CASE XVI.

S. C., married woman, aged 20. Extensive carcinoma of the whole abdomen, probably commencing in the pelvis. Early acute obstruction. Transverse colostomy. Colon found so bound down and the mesocolon so infiltrated that it could not be brought over the rod; it was therefore stitched to the skin margin and a Paul's tube inserted. Patient was relieved of vomiting and pain, but the absence of a spur permitted a good deal of faecal matter passing beyond to stoma. Patient died of exhaustion a fortnight later.

CASE XVII.

J. V., man aged 60. Carcinoma of third part of rectum and anus. No obstruction, but great pain and bleeding on defaecation; some small glands in both inguinal regions. Transverse colostomy by Maydl's method and removal of all inguinal glands. Bowel opened fourth and divided on tenth day. Excision of rectum and anus four days after colostomy by direct route. Patient is alive and well three years after operation. He has never had the least trouble with the colostomy, and has excellent control, knowing at once when the bowels require relief. Tells me he frequently discards his belt in the hot weather, as he never suffers from extravasation or prolapse. There is at present no sign of recurrence.

CASE XVIII.

M. H., 69, married woman. Under care of Dr. Sidney Beauchamp. Patient had an umbilical hernia, with symptoms of intestinal obstruction, which were thought to be the result of it. At operation no strangulation was found but a narrow ring cancer of the splenic flexure. Transverse colostomy by Maydl's method. Bowel opened on table and divided on tenth day. Patient relieved; good recovery. Patient lived eighteen months. Up to last two months of her life she had no difficulty whatever with her bowels, the belt being comfortable and controlling the motions perfectly. During the last two months the growth invaded the abdominal wall and broke down, an abscess discharging beside the stoma. This ceased to discharge for some time, but again broke down, and ultimately the patient died of asthenia. Had this patient not been so aged and corpulent, the case would have been better served with an ileo-sigmoidostomy.

CASE XIX.

L. C., married woman, 57 years of age. Inoperable carcinoma of rectum in the second part. Admitted with acute obstruction, vomiting, and distension. Patient very ill, and transverse colostomy done simply to relieve distress, bowel being opened on table. Immediate recovery took place and colostomy worked well, but patient died of perforating ulcer of caecum on the eighth day.

CASE XX.

M. S., married woman, aged 57. Inoperable carcinoma of sigmoid. Patient going gradually downhill with bleeding, pain, sleeplessness, and recurrent obstruction. Transverse colostomy by Maydl's method. Bowel opened third and divided tenth day. Bleeding and pain ceased almost entirely. Patient obtained complete control as soon as belt was fitted, and although more or less an invalid owing to her weakness, was able to get about with comfort for months after her operation, and was still alive when seen twelve months from that date. There was never either extravasation or prolapse, and patient expressed herself as perfectly comfortable.

CASE XXI.†

R. C., man aged 57, suffering from carcinoma of second part of rectum, with bleeding, pain, and incontinence of faeces. Growth was removed by abdomino-perineal excision. Transverse colostomy done by Maydl's method as a preliminary operation. Bowel opened in forty-eight hours and divided tenth day. Patient, in spite of *Bacillus coli* infection of superficial layers of abdominal wound, made an excellent recovery. He has never had any difficulty with his wound and has done his work without discomfort, extravasation, or prolapse for nearly two years, and says he is very satisfied with his operation. There is no sign of recurrence.

CASE XXII.

S. S., man aged 65, suffering from malignant growth of transverse colon at junction of middle and left third. Laparotomy done at site of transverse colostomy and growth found slightly adherent to stomach and omentum. The whole mass with its mesocolon everted and fixed outside abdomen. Bowel opened on fifth day and whole mass resected on fourteenth day, leaving him with the condition of a transverse colostomy. It is now two years and eight months since his operation, and he is alive and well; he has done his work regularly since convalescence, and so satisfactory has his colostomy proved that he tells me he has "discarded his belt as he has perfect control without it, and never uses it 'unless he has taken a purge.'" In spite of the absence of the belt there is no prolapse. He wears a pad of cotton-wool over the stoma to protect it.

CASE XXIII.

F. J., man aged 41. Similar case to No. 21; transverse colostomy preliminary to abdomino-perineal excision of rectum. Patient unfortunately suffered severely from *Bacillus coli* infection owing to the tearing away of growth in the pelvis, where it was slightly adherent to the sacrum. He died on the fourth day.

† This patient has died of a recurrence since this paper was written.

CASE XXIV.

E. S., married woman, aged 62. Extensive inoperable carcinoma of second and third parts of rectum, with enlargement of liver and secondary glands. Transverse colostomy by Maydl's method. Bowel opened fifth and divided tenth day. Patient had perfect control and lived three months without discomfort or prolapse. Bowels were moved morning and evening. She died of asthenia.

CASE XXV.

M. M., married woman, aged 60. Similar case in all respects to the above, and equally satisfactory; neither extravasation nor prolapse, and patient is alive and able to get about without discomfort.

CASE XXVI.

