the previous case. I therefore put in two tiers of Lembert sutures, the first row closing the ulcer and the second bringing a piece of omentum over it. The abdominal wound was closed completely after the area of operation had been sponged. The patient bore the operation well, and there was no subsequent vomiting. On the following day he was given nothing but a little hot water by the mouth. He had a nutrient enema of three ounces of beef-tea and an ounce of peptonized milk at noon. On July 15th, his bowels were opened thrice, his abdomen was moving well, there was no distension, and his progress would have been perfectly satisfactory if his pulse had not remained unduly quick. The patient began to fall on the 20th, and the abdominal wound, which had hitherto been healing kindly, now reopened and discharged pus. Three stitches were therefore removed, and a large drainage tube was inserted. The patient became more and more collapsed, and died on July 21st, eight days after the operation.

The necropsy showed that the peritoneal cavity contained about a pint of foul pus. The abscess was situated above the stomach and first part of the duodenum, below the right lobe of the liver and behind a portion of the great omentum. It was strictly localized, and there was no general peritonitis. There was a perforation in the upper portion of the first part of the duodenum just below the foramen of Winslow, and beyond the pyloric constriction. The perforation communicated with the abscess cavity. It was noticed that the ulcer was much larger than at the time of the operation, and that several of the sutures had cut their way through the softened tissues.

The result of this case was particularly disappointing, for the patient had felt so well after the operation that he was constantly inquiring when he might get up. The continued rapidity of the pulse, however, warned us not to be too sanguine of the result, and the lesson I learned from the case was to drain the abdominal cavity much more freely, and especially the portion which lies on the under surface of the liver.

CASE III.—A clerk, aged 37, was admitted into St. Bartholomew's Hospital suffering from severe pain in the abdomen. He said that for the last six months he had often suffered from stomach-ache about half an hour after taking food. On May 19th, 1902, the day of his admission, he was suddenly attacked at 12 o'clock midday with such severe pain that he was brought to the surgery in a cab. He referred the pain to the neighbourhood of the umbilicus and to the right side of the abdomen beneath the ribs.

On admission, he appeared to be a strong man in a state of extreme collapse. His pulse was 120 and his temperature 97.4°. His abdomen was contracted, but moved freely and equally during respiration. The abdominal walls were somewhat rigid, and the liver dullness was decreased. I saw the patient at 6 p.m. and decided to explore his abdominal cavity. The abdomen was opened above the umbilicus and in the middle line. Free gas and a quantity of bile-stained fluid escaped as soon as the peritoneum was divided, but considerable difficulty was experienced in locating the perforation as adhesions had formed in front of it. A circular hole was eventually found in the peritoneum, which measured about an eighth of an inch across. The outline of the ulcer was sharply defined, and a quantity of bile-coloured fluid was pouring out of it. The perforation was closed with two layers of Lembert sutures, and an incision was made in the right iliac region. A long rubber drainage tube was passed from this wound, its end being brought out at the first incision and a second drainage tube was passed beneath the liver. The patient never rallied from his state of collapse, and died on the following day at 1.55 p.m.

The necropsy showed that the patient had a suppurative peritonitis, with 2 oz. of turbid fluid in the pelvis. The stomach was much dilated and contained a dark fluid like "coffee grounds." There was a deep ulcer on the anterior wall of the duodenum, just beyond the pyloric orifice. The ulcer would have lodged a pea; its edges and surrounding parts were hard from cicatricial tissue, which had caused considerable stenosis of the pylorus. The ulcer had perforated externally into the peritoneal cavity, but it had been effectively closed by a series of interrupted silk sutures.

CASE IV.—A well-nourished man, aged 26, was admitted to the hospital at 7.30 a.m. on July 26th, 1902, suffering from acute abdominal pain and sickness. He said that he had suffered previously from attacks of stomach-ache, but that he was quite well until 7 p.m. on the previous evening, when the pain and sickness commenced suddenly. On admission his temperature was 97.2° F. and his pulse 112; the abdomen was hard and tense, and appeared to be tender everywhere. I did not see the patient until 10.30 a.m. on the day of his admission, and he then seemed to me to be suffering from an attack of acute perforative appendicitis, for he localized his pain entirely to the right flank, and the abdomen was more rigid in the right iliac region than elsewhere. I opened his abdomen at once by an incision carried through McBurney's point, and as soon as the peritoneal cavity was opened, gas rushed out with a large quantity of thin fluid which was sticky, odourless, and light yellow in colour. The large intestine and the appendix were found to be normal, but the small intestine was greatly inflamed, especially in the neighbourhood of each Peyer's patch. I therefore closed the opening, and made a second incision into the peritoneal cavity in the middle line. The small intestine was then systematically examined until a perforation was found on the anterior surface of the first part of the duodenum. The hole was small and well circumscribed. It was closed with Lembert sutures and the peritoneal cavity was drained by inserting very large rubber tubes into the space below the liver, into the recto-vesical pouch and into both flanks. The fluid contents of the tubes were pipetted away daily until August 4th, when the tubes were replaced with a light plugging of iodoform gauze. The patient made an uninterrupted good recovery, and was discharged to the convalescent home at Swanley on September 2nd.

