TUBO-OVARIAN ABSCESS, INTESTINAL OBSTRUCTION, AND URETERIC OBSTRUCTION:

SIX ABDOMINAL SECTIONS: RECOVERY.

By JOHN D. MALCOLM, F.R.C.S. EDIN.,

SENIOR SURGEON TO THE SAMARITAN FREE HOSPITAL.

A CASE in which three operations—the first, second, and fifth—were urgently needed to save life within two years seems worthy of record, and it is also of interest that, apparently, the first operation was not the cause of the peritoneal adhesions which brought about the intestinal obstruction.

First Operation.

Double Salpingectomy and Oophorectomy by Another Surgeon. September 16th, 1912.—After seventeen days' illness the patient, who had in a marked degree the delicate appearance frequently associated with tuberculous disease, was operated upon by an experienced gynaecologist, who has kindly informed me that he removed a tubo-ovarian abscess from each side, that the vermiform appendix was normal, and that an uninterrupted recovery followed. Except for an attack of abdominal pain in May, 1913, the patient continued in good health for nearly seventeen months. On February 7th, 1914, at the age of 23, she consulted Dr. P. A. Storey on account of severe colicky pain of three days' duration, accompanied by vomiting. A dose of morphine was given, and the patient was sent to the Samaritan Free Hospital. On admission all symptoms except a slight fullness of the abdomen were in abeyance, but next morning an intense gripping pain recurred every few minutes accompanied by visible peristalsis. The patient stated that for fifteen years she had suffered off and on from a pain in the right loin; its significance became clear at a later date.

Second Operation.

Fistula Formation in the Small Intestine. February 8th, 1914.—The lower two to three feet of the small intestine were empty and closely matted together over the brim of the pelvis on the right side. The vermiform appendix and caecum were involved in the bowel adhesions, but lay altogether to the right of them, and otherwise appeared healthy. The anterior abdominal wall was not adherent, and where the ovaries had been removed the broad ligaments were smooth and rounded, there being only a few filmy adhesions in the pelvis. The conditions of the former operation did not explain the new trouble. Neither did an appendicitis appear to be the centre of mischief, but, in the absence of a better, this was accepted as the cause of the adhesions. The ureter was not thought of at that time as a source of infection.

The adherent coils were separated and many surfaces had to be sewn over, the mucous membrane being exposed at several places. The manipulation made these coils so limp and inactive that an obstruction from paralysis seemed certain to follow if this part of the bowel was required to carry on its functions. An excision or a short-circuiting operation was indicated, but the small intestine generally showed a tendency to dilate and the patient became so feeble that a rapid termination of the operation was deemed necessary. A Paul's tube was therefore introduced into the lowest coil of healthy small intestine and the abdomen was closed around this tube, provision being made for drainage of the raw surfaces left in the peritoneal cavity. Removal of the vermiform appendix was postponed in the hope that the patient would be stronger at a later date. After this operation marked depression of the circulation persisted for several hours. The bowel above the fistula acted well from the first.

Considerable haemorrhage from the abdominal wall began on the third day, and did not stop until a vessel was ligatured under an anaesthetic on the sixth day. The loss of blood and the disturbance of the parts were unfavourable to a gain of strength, and when the Paul's tube separated the irritation of the discharges threw a further burden upon the patient.

Third Operation.

Ileo colotomy, Caecostomy. February 27th, 1914.—On the nineteenth day, as no further progress seemed likely,

the intestine was divided above the fistula, its lower end was closed and its upper part was joined to the ascending colon by an end-to-side anastomosis. Adhesions made this operation difficult, and again the circulation became very weak. It was decided, therefore, to open the caecum and put a Paul's tube in it, to ensure an absence of backward pressure at the seat of the anastomosis. The removal of the vermiform appendix was again postponed. After this operation the bowels acted on the third day, and there was never much discharge from the caecal fistula. The patient quickly recovered and increased considerably in strength.

Fourth Operation.

Closure of Caecal Fistula and Appendicectomy. March 24th, 1914.—After twenty-five days the caecal fistula was closed and the vermiform appendix was removed. The separation of firm adhesions of the inactive part of the intestine prolonged this operation and the depression following it was alarming, but, after two days, progress was good until the patient was allowed out of bed three weeks later. She then immediately suffered from severe pain in the right loin and vomiting, with a rise of temperature to 105° F. and of pulse to 120. These symptoms abated after a few days, but returned at intervals. Later the temperature fell to normal and the vomiting ceased, but the loin pain became so severe and continuous that restful sleep was impossible. The patient stated that this pain was the same as that she had suffered from time to time for fifteen years, only more intense. A well-defined very tender immovable swelling gradually developed below the right costal margin, the rest of the abdomen being free from distension or tenderness. The bowels gave no trouble, and the only abnormal constituent of the urine was the *Proteus vulgaris*. The swelling was diagnosed as a distended kidney and the conditions became so serious that surgical interference was considered absolutely necessary to prevent death from exhaustion.

