The fingers of the left hand were introduced into the abdomen as the peritoneum was cut, and the coils of distended intestine came under them. It was necessary now to introduce the whole hand, and the wound was enlarged downwards between the slightly separated fingers. The whole hand was then introduced, fitting somewhat tightly into the wound, so plugging it and preventing the escape of gut. The cæcum was first carefully explored, but without result. Next the umbilical region was examined, and here a cord about as thick as an ordinary lead pencil was found, attached at one end to the back of the umbilicus, and at the other running down into the pelvis. My first impression was that there was a band running from the umbilicus into the pelvis, round which the gut had become twisted. I brought it out at the wound, however, before doing anything further, and it was at once seen to be a piece of collapsed intestine. It was replaced and followed up, or rather down, as it turned out afterwards, by drawing the gut between the finger and thumb, a tedious and difficult matter with only one hand; it was followed up to its continuation into ordinary gut, containing gas. I now thought that the obstruction was due to a loop of intestine adhering to the back of the umbilicus, and probably twisted there. I tried to find the upward continuation of the part collapsed, but I was unable to do so. The difficulty in handling the intestine increased considerably. The coils were at first slippery, and slid almost too readily between the fingers, but now the peritoneum was curiously sticky, and it was very difficult to pass the finger and thumb along the gut.

It was, however, clear that the seat of obstruction was found, and it was suggested that a second incision should be made in the linea alba, so as to come more directly upon it. I was loth to make another opening, as I thought I should succeed in carefully detaching the adhesions from the interior. First, a cord about as thick as a crow-quill was felt, brought out at the wound, and cut between two catgut ligatures. The remaining adhesions were carefully separated until the surface seemed to be free. I asked Dr. Drummond to introduce his hand; and it was fortunate he did so, as he discovered another band lower down. It was brought out and cut between ligatures, like the other. The finger could now be swept freely along the back of the abdominal wall without meeting any obstruction. The wound was closed with sutures of silkworm-gut, passing through the whole thickness of the abdominal wall, including the peritoneum. A piece of dry Gangee tissue was laid on the wound, with a large pad of the same material over it. The abdomen was firmly bandaged, and in addition a broad binder was pinned round. The patient was in good condition at the end of the operation, though he vomited a little fluid faecal matter just when we were leaving. This was rather discouraging, but we comforted ourselves that it might be only chloroform-vomiting, and it turned out subsequently to be so. During the operation the intestines were freely handled, and everything about which there was a doubt was brought out into daylight and examined. Portions of intestine escaped now and then, but they were easily reduced.

The question of antiseptics in these cases is a difficult one to decide. In this instance I rejected the spray and the carbolic dressings. The skin was sponged over with a very weak solution of perchloride of mercury, and the sponges were wrung through the same fluid. The greatest care was taken to prevent the escape of blood into the peritoneum.

The after-history of the case was short and simple. There was no further vomiting. A dark liquid motion was passed a few hours after the operation, and a second copious motion a few hours later. Twenty-four hours after the operation the temperature was 99°, the pulse 100, respiration 24. The patient was kept under the influence of morphine, and for a few days he was limited to taking a little ice. He then had a little weak beef-tea; and, as he took it well, his diet was gradually improved, until one day, about a week after the operation, he took the matter into his own hands, and ate very freely of chops, cranberry-tart, and cheese. Later on he followed this up with hot cakes and tea. No bad results followed, and afterwards he simply took his ordinary diet. It was six days before his bowels were again moved, when a smooth consistent motion was passed; it was in one piece, and about a foot and a half long. The wound was untouched for a week, when the pad was lifted, the stitches were removed a few at a time, and in a fortnight the wound was healed.

As to the nature of the case, it seems pretty clear that the small intestine had become adherent to the back of the umbilicus in some previous attack of inflammation, and then that the gut had either become twisted or that it had been constricted by a band, and so strangulated. It is now eight months since the operation, and there has been no bulging of the scar, and no intestinal disturbance. He wears a broad pad with a strong belt, and has taken up light work.