The feeding of patients with a sutured ulcer of the alimentary canal is of the greatest importance, and Miss Bryan, Sister Kenton, has kindly given me the following account of the method we adopted in this case. The operation was performed at 10.30 a.m. and nothing at all was given by the mouth until after 8 p.m. when a drachm of water was given occasionally. Nutrient enemata were administered every four hours for ten days after the operation, the first one being given at 6 p.m. on the day of the operation. Each enema

consisted of peptonized milk with plasmon 3 oz.; beef essence, 1 oz.; salt, $\frac{1}{2}$ drachm. All the nutrients were retained, and the bowel was washed out with plain water twice every twenty-four hours. The patient began to complain of thirst after the first twenty-four hours, but it was relieved by constantly washing out his mouth with water and by an occasional rectal injection of half a pint or a pint of warm water. A soap and water enema was given on the sixth day and the bowels were relieved by similar means every other day from this date. Three grains of calomel given by the mouth on the eighth day were without effect in causing a motion. For the first five nights the patient received an injection of one-fifth of a grain of morphine hypodermically, and for the first two days morphine was injected twice a day. The food given by the mouth was as follows: During the first twenty-four hours a teaspoonful of water occasionally, amounting in all to about an ounce, and during the second twenty-four hours to about 3 oz. On the third day a little lemon juice was added to the water, and 4 oz. were given. On the fourth day a drachm of Benger's food was administered every two hours, with a drachm of lemon juice and water occasionally, and the same quantities were given on the fifth day. On the sixth day a drachm of Benger's food and a drachm of beef essence were given every hour alternately, the amount being increased to $\frac{1}{2}$ oz. on the seventh day. The patient felt some discomfort after the fifth hour, and was inclined to be sick, so 1 oz. of whey was given every hour instead of the Benger and essence, and this amount was increased to 2 oz. hourly on the eighth day. On the ninth day the patient was given 2 oz. of peptonized milk every hour, and at 4 p.m. he had some tea; thereafter on the ninth, tenth, and eleventh days he had beef essence or tea every two hours, and each time 2 oz. On the eleventh day he had some baked custard at midday, and on the thirteenth day this feeding was supplemented by a slice of thin bread and butter for tea and some bread and milk for supper. On the fourteenth day some jelly and sponge cake were added to the diet, and on the eighteenth day he was placed upon the ordinary half diet of the hospital, advancing to full diet on the twenty-fifth day after the operation.

The following lessons, I think, are taught by the four cases here recorded: (1) Duodenal ulcers occur more often in men than in women. (2) The extravasated fluid trickles into the iliac fossae, and causes a local peritonitis which may be mistaken for an acute appendicitis. (3) The transparent or bile-stained succus entericus found in the peritoneal cavity is diagnostic of a perforated duodenal ulcer. It is quite different from the astric contents escaping at a perforated ulcer of the stomach. (4) The prognosis of a duodenal ulcer is worse than that of a perforated gastric ulcer on account of the greater difficulty in closing it satisfactorily. (5) The prognosis should not be too sanguine until after the lapse of the eighth day, and it is always bad, however well the patient may appear, if the pulse-rate continues rapid. The pulse is a much better guide than the temperature. (6) Free drainage is imperative, both iliac fossae, the recto-vesical pouch, and the space below the liver more particularly need tubes. It is better that the patient should recover with a scarred belly than that he should die with an abdomen full of pus. (7) The feeding of the patient is a matter of great importance. Small quantities of food should be given frequently, and if the patient feels sick the amount must be reduced at once. It is better to give nutrient enemata for some days after the operation than to administer food by the mouth.

A Clinical Lecture

ON

RESECTION OF THE LARGE INTESTINE FOR CARCINOMA.