Fifth Operation.

Right Nephrectomy. May 12th, 1914.—On again opening the abdomen a slightly enlarged kidney, fixed in an unusually low position, was exposed. It was misshapen, the pelvis being on its anterior flat aspect instead of at the inner edge, but there was no obstruction in the pelvis. The ureter, where it lay on the pelvic brim, was thickened and fixed, and it appeared that some obstruction at this point was the cause of the kidney pain. It was deemed essential that complete relief should be given at once, and that if possible no further strain should be made on the patient's mental and physical endurance such as a renal fistula would involve. I therefore rapidly excised the right kidney after ascertaining that the left was normal to palpation. This was the shortest operation of those performed by me on this patient, and although the pulse became quick and feeble, she soon rallied. The cut end of the ureter was fixed to the skin between the lips of the incision, and seemed to be a source of infection, union being delayed until some sutures came away. The patient never had any of the old pain in her loin after this operation, and her whole condition at once improved.

Sixth Operation.

Closure of Fistula in Small Intestine. January 1st, 1915.—The fistula made at the second operation, February 8th, 1914, with the blind piece of small intestine above it, was excised, and the bowel below was closed, the abdominal wall being carefully repaired. The wound healed by first intention, and at this time there was no bulging of any of the incisions. The latest report (June 27th, 1915) is that, except for an occasional pain in the back, the patient's health is good, and her bowels give little or no trouble.

It seems to me that in this case there was a very old difficulty in the passage of urine through the right ureter, near the pelvic brim. The abnormal shape and fixation of the kidney could not be a cause of the symptoms, but they suggest the possibility that a congenital abnormality might exist also in the ureter. Otherwise some infection within the ureter, or in a gland close to it, was probably the cause of obstruction. The tubo-ovarian abscesses were certainly due to infection, possibly tuberculous, and their removal had no direct bearing upon the rest of the history, unless

the mere opening and manipulation of the peritoneum could induce an extension of inflammation from the ureter to the serous membrane. There seems to be no doubt that such an extension took place and caused the intestinal adhesions, the vermiform appendix being involved secondarily.

It is obvious that at the second operation a short-circuiting of the bowel would have rendered the third, fourth, and sixth operations unnecessary, and possibly the need for the nephrectomy would not have arisen, but if the adherent coils had not been separated a pus focus might have been left, and when the absence of any such condition was ascertained the patient, never strong, had become so feeble that the course adopted seemed the safest. Removal of the kidney was essential for health and comfort, so the development of the renal symptoms was not regretted after they had been successfully dealt with.

INVERSION OF THE UTERUS IN A NULLIPARA DUE TO A SUBMUCOUS FIBROMYOMA.

BY

ROBERT B. JOHNSTON, F.R.C.S., M.R.C.P.E.,

PENRITH.

THE following case being of a somewhat unusual nature, I have thought that a short statement of it might be of interest.

On February 5th I was called at midnight to see a farmer's daughter, a nullipara aged 45. All the appearances of a recent severe haemorrhage were present. A mass about 5 in. long, somewhat conical in shape, with a blunt apex and base towards the vagina, protruded from the vulva. Its lower part was quite smooth and pale red in colour, and its surface was shiny except in one or two places where there were linear excoriations up to about half an inch outside the vulva, where it abruptly became rough and shaggy, and almost black in colour. It was here covered with dark blood which slowly oozed from its surface, and was tightly constricted at the vaginal orifice. The bed and the patient's clothes were saturated with blood, as in an abortion. The pulse was 120, rather small, but steady; temperature 97°, respirations normal. The patient sweated, and was evidently suffering from shock. Thinking at first that it might be a cervical polypus protruding from the vagina and commencing to slough, I was, however, assured that nothing had projected externally until about one hour before I was summoned. On closer examination I discovered that the protruding mass was a sessile polypus attached to and occupying the whole fundus uteri, and that it had caused a complete inversion of the uterus. The dark, rough, shaggy mass was the fundus in a state of strangulation caused by the narrow vulval orifice, and I could distinguish the dimples indicating the uterine openings of the Fallopian tubes on each side, just inside the vagina. I had received no information as to the nature of the case I was called to see, so that I had no chloroform at hand; but as, fortunately, I had taken my surgical accident bag, I was provided with antiseptics. The patient's condition was very serious, so I decided to try to reduce the mass without an anaesthetic. I carefully cleansed the surrounding parts and the tumour, and grasped the fundus, which was hard and firm, close up to the vagina with my right hand, and then kept up a steady pressure, as in the reduction of a hernia, for about ten minutes, when I became sensible of a softening in its consistency. Maintaining this pressure, I now began to push the mass steadily inwards and slightly upwards until the whole fundus passed inside the vagina. The vulval orifice being so small, I could no longer keep up the pressure on the uterus, so I pressed the fibroid. When the apex of the tumour had reached the orifice, the whole mass suddenly reduced itself, and nothing could be felt in the vagina but the cervix uteri, with an external os which would just admit the tip of the index finger, and with nothing protruding. The whole process of reduction took only twenty minutes. The uterus could now be defined enlarged, as in the third month of pregnancy, and retroverted. The fundus, normal in its rounded contour, showed no signs of dimpling. I cleansed the vagina as well as I could under the circumstances, and gave the

