the same risks of secondary inflammatory complications, and he will be much less liable to the occurrence of permanent stenosis of the trachea or the formation of an aërial fistula.

I have to thank the honorary surgeons of the Manchester Royal Infirmary for their kind permission to publish these cases.

REFERENCES.

¹ *Lancet*, 1892, vol. ii, p. 1427. ² *Ibid.*, p. 1532. ³ A case of wound of the common carotid artery and internal jugular veins in which recovery followed ligation of the injured vessels and transfusion of saline fluid has been recorded by W. T. Thomas, *BRITISH MEDICAL JOURNAL*, 1895, vol. ii, p. 1420.

TWO CASES OF ACUTE INTESTINAL OBSTRUCTION DUE TO ADHESIONS, IN ONE OF WHICH ENTERECTOMY AND ANASTOMOSIS BY MAUNSELL'S METHOD WERE PERFORMED.

By LEONARD A. BIDWELL, F.R.C.S.,
Senior Assistant Surgeon to the West London Hospital.

THESE two cases resemble each other only, in so far that the obstruction in each case was the result of previous peritoneal inflammation, due in the first case to an operation for ovarian disease, and in the second to perimetritis after parturition. In the first case the patient came to the hospital at once, and the operation was performed within a few hours of the onset of the symptoms, so the gut was naturally not damaged; while in the second case the symptoms had existed for nearly eleven days before admission, and so the constricted part of the gut was so damaged as to necessitate enterectomy. Although both cases made perfect recoveries, the greater severity of the operation required in the second case shows how much the risk to life is increased when abdominal exploration is not performed at an early period in cases of acute intestinal obstruction.

CASE I.—E. S., aged 28, was admitted into the West London Hospital on June 27th, 1895. She was suffering from acute abdominal pain and vomiting, and stated that five months previously she had undergone double ovariectomy at another hospital. During convalescence there had been a faecal discharge from the wound, which, however, had stopped for about six weeks, the wound being now soundly healed. She still, however, had some abdominal pain from time to time. Two hours before admission she was seized with acute pain referred to the umbilical region, and she vomited several times. On admission the patient was doubled up with pain, and the abdomen was slightly distended and extremely tender. The patient vomited two or three times after she was put to bed. The pulse was rapid and feeble, and the patient was restless and perspiring.

After consultation it was decided to perform a laparotomy immediately, and this was done within two hours of the patient's admission.

The abdomen was opened in the line of the old cicatrix, and a loop each of the ileum and of the sigmoid was found densely adherent to the abdominal wall. One of the appendices epiploicæ of the sigmoid loop was adherent to the abdominal wall a short distance away, and so formed a band under which a portion of the ileum, just above the adherent portion, had been caught and was strangulated. This band was divided between two ligatures, and the loops of ileum and sigmoid were freed from their dense adhesions to the abdominal wall, after which they both retracted some distance from the wound. The strangulated portion of the ileum was congested, and showed a deep sulcus where the constriction had existed, but was not damaged. The omentum was carefully arranged beneath the incision so as to obviate any chance of adhesions between the bowel and the new scar, and the wound closed.

The patient made an uninterrupted recovery, and left the hospital perfectly well at the expiration of three weeks after the operation.

CASE II.—J. C., a healthy woman, aged 42, was admitted into the West London Hospital on April 7th, 1896. She had been confined of twins eight weeks previously, and on the third day after delivery she developed some form of perimetritic inflammation which she described as "milk fever."

Although she recovered from this trouble, she continued to have from time to time attacks of pain in the pelvis, and on March 28th she had an attack of severe abdominal pain accompanied by distension and followed by vomiting. From that date the vomiting, abdominal pain, and distension had increased every day, and had been treated by croton oil, sulphate of magnesia, and other purgatives without effect. During the forty-eight hours previous to admission the vomit had become faecal.