Delivered at the Bristol Royal Infirmary,

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CANCEROUS growths of the intestine are almost always found in the large bowel; the sigmoid flexure, the caecum, and the descending colon being the parts most usually affected, if the rectum is excluded.

The disease commences in the mucous membrane, columnar epithelioma being the most common type of cancer found in

the gut. Its chief peculiarity consists in the contraction of the new growth, which causes a marked stenosis of the lumen of the intestine. This is sometimes so severe that the gut looks as if a tight string had been tied round it, and the lumen of the gut in the middle of the growth will then scarcely admit a crow's quill.

The occurrence of stenosis in carcinoma, which stands in obvious contrast to the patency of the intestinal canal in sarcoma, is the chief cause of the symptoms for which the patient seeks relief; and a gradually increasing constipation, amounting in some cases to actual obstruction, accompanied by attacks of pain, should make us suspicious of the possibly malignant nature of the affection.

The pain is caused by ineffectual attempts on the part of the bowel above the constriction to overcome the obstruction, and the pains become more frequent and more severe as the stenosis increases. Above the growth the intestine is generally considerably dilated and hypertrophied, and when undergoing contraction a visible peristalsis can often be distinctly seen. Visible peristalsis, frequently accompanied by loud gurglings, may lead us to a correct diagnosis of the site and cause of the obstruction, and it is a valuable sign, for it practically never occurs without some form of chronic obstruction being present. Alternating with the marked constipation attacks of an irritative diarrhoea may occur.

A tumour can sometimes be felt, especially in the transverse colon, which is the most superficial part of the large gut. Such tumours have a slight mobility, but are somewhat fixed as compared with growths in the small intestine.

The only means of cure consists in the resection of the adjacent part of the bowel and mesentery involved. (I do not propose to speak of the treatment of cases which do not admit of free removal of the disease). The operation of resection for carcinoma must be considered under two heads:

1. In an early stage of the disease—that is, before the patient is threatened with complete obstruction.
2. In a late stage of the disease—that is, where intestinal obstruction is present.

RESECTION OF THE INTESTINE WITHOUT SYMPTOMS OF OBSTRUCTION.

Parietal Incision.—This should always be made, if possible, over the tumour or slightly to the outer side of it if it be in the ascending or descending colon. For the transverse colon the middle line is generally the best, but for the caecum, ascending colon and descending colon, a vertical incision in the neighbourhood of the tumour gives the most direct access to the part to be removed, which is often fixed by a mesocolon shortened by implication in the disease. The muscular fibres in the line of the incision may be bluntly separated rather than divided, but in cases of malignant disease such as we are considering there should be no impediment to the thorough removal of the parts affected, and surgical refinements must, if necessary, give way to the needs of the case. The incision should at first be about 2 in. long—sufficient for the thorough examination of the tumour—and if resection be considered desirable the incision can be enlarged in accordance with the amount of tissue to be removed. Firm adhesions to neighbouring bowel or extensive lymphatic involvement would contraindicate operation in most cases.

Delivery of the Part to be Resected.—In every case the portion to be operated upon should be brought freely outside the abdominal cavity through the parietal incision, and isolated by means of gauze or sponge cloths. Where the mesocolon is short it may be necessary to incise it, after ligation, before the bowel can be brought to the surface. If it is considered desirable to use intestinal clamps, the gut should be emptied by pressing the contents upwards and downwards before they are applied. In all cases in which clamps are used they should be placed at least 2 in. away from the line of resection on either side of the growth.

Resection of Bowel.—The gut should be divided at least an inch away from the growth on either side; this is best done by sharp scissors. If the mesocolon has not previously been incised, the portion to be removed must be freed from the adjacent mesocolon by an incision parallel to the bowel, the raw surface so left being closed by a continuous stitch, drawing together the divided mesocolon on either side. It is better to make the cut in the bowel rather obliquely so that more of the convexity away from the mesocolon is removed, as in this way the nutrition of the bowel will be better maintained after suture, and gangrene is less likely to result. Resection of the caecum generally has to be done without complete delivery of the bowel, and involves the division of

the mesentery at the ileo-colic junction. Resection of the transverse colon necessitates division of its own mesocolon, of the gastro-colic omentum, and of the great omentum.