patient one-sixth of a grain of heroin hypodermically. As no haemorrhage or pain ensued I was able to leave her one hour later. The subsequent history was uneventful; the temperature rose to 99° next day, and then fell gradually to normal; the pulse also by the second day fell to 80. On the third day an enema was given with a good result and no untoward symptoms. There has since only been a slight show daily, with no pain.

The history of the case is as follows: Until Christmas, 1914, the patient, who is a strong, healthy single woman, inclined to stoutness, and engaged in farm work, had noticed nothing unusual. After Christmas, however, she suddenly began to have occasional rather severe losses at the periods, with more or less metrorrhagia, but no pain. These symptoms were ascribed to the coming of the menopause. At 4 p.m. on February 5th, after a particularly heavy day's work, pains in the back, with some bleeding, set in; which gradually became more severe, and extended all round, somewhat as in labour. At about 7 p.m. the patient first felt that something occupied the vagina. She did not like to say anything, however, but went to bed, and fell asleep for nearly two hours, when the pains became most intense, and the mass suddenly issued from the vagina, and then I was sent for, four miles from her home.

The unusual feature of this case is the inversion of the uterus in a nulliparous woman—a condition which is rarely mentioned in textbooks, and was no doubt produced by the efforts of the uterus to expel the polypus as a foreign body. Owing to its close attachment to the fundus, the tumour gradually produced a dimpling, this process extending *propter hoc et post hoc* until the uterus was completely inverted. I may add that I was rather surprised at the fairly easy way in which it was reduced, and at the quick and steady recovery from what must have been a severe shock, not to speak of the risk of uterine infection. I would also say that the patient, who dreads operation, so far cannot make up her mind to submit to the necessary surgical treatment for her cure.

ACUTE SEPTIC MENINGITIS DUE TO B. COLI FOLLOWING SKULL WOUND.

By C. E. H. MILNER, M.R.C.S., L.R.C.P.,

LIEUTENANT R.A.M.C.(T.).

THE following case has recently come under my care at the 4th London General Hospital, and in view of one or two unusual features in its etiology and progress I have thought it worth while to place it on record.

Lieutenant R. W. was wounded in the head on May 5th by splinters of a high explosive shell, and sustained a compound fracture of the right parietal bone. Three days later he was trephined in France. Fragments of broken bone were elevated and removed, the original skull wound was enlarged, and the dura opened and drained. He was placed on the danger list and his friends telegraphed for, and it is largely thanks to the accurate observations made by his brother, who went at once to Boulogne, that I have been able to piece together a continuous history.

With a single relapse on May 21st, when he was very drowsy all day and his temperature rose to 100° F., he recovered gradually, until on June 1st he was well enough to be brought to England. On admission to the 4th London General Hospital on June 2nd he had a narrow, horizontal, nearly healed wound 3 in. long, situated 1 in. above the right ear, and overlying a larger trephine wound measuring 3 in. by 1½ in., from which a slight amount of cerebrospinal fluid was escaping. He complained of some headache, which was attributed to the journey by sea and by train. Except for slight weakness of the muscles of the left side of the face (a symptom which had been present from the outset) all the motor functions were normal; the deep reflexes normal to brisk, and both plantars flexion. The optic discs were normal and the temperature 99.8° F. It fell at night to 98.6° F.

At 4 next morning he complained of violent headache, and the temperature had risen to 103° F. There was no rigidity of neck or back muscles; Kernig's sign was absent, and there was still a complete absence of localizing neurological symptoms. Lumbar puncture was performed,