On admission, the patient looked very anxious, and her face was pale, pinched, and drawn. The pulse was 140 per minute, very small, rapid, and running. The tongue was brown and rather dry, and the breath had a distinctly faecal odour. The abdomen was greatly and uniformly distended, and was tympanitic all over, but there was not much pain; coils of intestine could be seen moving beneath the abdominal wall. As no hernial protrusion could be discovered, obstruction by a band was diagnosed. An operation was performed three hours after admission, chloroform was given, and the abdomen was opened by a median incision $3\frac{1}{2}$ inches long below the umbilicus. The cæcum was first examined and was found to be contracted, so the small intestine, which was much distended, was brought out of the wound, coil by coil, and examined. After 6 or 8 feet had been examined and replaced, a band was found which slightly constricted the bowel; this was divided between ligatures, but as the gut beyond the bowel was distended the search was continued, and a tight band was found on the left side of the pelvis which was adherent to and strongly nipped the gut. This band was also divided between ligatures, and it was then discovered that the intestine itself was also adherent to the brim of the pelvis. After separating these adhesions, the damaged bowel was examined, and as it was deeply congested, and its peritoneal coat was dull and abraded for about 3 inches, it was decided to resect the damaged part. Sponges were packed in the wound, and the loop of bowel brought outside the abdominal cavity; it was clamped above and below between safety pins and sponges, and nearly 4 inches with a piece of mesentery were removed. The two ends were then united by Maunsell's method, the longitudinal incision being closed with a continuous suture, and the mesentery being united with three interrupted sutures. On examining the anastomosis, the mucous membrane was found to be protruding at one or two points, so a row of Lembert's sutures was inserted all round the joint. The abdomen was sponged out, and the wound closed with silkworm gut sutures.

The patient rallied well after the operation, and only vomited very slightly. On the following day, brandy, milk, and barley water were given by the mouth, and as no flatus escaped on passing a rectal tube, an enema was ordered but without any result, as the rectum was blocked with stony faeces. About midday on the second day after the operation, the bowels acted four or five times copiously without any further enema, and all the abdominal distension disappeared. The patient, however, became considerably collapsed, but rallied after champagne and hypodermic injections of strychnine. At 9 P.M. she became much worse, and appeared almost moribund; her pulse was small and flickering, and the skin was cold; she also vomited slightly. My house-surgeon, Mr. Pardoe, immediately injected 4 pints of normal saline solution into the median basilic vein; almost directly after this the pulse became firm and full, and there was no more vomiting. The further progress of the case was quite uneventful. The patient took nourishment freely by the mouth and made a steady progress; her convalescence, however, was retarded by a bed sore, which had existed before her admission to the hospital. She got up on April 24th, but had to remain in hospital till May 22nd to allow of the complete cicatrization of her bed sore. During the first fortnight she occasionally had slight attacks of abdominal pain and slight distension, which, however, were relieved by enemata; a hard lump, too, could be felt in the left iliac region at the site of the anastomosis, but this could not be felt when she left the hospital. When last seen, four months after the operation, she was in excellent health, and did not have any trouble with her bowels.

REMARKS.

Although several cases of acute intestinal obstruction after ovariectomy have been recorded, such cases are always of

interest. The dense adhesions between the ileum, sigmoid, and the abdominal wall rather point to a delay in the re-establishment of peristaltic action after the first operation, due probably to the administration of opium. Unfortunately I have been unable to obtain any notes of the ovarian operation.

The second case is very interesting, since acute obstruction as a result of a complication of parturition is uncommon. The long-continued use of purges and of croton oil in cases of obstruction is now seldom met with, and in such a case, where faecal vomiting had existed for forty-eight hours, the result of an operation is not usually satisfactory. It is interesting, too, to note the extreme collapse which followed the free action of the bowels; I have noticed a similar condition after the relief of other cases of obstruction, such as strangulated herniae or colotomy. The treatment of such collapse by intravenous saline infusion is, I think, original, and the patient probably owes her life to Mr. Pardoe for his prompt and successful employment of this remedy.

Some doubts still exist with regard to the propriety of performing a primary enterectomy and anastomosis during acute obstruction, but if healthy gut be chosen a successful joint ought to be obtained. In this case I may not have chosen absolutely healthy gut for my anastomosis, since two of the sutures apparently loosened and I found it necessary to insert a supporting row of Lembert's sutures afterwards.

In another Maunsell's anastomosis of my own and in two of a colleague's, where no supporting row of sutures had been used, a temporary faecal fistula appeared on about the tenth day after the operation; all the cases, however, ultimately got well. It, therefore, does not seem to me to be quite safe to perform this method of anastomosis without a row of supporting sutures, and, if this be necessary, perhaps Maunsell's method of suturing is not essential, and the anastomosis might be effected by the row of Lembert's sutures alone. In neither of my cases of anastomosis by Maunsell's method have there been any symptoms of stricture of the intestine.

FIXATION OF LIVER AND BOTH KIDNEYS IN A CASE OF GLENARD'S DISEASE.

By F. WINSON RAMSAY, M.S., F.R.C.S.E.,
Surgeon to the Royal Victoria Hospital, Bournemouth.