Enterorrhaphy.—After the removal of the growth we have to consider the best means of uniting the divided intestine and so restoring the continuity of the intestinal canal. Although the apposition of raw surfaces would give the strongest union, we have to rely on the apposition of serous surfaces, owing to the thinness of the bowel wall, which prevents the practical use of other methods to any extent. This end-to-end union may be effected directly by suture, or we may secure approximation by means of the Murphy button, Mayo-Robson's decalcified bone bobbins, potato tubes, and such-like appliances. When the caecum has been removed the inequality of the size of the ileum and the colon have led some surgeons to close the end of the colon and then to implant the open end of the ileum into the side of the ascending colon. In other cases the two divided ends of the bowel have been closed and the continuity of the bowel restored by making lateral anastomotic openings in the two portions of intestines placed side by side. These methods—like the end-to-end union—may be effected either by direct suture or by the aid of such apparatus as I have referred to. A surgeon must be familiar with all these methods so as to suit them to the needs of the case, but, whenever practicable, I greatly prefer the end-to-end union by direct suture, and time will only allow me to speak of this mode of enterorrhaphy. The use of most forms of apparatus is open to the objection that a foreign body is left in the gut, and these methods of union are not always so secure against leakage as union by direct suture. These objections are not valid against certain retentive mechanisms which hold the gut in place while being sutured and are withdrawn before the suturing is complete. The most useful of this last class of apparatus is perhaps O'Hara's forceps, which act at once as intestinal clamps—and thus prevent leakage during the application of the sutures—and as intestine holders. I have lately used the forceps in two cases of intestinal resection, and have found them most useful. When, however, the general condition of the patient is bad and it is desirable to finish the operation as speedily as possible, the use of a bone bobbin, Murphy button, etc., may be desirable.

Sutures and Method of Suturing.—The best suture material is one of the smaller sizes of Chinese silk twist. The best needle is an ordinary milliner's needle or a crewel needle. Both have no cutting edge and if the points are not too sharp the intestinal vessels are not likely to be perforated. Sutures passed obliquely through the peritoneal and muscular coats only are liable to cut their way out. The needle should be passed at right angles to the bowel and pushed on until it reaches the firmer submucous tissue, and should then be passed some distance along this tissue before it is brought to the surface again. The resistance offered by the submucous tissue can only be appreciated by experience, but it is of the greatest practical value in intestinal work to recognize the firm hold which this tissue gives to the sutures. Of intestinal sutures there are many varieties, but one of the best and the most easily applied is Halsted's stitch, which turns in the serosa as each stitch is tied. In order to keep these stitches in a line it is desirable that all the stitches should be passed before any are tied. About four complete Halsted's stitches should be placed in each inch of the circumference of the intestine, and I have usually found that one row carefully placed is sufficient to ensure against leakage. Extra sutures may be placed at any point where the union seems weak or the line of suture may be covered with an omental graft. After the union is completed, the bowel is returned into the abdominal cavity and the wound closed without drainage, except in cases where it is feared that leakage might occur, when strips of gauze may be passed on either side of the newly-united intestine and brought out at one end of the parietal wound. One of the most extensive resections for carcinoma of the large intestine is the following:

CASE 1.—History.—P. H., male, aged 35, had attacks of "biliousness" and constipation from November, 1900, to January, 1901. Each attack lasted four or five days, and was attended with distension and pains round the middle of the abdomen. The constipation was continued, though not so marked, and he has had abdominal pain on and off ever since. Until a week before I saw him, when he felt a lump in the right side of the abdomen which caused sickness on pressure, he attributed his symptoms to indigestion. The patient's mother was said to have died "ridicled with cancer."

State on Examination.—He looked well-nourished but was pallid. A hard, irregular mass, rather larger than the fist, was found in the right iliac fossa, the upper border coming just above a line joining the right anterior superior iliac spine with the umbilicus. The swelling caused a slight bulging of the anterior parietes, moved slightly with respiration, and

could be moved about one inch in an upward direction and rather less from side to side. The inner border of the tumour was more defined than that towards the loin. There was somewhat impaired resonance over the swelling. All the organs were healthy.

Diagnosis.—From the position and comparative fixity of the tumour it was regarded as an affection of the ascending colon, and the fact that there was at least distinct, though slight, mobility of the swelling, gave some hope that it might be possible to remove the disease.