J. W., unmarried woman, aged 57, sent to me by Dr. Donkin of Bexley. Carcinoma of second part of rectum, no glands and no enlargement of liver. Transverse colostomy done as preliminary operation to abdomino-perineal excision of rectum, the two operations being done under spinal analgesia, with the exception of forty minutes light chloroform anaesthesia. Sixteen months since operation, patient well and no sign of recurrence. Colostomy works well, and with belt she has complete control, is comfortable, has no trouble with her bowels, and is able to get about as well as ever. She expresses herself as being very pleased with the result of operation.

Thus of these 26 cases 23 have been done by the transverse and 6 by the iliac method. Of the former 3 were done for non-malignant and 17 for malignant conditions. Of the non-malignant 1 died of strangulation at three months, and 1 of phthisis at two years from operation, the third is alive and well to-day.

Of the malignant cases 5 are alive to-day, 1 at three years, 1 at two years, 2 at eighteen months, and 1 at a year from the time of operation; and in all of these this method of colostomy has fully justified the opinion I have formed of it, as it has also done in all cases in which the patients have lived sufficiently long to allow of an honest judgement being formed.

REFERENCES.

¹ *Clinical Society's Transactions*, 1906. ² *BRITISH MEDICAL JOURNAL*, July, 1912. ³ Allingham, *Diseases of the Rectum*, p. 432.

URACHAL FISTULA.

BY

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As is well known, in early fetal life the allantois, the pouch from the lower end of the primitive intestinal cloaca, projects through the umbilicus. At the seventh month the upper portion of the allantois becomes normally closed and forms a fibrous cord, called the urachus, extending from the umbilicus to the urinary bladder, which is derived from its lower portion. Now and then the upper part remains patent, as the so-called urachal fistula, from which a certain amount of urine escapes upon attempts at micturition. In such a case any of the following conditions may be observed:¹

(a) A button-like papillary projection at the umbilicus with an orifice at its summit, through which a probe may be passed.

(b) The urine may escape at several points of a hernial protrusion, covered externally by mucous membrane.

(c) The orifice may be a mere deficiency in the linea alba.

The abnormality may be said to be one of degree, the greatest deformity being fissure of the bladder, in which condition the allantois has failed to close completely inside the abdomen, so as to form the urinary bladder, and the lateral borders of the latter are adherent to the sides of the cleft, while the anterior wall is entirely absent. Again, the cleft may be confined to the upper part of the bladder, which presents itself as a red protrusion just beneath the umbilicus, the parts below being perfect.² Whichever condition exists, there is a greater or less amount of discomfort and danger.

The following case is interesting, because of the size of the projection, the presence of an apparent pouch, and the rapidity of closure with practically no interference of a surgical nature:

Mrs. W., primipara, somewhat neurotic, was confined on May 19th, 1912. Presentation was normal, and, on account of a prolonged second stage and the patient's temperament, delivery was accelerated by forceps under an anaesthetic.

The child (a male) was apparently healthy, presented no obvious signs of incomplete development, and shortly after birth weighed $7\frac{1}{2}$ lb. It may be noted that the umbilical cord contained a great excess of Wharton's jelly, its circumference being 6 in. at a point 7 in. from the child. It was tied and afterwards dressed in the ordinary way.

Four days later (May 23rd) the nurse reported that the state of the navel seemed unusual, and that the infant had not passed any urine. On examination the cord was found to be partially separated and particularly foul, the surrounding skin having an inflamed appearance. What remained of it was removed, and there was found at the umbilical region, projecting quite above the surface of the skin, a bright red mass of almost cauliflower appearance, having a circumference slightly larger than that of a penny. It was tender to the touch, and at two obvious points upon its surface small globules of urine oozed, while the child cried and struggled. On passing a fine probe into these openings it was found that one led straight into the cavity of the bladder without any obstruction; the second led into the first passage, about $1\frac{1}{2}$ in. from the entrance; there was a third opening on the surface into which the probe entered for only an inch, but when in this small pouch it could be moved easily from side to side. In no case could the probe be passed upwards.

The surrounding skin was smeared with a mild, unirritating ointment, and waterproof tissue, cut in such a way as to fit tightly round the base of the projecting mass, and so prevent the urine touching the skin, was applied, and on the top of this a thick pad of wool and binder, the wool being changed as frequently as was necessary. There was a slight degree of phimosis present, but when, two days later, a small catheter was passed, the urethra was found quite patent. The raw surface was dressed several times a day like an ordinary wound, and the child got frequent boric acid baths, as recommended by Vaughn,³ to aid normal micturition.

On May 30th, eleven days after birth, the nurse stated that normal micturition had begun, and on June 6th it was seen that the pad of wool was no longer wet with urine. The protuberance had diminished in size, and, on probing, though the main canal leading to the bladder was still pervious, the smaller one could not be found, whilst that connected with the small pouch would scarcely admit the probe. The whole surface was lightly touched with silver nitrate.

On June 12th the projection was only the size of a small nut, and pink instead of red in colour. The only canal pervious was the main fistula, and no urine was squeezed out even when the child struggled, or during micturition. It was again treated with silver nitrate, the entrance to the fistula being especially cauterized.