E. I., aged 39, widow, was admitted to the Royal Victoria Hospital on June 11th, 1895, complaining of incontinence of urine, scalding pain in the abdomen, worse before passing urine, and a tumour in the left hypogastrium. She had typhoid fever when 18, and gastric ulcer when about 20 to 25. Has three children, youngest 4 years. Her present illness dates from April, 1895, when she had an attack of influenza; she did not "lay up," but since has never felt quite well. For several weeks past has had rather profuse leucorrhœa; has been quite unable to work for some weeks. The tumour was diagnosed as a floating left kidney. Examination revealed a completely anteverted uterus; this was replaced, and with complete rest and vaginal injections the symptoms complained of disappeared. The kidney was still tender and gave a deal of discomfort when sitting or standing up. Operation was recommended and accepted. On May 4th preceding Professor Vulliet, of Geneva, read a paper before the Swiss Medical Congress at Lausanne describing a new form of kidney fixation, and the result in the one case in which he had performed it; the description was so enticing and the result so satisfactory that I determined to repeat the operation. As this operation is not generally known, I will describe briefly its steps.

On July 2nd, the patient being on her right side, the usual loin incision was made, the kidney being readily found; it was freed from connective tissue, and found to have a long and perfect mesonephron; this was stripped off so as to expose the outer or posterior surface, the wound packed with gauze and temporarily closed. The patient being turned a little more forward a second incision was made, about 2 inches long, a little to the left of the spine, its lower end reaching to the first lumbar spinous process. The skin and superficial fascia being cut through, the strong deep fascia was exposed; this being divided revealed the flat tendinous

structure of the longissimus dorsi muscle, its fibres running upwards and slightly outwards; a portion of it, about one-sixth of an inch wide, being selected was separated with a knife sufficiently to allow a finger being introduced underneath it; forcible traction then being made, it broke away from its insertion into the rib above, with its attachment to the first lumbar spinous process still intact. The tendon thus obtained was about 10 inches in length; there were some muscular fibres still attached to it, and these were trimmed off with scissors. The flank wound now being reopened, with one hand inserted into it and the other at the back wound, the structures of the back could be readily palpated and recognised. The tendon was threaded on a long pedicle needle and passed right through the muscles of the back, so that while one end was attached to the first lumbar process, the other was free on the abdominal side of the back at the upper part of the normal kidney bed.

Incisions about one-fourth of an inch were now made near the upper and lower borders of the kidney through the capsule, and the tendon, again by means of the pedicle needle, drawn through underneath the capsule from one incision to the other, thus underrunning about five-sixths of the length of the kidney; the tendon was then passed in the same way back through the muscles, so that its free end was again in sight at the back incision. The kidney then being firmly pressed into its normal position, the tendon was drawn taut and fixed safely with silk to its adjacent tendons. The muscles divided in the loin incision were sutured with buried silk sutures, and both wounds closed and dressed. The wounds healed by first intention, but on the second day the temperature rose to 103°, the patient got restless and semi-delirious, and left her bed and walked about the ward. In a few days she developed a regular attack of melancholia. Inquiry revealed the fact, until then not ascertained, that she had suffered from similar attacks before. Her bodily health improved, but her mind remained in the same state for a month, when she suddenly recovered and left the hospital on August 29th in fair health, shortly afterwards resuming her work as charwoman.

She was readmitted on February 20th, 1896, complaining of sickness, pain in the right side, and a tumour in the right hypochondrium. She had received so much benefit from the first operation that she was anxious to be relieved, if possible, by operation again. The right kidney was found to be freely movable in the abdominal cavity, but the left kidney could not be felt at all; the liver was noticed to be rather lower than usual, but she was examined only in the recumbent position.

On February 25th the right kidney was fixed in the same manner as the left. The wounds healed by first intention; there was no rise of temperature, and the patient rapidly convalesced without any of the untoward symptoms which had marked the first operation.

On the patient being allowed to sit up the nausea and vomiting returned, and, according to the patient, the tumour had also "come down again." On examination, the kidney could not be felt whilst the patient was in bed. She was now examined in the erect position, and it was found that the liver, which in the recumbent posture seemed in its normal position, pivoted round on its left lobe, so that its right lobe fell downwards until it occupied the middle of the abdomen below the umbilicus. It was freely movable on its axis, the right lobe being easily pressed into the left hypogastrium, or back into its normal position. It seemed smaller than usual, was slightly painful on pressure, and its movement immediately set up nausea and emesis. The patient was willing to undergo any operation that promised relief.

On April 24th, 1896, ten months after the first operation and two months after the second, the abdomen was opened by an incision 3 inches long through the middle of the right rectus muscle; the left kidney was first searched for, and found to be immovably fixed high in its normal position; the right kidney was in good position, lower than the left, and could be moved slightly laterally but otherwise well fixed; the liver was found to move freely as before described, the suspensory ligament being very much elongated. The upper surface of the liver was rubbed hard with some aseptic gauze to try to promote adhesion; in order to do this it was necessary to extend the wound another couple of inches; the round