Operation.—A 4-in. vertical incision was made over the outer part of the growth, the middle of the incision being about 1 in. below the level of the umbilicus. On turning up the great omentum, a hard, irregular mass was found occupying the upper part of the ascending colon, but invading the mesocolon, and, by its contraction, dragging the transverse colon and caecum towards itself. The tumour and the adjacent parts of the intestine were delivered through the parietal wound, and isolated with sponge cloths. One of O'Hara's forceps was placed on the ileum, and another on the transverse colon well away from the growth. Swain's clamps were placed on the gut about 2 in. nearer the tumour in each case. The transverse colon was divided with scissors close to the proximal side of the O'Hara forceps, and removal of the growth from the upper end (as seen in the body) was commenced. Portions of the gastro-colic omentum and transverse mesocolon were divided and sewn over and over with catgut, but, as the bleeding was considerable and this method was slow, the whole of the ascending mesocolon, mesocaecum, and the portion of the mesentery attached to the lower ileum were tied off by a series of mass sutures passing through the structures. The ileum was then divided on the distal side of the other O'Hara forceps, about 6 in. from the ileo-caecal valve, and the whole mass thus removed. The two O'Hara forceps were approximated, so that the cut end of the ileum came in close contact with the cut end of the transverse colon, and ileo-colostomy by end-to-end union was effected by Halsted's sutures. The mesentery of the ileum was also attached to the remains of the transverse mesocolon. Haemorrhage was fairly free, especially from a wound in a large vein in the mesentery which had been dragged in by the contracting growth, and which could only be distinguished from intestine by its position. Another accident was discovered by the escape of bile from the wound, and the posterior surface of the stomach was found perforated by a ligature which was free because the thread had fortunately broken in tying. The perforation had doubtless occurred in consequence of the stomach being drawn towards the contracting growth by means of its attachment to the transverse colon by the gastro-colic omentum. The thread was removed and the hole closed by two Halsted's stitches; but the second hole, which obviously must have existed on the opposite side of the stomach, could not be found. In consequence of the wound in the stomach, and the hasty suturing of the gut, a drainage tube was placed under the right kidney and brought out through a counter-puncture in the right flank. Two pieces of iodoform gauze were placed over the newly-united intestine, which was placed in the lumbar hollow, and the ends brought out through the same counter-puncture. The incision in the anterior parietes was completely closed with interrupted silkworm-gut sutures. The specimen removed consisted of six inches of ileum, the caecum, and vermiform appendix, the whole of the ascending colon with the growth, about two-thirds of the transverse colon, and the whole of the great omentum. Two lymphatic glands, the size of small marbles, were removed from the ascending meso-colon. The growth involved the whole circumference of the gut, and was about three inches in diameter. The tube was removed the following day, and the pieces of gauze two days later. Solid food was given five days after operation, the bowels acted spontaneously on the eleventh day, and the patient began to get up at the end of three weeks after operation, his recovery being rapid and complete.

RESECTION OF THE INTESTINE WHEN INTESTINAL OBSTRUCTION IS PRESENT.

The presence of obstruction, especially in the large intestine, causes a great depression of the resisting powers of the patient, and the resection of the gut under these circumstances is attended with a very high mortality.

The late Mr. Greig Smith taught that it was much safer in these cases to relieve the obstruction first, and to resect the bowel afterwards. His method was, first, to fix the growth outside the body, and to immediately establish intestinal drainage; secondly, to resect the growth about ten days after; and thirdly, to close the artificial anus at a still later date. For some time past I have merged these last two stages into one, the ends of the divided intestine being approximated immediately after the growth is excised. This is a saving of time, and the operation is easier than in three stages because the calibre of the two portions of the gut is less unequal, and there is no marked "spur" to contend with.

The first part of the operation consists in making an incision over the tumour if its position can be accurately diagnosed. Failing this, an incision must first be made in the median line, and after the tumour is found a second incision must be made laterally if necessary. The tumour and the adjacent parts of the intestine are then delivered through the abdominal parietes, a glass or vulcanite rod being passed through the mesocolon to keep the gut in place. This rod should pass under the tumour and rest on the parietes. The extruded bowel is isolated with gauze or sponge cloths, and an incision is then made in the proximal portion of intestine, and a glass Paul's tube with rubber tubing attached is tied into the bowel. Through this tube the faeces are conducted to a receiver at the side of the patient. A layer of "protective" is placed over the exposed intestine, and dressings of gauze or lint and wool are strapped on. At the end of a week or ten days, when the patient has fully recovered from the

symptoms of obstruction, and is taking food well, the cancerous bowel may be resected and the ends of the divided intestine united.