OBSCURE CASE OF INTESTINAL OBSTRUCTION (?VOLVULUS): LAPAROTOMY: RECOVERY.

By C. STONHAM, F.R.C.S.ENG.,

Senior Assistant-Surgeon and Pathologist to the Brompton Cancer Hospital.

ELIZABETH H., aged 18, a laundress, came under my care on March 17th, 1884, with the following history:—

On the previous Friday morning, March 14th, she had gone to her work as usual, feeling quite well. Between 12 and 1 o'clock she felt slight pains in her abdomen, "like stomach-ache." The pain gradually increased in severity, and during the afternoon became suddenly so acute that she had to leave work and go home to bed. She says the pain was much worse just to the left of the umbilicus, was constant in character, and describes it as feeling as if the intestines were "all tied up in a knot behind the navel." The pain continued to increase in severity until I saw her. The bowels had acted well on the morning of the seizure, and had done so each day previously; there had been no action since, and no flatus had been passed since March 15th, the day following the first appearance of symptoms. At 7 P.M. on March 15th she vomited, and also again the following afternoon. Since the seizure she had not taken any food with the exception of an egg and some tea on March 15th.

State on Admission.—The patient was complaining of intense abdominal pain, more especially felt just above and to the left of the umbilicus; she was writhing in bed, and evidently suffering acutely, but got much relief from a hypodermic injection of morphine, one-third of a grain. There was no noticeable alteration in the shape or fullness of the abdomen. There was general tenderness on pressure, but this amounted to acute pain just above and to the left of the umbilicus. Both recti were tight and contracted, and this was especially noticed to be so with the upper half of the left one. No abdominal tumour could be made out, nor was there any evidence of an external hernia. Vaginal and rectal exploration and examination under chloroform revealed nothing further. The pulse was 110, small, and wiry; the temperature 99° F. Since admission she had been sick, and nothing had passed by the rectum. The tongue was rather over-clean and irritable, and there was a rim of frothy saliva on each side. The conjunctivæ were very slightly bile-stained. Hot fomentations were ordered to be applied to the abdomen, and a grain of opium to be given every four hours, and an enema of a pint of warm oil was administered.

March 18th. She had vomited five times since the previous day. The vomited matter was from the small gut, but was not stercoraceous; there was a constant feeling of nausea. The enema brought away one or two small hard scybalous masses. The abdomen was a good deal distended, more especially above and to the left of the umbilicus. She was under the influence of opium, and so the pain was less. The tongue was dry, brown, and cracked: the patient was nervous and anxious, the pulse was 120, and the temperature 100°.

As nothing further could be elicited by abdominal examination, after consulting with Dr. Sainsbury, it was decided to perform abdominal section.

Operation.—The patient being under the influence of chloroform, the abdomen was opened in the usual way, and the greatly distended transverse colon immediately protruded through the opening. The peritoneum was in a state of acute inflammation, and recent lymph coated the coils of gut, one or two of which were loosely united by it. On tracing up the gut from the rectum I found the sigmoid flexure and descending colon empty, but on arriving at the splenic flexure there was suddenly a large escape of flatus by the anus, and the distended transverse colon collapsed at once. I was not conscious of having undone any twist of the gut, but that was the only explanation I could offer to account for this occurrence. I passed all the intestines through my fingers, but found nothing except quite recent adhesions between one or two coils; these I separated. There was a little turbid fluid in the abdomen. The operation was done under the spray, and when the abdominal wound was closed it was noticed by all present that the abdomen was much smaller. Opium was ordered to be given in grain doses every hour.

March 19th. Since the operation flatus had passed freely, and the bowels acted twice this morning. Vomiting had occurred each time food had been given, but not at other times. The general condition had much improved, although she was still in a weak and prostrate state. The pulse was 120; the temperature 99°. Fairly firm pressure over the abdomen did not cause pain. In the evening the bowels were opened for the third time.

