination of the pedicle preliminary to closing the abdomen, a hard lump was felt in a coil of intestine, and when brought into view this turned out to be an annular stricture caused by a solid growth completely surrounding the bowel, and apparently occupying its entire lumen. There were also some glands felt in the mesentery. The patient had been very much collapsed during the operation, and no further measures could have been undertaken at that time.

There were no unfavourable symptoms after this operation but much flatulence, and occasional twisting pain, apparently at the site of the intestinal growth.

On July 20th, that is, twelve days after the ovariectomy, the abdomen was again opened, and some 4 inches of small intestine removed with a V-shaped piece of mesentery containing some enlarged glands. The part removed appeared to be high up in the small bowel, and lay above and to the left of the umbilicus. The bowel was united end to end with the aid of an Allingham's bobbin. There was very severe hæmorrhage from dilated veins in the mesentery, and all the glands could not be removed.

The patient made an uninterrupted recovery. Contrary to expectation the bobbin was passed *per rectum* on the fifth day, and the bowels continued to act naturally. The growth proved to be a cylindrical carcinoma, and the lumen barely admitted the passage of a goose quill.

At the present time, February, 1901, the patient can walk about. No signs of recurrence can be felt from the abdomen or vagina, but there is pain and difficulty in passing flatus, though the bowels act freely with aperients.

CASE OF EXTREME STENOSIS OF THE SMALL INTESTINE IN AN INFANT.

By ERNEST W. HEY GROVES, M.D., B.Sc.LOND.,
Kingswood, Bristol.

It is probably extremely rare to meet with a case of chronic intestinal obstruction in an infant apart from peritonitis or intussusception, and the recognition of such an occurrence may be of such practical importance that the following case presents both clinical and pathological interest.

G. P., a female infant aged 1 year 8 months, was brought to me suffering from distended abdomen and great emaciation.

History.—There was no history of tubercle or syphilis in the family. She had been a full term child, and was healthy and strong for the first twelve months of her life, during which time she was exclusively breast-fed. Soon after the baby was weaned, in February, 1899, when she was about 1 year old, she began to lose flesh, and was constantly crying, as if in pain. Since the appearance of these symptoms the child became steadily worse until September 3rd, 1899, when her condition was as follows.

Anamnesis.—She was extremely emaciated, weighing 9½ lbs., and constantly crying and moaning. Her face was thin and drawn, showing blue veins very distinctly through the skin. There were no signs of rickets, tubercle, or syphilis, and the dental development was good. The abdomen was much and uniformly distended, measuring 25 inches round at the navel. Through the very thin abdominal walls the coils of intestine could often be seen. The contractions of the intestine were accompanied by a loud gurgling noise and generally caused the child acute distress. The largest visible coil was 2½ fingerbreadths across. The whole abdomen was tympanitic to percussion; there was no tenderness on palpation and no hard masses or tumour could be felt. *Per rectum* nothing abnormal

was felt. The child was admitted to a nursing home for observation and treatment, when the following further facts were discovered.

She took her food greedily and was never sick (her mother, too, said she never remembered the child vomiting). The bowels were opened with great regularity two or three times a day. The stools were soft, but well-formed and rather clay-coloured. She was fed while under my care on dilute peptonised milk and meat juice. This careful feeding made the child more comfortable, so that she sometimes would sit or lie quiet for several hours together, and the abdominal distension and peristalsis were less marked.

She became much worse on September 9th, her temperature rising above 100° F. for the first time, and she refused her food. This continued until the 12th, when the child died. It was proposed to perform a laparotomy in the hope of being able to deal with the cause of intestinal obstruction, but the parents' consent to this was delayed until it was too late.

Post-mortem Examination.—On opening the abdomen several very large dark-red coils of intestine presented themselves, which proved to be the jejunum and part of the ileum enormously dilated. In the ileum, 39 inches from the cæcum and 25 inches from the pylorus, the calibre of the gut was suddenly reduced by a hard unyielding stricture three-quarters of an inch long, which only admitted a probe with difficulty. The other parts of the intestine were normal, but the mesenteric glands were slightly enlarged. There was no free fluid or adhesions, or any evidence of inflammatory changes. On opening the bowel in its dilated portion a great quantity of food debris was washed out, including fruit skins, vegetable fibres, a number of unripe black currants, and three cherry stones! This debris had formed a thick felted accumulation immediately above the stricture. There were no recognisable particles below the stricture. The other abdominal viscera were normal. An examination of the other parts was not allowed.

The clinical interest of the case centres round (1) the diagnosis and (2) treatment.

(1) The absence of febrile conditions, tenderness, and the signs of free fluid or hard masses, and the visible mobility of the intestinal coils excluded tuberculous peritonitis. There was no tumour, diarrhoea, or bloody mucoid stools, and the history of gradual onset was unlike intussusception. There were no means of telling whether the condition might not have been due to chronic obstruction by a band, and it was in hope of this that I proposed to open the abdomen. The fact that the illness dated from the time the child was weaned was clearly explained by the mass of debris found above the stricture, the peculiar character of which was explained by her having been allowed to play in a large fruit garden. The extreme emaciation and the regular action of the bowels pointed to the stricture being one of the small intestine, but, on the other hand, the complete absence of vomiting throughout was very remarkable, and left a doubt to the last that there could be any marked stricture of the small intestine.

(2) If it had been possible to diagnose the condition early enough and the child had been kept on a rigid diet of soft digestible food she might have lived for years. In support of this I would refer to a case of a man aged 62, who had a diaphragmatic stricture of the ileum 36 inches from the cæcum, who never showed any sign or symptom of the disease; and also Hudson's case of a boy aged 8, which I refer to below. As regards operative treatment the chances of success in such conditions are infinitely small. The intestine just above the stricture must have been brought out of the wound and opened and a subsequent anastomotic operation attempted.

Pathology.—The condition was almost certainly congenital, and as such is well recognised under three varieties—(1) a diaphragmatic stricture composed of mucous membrane, sub-mucous layer, and circular muscle, (2) a regular contraction of the bowel involving all the coats; and (3) an entire obliteration of the bowel at one or more spots. This last is the commonest variety, and, of course, leads to death with vomiting and wasting in a few days after birth. But as a disease associated with clinical manifestation apart from the newborn any kind of congenital stricture is extremely rare. I can only find one other instance, and that is of a boy, aged 8, who had suffered from a long-standing abdominal illness, and eventually died of peritonitis. He was found to have a stricture 2½-inch long, barely admitting a probe 38 inches above the cæcum.² The commonly-received theory of this congenital occlusion or stenosis is that it arises in connection with the involution of the embryonic vitelline duct. If this duct remains pervious as Meckel's diverticulum the whole way from the intestine to the navel, it causes a faecal fistula. If it only remains partially pervious and attached to the navel by a fibrous cord it often causes intestinal obstruction. If its connection with the umbilicus is obliterated, it remains as a simple diverticulum of the ileum