On June 24th the umbilicus still projected slightly, but had become the colour of the surrounding skin. Probe entered the fistula with difficulty.

On August 10th there was no apparent fistula left, and all the functions of the infant were normal.

At no time in this case was there any rise in temperature, nor was any faeculent material ever excreted at the fleshy protrusion. The child, with the exception of the first few days of its existence, steadily increased in weight, and on August 10th was 16 lb., and above the average weight at that age. There were no complications, and the progress throughout was not such as to warrant more energetic methods of treatment.

In some cases a slender electric cautery has been applied to close up a small urachal tract, but this is not without danger; in others, laying open the dilated urachus at the umbilicus, curetting its walls, and cauterizing the whole interior with zinc chloride, is successful even after plastic paring has failed.⁴

In cases simpler than that detailed above the application of a ligature around the base of the papilla which will dry up and fall off, leaving the fistula permanently closed, is sufficient. The choice of any of those methods of treatment, however, must depend not only upon the local conditions at the umbilicus, but also upon the circumstances associated with the abnormality, for urethral calculus, phimosis, and congenital stricture often accompany it, and unless these are treated with a certain degree of success, no attempt at closure should be made.

REFERENCES.

¹ Treves: *System of Surgery*, vol. ii. ² Coats: *Manual of Pathology*, p. 48. ³ Trans. Amer. Surg. Assoc., vol. xxiii, 273. ⁴ Willard: *Surgery of Childhood*.

A COMMITTEE has been formed for the establishment of a German society of military dentistry. The president is Hofzahnarzt G. Labaschin (Berlin-Wilmersdorf).

THE Royal Academy of Medicine at Turin reminds the medical profession in all countries that the thirteenth award of the Riberi prize of £3,000 for scientific work relating to medical subjects in the widest sense will be made on December 31st, 1916. For particulars application should be made to the Secretariat of the Academy, 18 Via Po, Turin.

ENCHONDROMA OF THE MANUBRIUM STERNI SUCCESSFULLY REMOVED BY OPERATION.

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A. C., aged 26, a healthy, well-developed, sea-going engineer, was sent to me on February 15th, 1913, by Dr. Baker, of North Shields. He had a swelling in the lower part of his neck, immediately above the sternum (Fig. 1), and he complained of difficulty in breathing when he exerted himself.

When I first saw him he had just arrived at the Royal Victoria Infirmary, having walked uphill from the railway station, a distance of less than a mile; he looked anxious and appeared to be distressed in breathing, and he told me that he always felt the same after exertion. With the exception of shortness of breath he had no complaint to make and he appeared to be in perfect health.

History.

He had known of the existence of a swelling above the sternum for years. It had never inconvenienced him by interfering with his employment and it had never been painful. Seven months previously he noticed that it was increasing in size, and shortly after that date he began to feel some shortness of breath during exertion, but he always found that he recovered as soon as he rested. The shortness of breath, however, had become distressing during the few weeks before he saw Dr. Baker, and on that account alone he sought medical advice.

Condition on Admission.

The swelling was in the mid-line of the neck, and in appearance it was indistinguishable from an adenoma of the thyroid gland. It was densely hard, uneven on the surface, and continuous with the sternum. The sternal head of each sterno-mastoid muscle passed in front of the tumour, which was not affected by the act of swallowing. Movements of the head and of the neck were natural. There was no cyanosis and no visible distension of the veins of either the head and neck or of the arms. The patient was not aware of any alteration in the tone of his voice, and there was no pulsation or bruit in the tumour.

He was admitted as an in-patient for observation, and during the few following days he showed no symptoms whatever.

The tumour, being of very slow growth, was thought to be innocent; but, in view of the fact that the difficulty in breathing was increasing rather rapidly, there was a suspicion that it might be sarcomatous. An x-ray photograph showed a shadow in the situation of the tumour, but it was ill defined and little more than enough to obscure the shadows of the vertebrae.

Diagnosis.

We had to deal with a tumour attached to the sternum which was narrowing the upper outlet of the thorax and implicating the trachea at such a low point as to render it impossible to perform tracheotomy, should that operation, as seemed probable, become necessary, and thus removal of the tumour was the only alternative. The question arose, Was removal practicable? Slow growth and the absence of any symptoms pointing to infiltration of adjacent structures made it probable that there was something in the nature of a capsule, and, if that were the case, removal would be possible. In that opinion I had the benefit of the concurrence of Professor Rutherford Morison.

Operation.

I operated on March 5th. The incision was in the line of a necklace with a pendant (Fig. 2). Both sterno-mastoid muscles were fully exposed in their lower portions, and so were the great pectoral muscles and the sternum to a point below the junction of the manubrium and the gladiolus. Each sterno-mastoid muscle was divided about $2\frac{1}{2}$ in. above the clavicle, but not completely, the outer part of the clavicular portion of each muscle being left. The sterno-hyoid and sterno-thyroid muscles were behind the tumour, and were divided at a late stage of the operation. Each clavicle was sawn through about $\frac{3}{4}$ in. from