March 20. She had passed a very good night, and was very much improved. The bowels were opened once in the night, the stool was

copious and watery, and of a light-brown colour. There was no further sickness, and the abdominal pain had almost entirely gone. She took nourishment well. The pulse was 104; the temperature 99°.

March 21st. The bowels were well opened twice to-day; the stools were normal. She was very much better in all respects, but still complained of pain in the left hypochondriac region.

March 22nd. The wound was dressed for the first time; it was looking well; the bowels had been open seven times since the previous day. She slept and took food well.

March 24th. The sutures were all removed; the wound was quite healed, except superficially, where there was a shallow raw groove. The patient slept and ate well, and was taking solid food. There was still slight pain as before.

March 26th. The wound had quite healed, and the pain had left her. The bowels were rather freely open, and she had required a little astringent medicine, but is otherwise almost well. From this date she rapidly recovered, and left for the country in April, all abdominal symptoms having disappeared, and the bowels acting regularly.

Towards the end of 1885 I again heard of this patient at University College Hospital, where she had gone on account of constipation, but the usual treatment had soon removed all her symptoms.

REMARKS.—I have thought this case worthy of publication on account of the obscure nature of the cause of the obstruction. At the time of the operation those present, as well as myself, looked upon the case as being one of volvulus at the splenic flexure or thereabouts, and on further consideration of the case I think this offers the best explanation of the symptoms. In favour of this view, I would submit the following facts for consideration: first, the sudden onset of the attack and the early occurrence of severe pain, which gradually increased, so much so that morphine had to be given hypodermically. This pain was felt most at the navel and in the left hypochondriac region, and there was also general tenderness, due to the peritonitis, which I look upon as a secondary condition. Secondly, the vomiting was not at all a marked symptom, and although it consisted later on of the contents of the small gut, it never became stercoraceous. Again, the temperature remained normal throughout, but on the second or third day after the onset of the attack, it rose once to 100°, probably owing to the peritonitis; although I am aware that too much stress must not be laid on this point, since it is well known that acute peritonitis may run its course with a normal or even subnormal temperature. The condition of the gut below and above the splenic flexure, and the result of the operation, seem to me to point very strongly to the fact that there must have been a slight twist at this point.

Mr. Treves, in his excellent work on *Intestinal Obstruction*, points out that in cases of volvulus the distension of the abdomen is a marked symptom; but in this case it did not come on until the third day, and then was not very marked, and was most perceptible at the upper part of the abdomen. At the operation I did not detect any elongation of the meso-colon, as is usually the case in volvulus; nor, according to the patient's account, had there been any previous constipation. In conclusion, it seems to me that a point of great interest in this case is the fact that the twist (as I suppose it to have been) was reduced without any trouble; indeed, one could only judge of its presence by the beneficial effects that were at once produced as the hand passed along the descending and transverse colon. I do not think that the curious assemblage of symptoms and the effects of the treatment in this case bear any other interpretation than the one I here submit.

ADENO-ENCEPHALOID CANCER OF THE BLADDER.

By J. HEADLEY NEALE, M.B., M.R.C.P. LOND.,

Assistant Physician to the Leicester Infirmary.

(With notes of operation by Mr. C. H. MARRIOTT, F.R.C.S. Eng.)

On April 1st, 1886, Mr. T., a retired tradesman, consulted me, giving the following history:—He was 63 years of age, married, with one son; had never suffered from gonorrhœa nor syphilis. More than two years ago he noticed that he occasionally passed a drop or two of blood on completing the act of micturition, but for the last eight months he had been a martyr to precipitate urination. Every ten minutes or so he was compelled to micturate, "passing almost pure blood," the act being accompanied by the most intense suffering. The patient had a worn, haggard, and decidedly cachectic look, over and above the pallor of simple mechanical anæmia. I requested him to make water into a glass in my presence. He passed about an ounce of apparently pure blood, the whole act of micturition amount-

ing to the most intense strangury, which nearly bent the patient double. As the fluid was passed, a pale fibrinous clot immediately separated out as a solid mass and settled at the bottom of the glass. The blood was recent, and I suspected (a) an encysted calculus, (b) a tumour, malignant or non-malignant. A pill containing 3 grains of ergotin had a decided effect in lessening the hæmorrhage.