The resection is carried out as previously described by cutting across the bowel with scissors at least an inch away from the growth on either side. If sufficient intestine has been left outside, there will be no difficulty in uniting the divided ends, but more bowel must be drawn into the wound for this purpose if necessary. The posterior parts of the intestine are first united on their serous aspects by interrupted silk sutures passing down to the submucous coat. A continuous catgut suture is then placed in the mucous coat on either side so as to restore the continuity of the gut, and over this Halsted's silk sutures are placed to unite the serous surfaces in the anterior part of the gut left unsewn before the puncture of the mucous membrane was effected. The newly-united intestine is then gently pushed towards the peritoneal cavity, and the parietes are sutured over it with interrupted silkworm gut. As examples of this method I may quote the following cases:

CASE II.—History and State on Examination.—A. D., female, aged 45, complained of great abdominal pain and sickness, with absolute constipation of ten days' duration. She looked very ill, with dry tongue and bounding pulse of 120 per minute. The abdomen was distended, especially in the neighbourhood of the caecum, and during the attacks of pain peristaltic waves could be seen passing across the abdomen. No tumour could be felt in the abdomen. The temperature was normal.

Operation.—A median incision was made extending above and below the umbilicus. The caecum was enormously distended and was about 5 in. in diameter. On passing the hand into the abdomen a hard growth was discovered at the splenic flexure of the colon, under the left costal margin. This was brought to the surface and it appeared as a tense band tightly constricting the gut. Some enlarged glands were removed from the mesentery in the neighbourhood. The loop of bowel with the growth was kept outside the abdomen by means of a glass rod passed under the growth, and the proximal loop of the colon was then opened and a Paul's tube tied in. Faeces came freely through the Paul's tube, and after this, sloughed out on the third day the artificial anus so formed continued to act well, and the patient rapidly recovered from the effects of the intestinal obstruction. Ten days after this operation the growth was excised by an incision in the colon on either side about 1 in. away from the tumour. The cut ends of the divided gut were then united end-to-end by direct suture, loosened from the adherent parietes at the base of the loop, and gently pushed inside the abdominal cavity. The parietes were then united except at the lowest part which was left open for drainage. The patient got up about three weeks afterwards and made a good recovery.

The following case is interesting on account of the great age of the patient:

CASE III.—History.—L. L., a female, aged 78, had had several attacks of obstruction during the preceding twelve months. For ten days before operation there had been symptoms of incomplete obstruction with vomiting, and for twenty-four hours before operation there was complete obstruction, with gradually-increasing abdominal distension, pain, and vomiting.

Operation.—A coil of the descending colon with a malignant growth at the apex was fixed over a glass rod outside an oblique incision in the left flank, and a medium-sized Paul's tube was placed in the upper end of the loop, by which a pint of liquid faeces and much flatus soon came away. The Paul's tube was cut away on the third day, and the patient allowed to get up on the tenth day after operation. On the seventeenth day after operation the colon was completely cut across above and below the growth, and the latter thereby freely excised. The two ends of the gut were then immediately united by a double layer of sutures. A faecal fistula formed, but the advanced age of the patient rendered further operation undesirable. The growth—which was a columnar epithelioma—occupied about 1½ in. of the circumference of the gut, and had almost completely obliterated the lumen.

AFTER-TREATMENT OF CASES OF INTESTINAL RESECTION.

Resection is often followed by a good deal of shock, which is best met by the administration of nutrient enemata of brandy and peptonized milk every four hours. Hot water may be allowed by the mouth from the first, and as soon as vomiting has ceased water gruel, Benger's food, or other easily assimilable diet may be given. Bread and butter may be given on the third day, and solid food thereafter gradually increased.

Morphine may be required during the first twenty-four hours, but should be avoided afterwards. Flatulence may cause much trouble, but can generally be relieved by a turpentine enema—one of the "sheet-anchors" of the after-treatment of abdominal operations. If possible the bowels should be allowed to act spontaneously or after an enema, as it is desirable to avoid purgatives for the first week or ten days after operation.

REQUESTS TO HOSPITALS.—Mr. John Heneage, of Richmond Hill, Surrey, has left his residuary estate in equal shares to the Royal Hospital at Richmond, the Royal Free Hospital, the Middlesex Hospital, and the Home for Incurables at Putney. Under the will of the late Mr. Eli Parkinson Ackroyd, of Shipley, the sum of £4,000 each has been bequeathed to the Bradford Royal Infirmary and Dispensary, and the Bradford Children's Hospital.