On April 8th, in company with my colleague, Mr. C. J. Bond, I sounded the patient's bladder, with a negative result so far as stone was concerned, but the following condition was easily made out: occupying the whole of the left side, and encroaching somewhat over the middle line to the right side of the trigone of the bladder, was to be felt a rugged indurated mass, evidently a sessile tumour, springing from the base of the bladder. A fragment that came away in the "eye" of the sound was examined microscopically, and the diagnosis of malignant disease arrived at. Our joint advice to the patient subsequently was that he should submit to an operation that would allow of free drainage of the bladder, and relieve him of the distressing spasm that accompanied each act of micturition.

Accordingly, having first sounded the patient's bladder and confirmed the diagnosis, Mr. Marriott, on May 3rd, performed median perineal section. Digital exploration of the bladder fully bore out the diagnosis, the tumour not only occupying the position indicated, but extending upwards on to the anterior wall, behind the pubes. Mr. Marriott then decided to remove what he could of the growth, using Sir Henry Thompson's recently devised instruments. In all, the masses removed weighed two ounces and a quarter; probably another quarter of an ounce was lost in the *débris* and blood-clots that came away. A rubber drainage-tube (quarter-inch) was passed into the bladder through the perineal opening, and kept in position by tapes. Through this, frequent irrigation with a solution of carbolic acid was ordered.

In a few days the patient became intolerant of the presence of the tube; it was constantly getting blocked with *débris*, and required frequent removal and re-insertion. A glass tube was then substituted, but with no better results.

The urine became alkaline; the tube, as well as the margins of the wound being coated with phosphates. A solution of benzoic acid was then ordered. The perineal wound closed up with remarkable rapidity, and on one occasion, the patient having removed the tube, and twenty-four hours having elapsed before I saw him again, it was with the greatest difficulty that I introduced a No. 10 soft elastic catheter into the bladder. However, he was not to be denied, and in a few days the wound had completely closed. There was a temporary lull, and then the old symptoms gradually returned, in addition to which a somewhat elongated prepuce commenced to slough in a line corresponding to the "corona penis."

[Microscopic section of a portion of the growth (hardened in Müller's fluid), stained with picro-carmin, had the characters of encephaloid cancer. This enabled me at once to give an unfavourable prognosis of the case; but being puzzled by the distinctly adenomatous type of certain portions of the sections examined, I sent a slide to Professor Greenfield, at Edinburgh, giving no particulars of the case, but asking for his independent opinion. He promptly and courteously replied as follows:

"The tumour is usually classed as encephaloid, but is of a form intermediate between malignant adenoma and encephaloid, and is not uncommon both as a primary and secondary growth in various parts."

The patient next complained of a "hard lump" at the site of the wound; this gradually increased until the whole of the perineal region was occupied by a large conical tumour, the apex of which had a gaping aspect. There was no breach of continuity, simply a stretching of the cicatricial tissue. To the outer side could be clearly seen the pale skin cicatrix; internal to this and pinker in colour, the cicatrised mucous membrane of the floor of the urethra, while beneath the latter a reddish-blue fungating mass protruded. The patient rapidly went from bad to worse, the stench of the fluid passed from the bladder was insufferable; he gradually sank, and died on August 5th.

REMARKS.—This case alone appears to me to put a limit to the range of surgical treatment of vesical tumours. Where a polypoid or pedunculated growth is diagnosed, by all means remove it; but in the case of a sessile tumour closely incorporated with the muscular walls of the bladder, the treatment best suited to the requirements of the case seems to me to be to establish and maintain free drainage and so relieve the strangury, leaving the tumour to take its own course. The instantaneous coagulation of the blood passed by the patient by the urethra may have an important significance when viewed in connection with the subject of metastasis and secondary deposits.