Sequelae.

An infant may be left with a weak digestion and fall into a state of marasmus. Bronchitis is a very common accompaniment, and such patients must always be kept very warm. After prolonged enteritis, swelling of the backs of the hands and dorsum of the feet is common. This is toxic oedema, and has nothing to do with kidney disease. Drugs form a minor part of the treatment. Bismuth in some form does, however, help to diminish the number of motions, and small doses of opium at the proper time. Never give opium at the onset or if the infant is collapsed. Opium is, however, useful when the large bowel is affected and there is excessive peristalsis going on.

Pyloric Stenosis in Infancy.

A clear understanding of the condition and the recognition of the importance of early diagnosis, and so treatment, is most important. I am quite sure that if pyloric stenosis in infants could be recognized early many lives would be saved. It is a more common condition than is usually thought to be the case. By pyloric stenosis we mean a great hypertrophy of the circular and longitudinal muscles which control the passage of food from the stomach to the duodenum. The muscle here becomes enormously thickened and hypertrophied so as to block the pyloric canal. The consequence of the block is that the stomach wall also increases in thickness as it tries to force food through the tight pylorus. As the food cannot get through the pylorus it is vomited forcibly. In the great majority, the infant is a boy. Many cases occur in the first-born; there is a special liability for any first-born infant to have an abnormality.

The symptoms do not appear till the infant is at least two weeks old, and the commonest time for the vomiting to start is at the age of two to four weeks. It is forcible and projectile in character and large in amount, for more than one feed may be brought up at a time. Constipation is marked, for little passes through the pylorus. The wasting is rapid and progressive, as little food is retained. The infant is greedy for the feeds, as it is hungry. This is quite unlike ordinary dyspepsia.

Waves of peristalsis may be seen passing across the abdomen, due to contractions of the stomach. They are best seen while the infant is having a feed or soon after. This peristalsis may be seen in other conditions besides pyloric stenosis, but it is specially well marked in it. The pylorus may be felt under the right rectus muscle, about an inch above the umbilicus. If the tumour is not felt, this fact should not disturb us, as the detection of the tumour is often quite impossible. I am quite convinced that so soon as the condition is diagnosed surgical intervention alone will give the best results. Although medical treatment has undoubtedly been successful in a number of cases, much valuable time may be lost, and the infant will be, in consequence, less able to stand the operation. The best operation is that devised by Rammstedt. It consists in a transperitoneal incision of the hypertrophied pyloric ring, leaving the mucous membrane intact, thereby restoring the continuity of the alimentary canal. The mortality is now being very much reduced by this method, and it should be only about 10 to 20 per cent., or even less.

Breast-feeding is a great help in the after-care of these cases, and the mother should be carefully looked after to see that her milk does not cease during the short operation period. If the infant survives, there is no disability left in the future.

PARTIAL INTESTINAL OBSTRUCTION IN A CHILD DUE TO POST-RECTAL TERATOMA.

BY

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THIS case is interesting on account, not only of the rarity of the tumour described, but also of the condition of bowel obstruction resulting from it.

Bland-Sutton¹ states that post-rectal teratomas are very rare. There is a specimen in the Middlesex Hospital museum containing hair, grease, and a tooth. The origin

of these tumours is obscure. They are probably the result of incomplete dichotomy at an early stage. Keen removed a tumour connected with the skin by a cartilaginous tract resembling a trachea. Some post-rectal tumours have been described communicating with the sacral dura mater and resembling spina bifida sacs.

D. C., a boy aged 4 years and 5 months, was sent to the Derbyshire Children's Hospital by Dr. G. S. Sims of Derby on February 5th, 1925. The mother stated that the boy had been very constipated for a few weeks, and that a fortnight previously his abdomen had suddenly swelled up. On close questioning she admitted that the child's bowels had never been regularly moved since birth. There had been no vomiting, nor any failure of appetite.

The boy was somewhat undernourished. The abdomen was enormously distended and resonant all over. A hard mass could just be felt on deep palpation above the pubes. Peristalsis was easily seen. The liver dullness was normal, the spleen could not be felt, and there was no shifting dullness in the flanks. Both testicles were in the scrotum. There was a slight rise of temperature, but this rapidly fell to normal. The pulse was 128.

On rectal examination the pelvis was found to be filled by a large hard mass lying behind and somewhat to the left side of the rectum. The bowel was so tightly compressed that it was impossible to pass the finger beyond the mass. During the examination a burst of flatus suddenly escaped and the distension of the abdomen became distinctly less marked. The urine contained no acetone or diacetic acid.

A flatus tube was passed at intervals, followed by an injection of pituitary extract. The size of the abdomen was much reduced by this procedure, but the effect was transient. Occasional enemata produced fair results, but with only temporary effect on the abdominal distension. A radiogram of the pelvis showed nothing abnormal.

Operation.

On February 16th the abdomen was opened by a left paramedian incision displacing the rectus outwards. A very small quantity of blood-stained fluid was noticed in the peritoneal cavity. The large intestine was enormously distended and hypertrophied, being about the size of the inner tube of a cycle tyre. The lower part of the small intestine also was both distended and hypertrophied. This was less marked higher up, and the jejunum appeared quite normal. The pelvis was completely filled by a hard retroperitoneal mass, the upper convex surface of which was covered with distended veins and rose well above the brim of the pelvis.

The growth was obviously inoperable. A small gridiron incision was accordingly made near the right anterior superior iliac spine and the mass exposed retroperitoneally, incised, and some fragments secured for microscopic examination. The general condition of the child not being very good, a descending colostomy was performed through the laparotomy incision and a Paul's tube inserted.

Pathological Report.

The section shows a remarkable new growth, consisting of a mass of tissue which, on close inspection, is seen to be made up of small papillary outgrowths of fibrous stroma, covered with epithelium of an elementary type. It is practically certain that this is part of a teratoma. What the tissue is it is impossible to say—it is too slightly differentiated to have a special function or name; this may be the main element of its malignancy, which is evidently of a high order. If the entire aberrant mass could be examined there is little doubt that other tissues would be discovered, though in the case of a malignant overgrowth of teratomatous tissue it is quite usual for one type of tissue to become considerably more increased than the remainder.

After-History.

The child was fairly comfortable after the operation, and the abdomen greatly diminished in size. The chief difficulty was in passing urine, and it is probable that the immediate cause of death on March 5th was uraemia. For the last few days the patient was semi-conscious.

Post-mortem Examination.

The bladder was much distended, and its walls very thin. The colon, both above and below the colostomy opening, had contracted down in a very striking manner. The liver and other viscera appeared normal. A spherical mass of friable tissue, the size of a small orange, was lying between the rectum and the sacrum—somewhat enveloping the former. This mass, on close inspection, appeared to be composed of several different tissues, and contained numerous tiny hard nodules (cartilage). No hairs or teeth were found.

The section shows various tissues, including muscular, nervous, and epithelial cells, all in a primitive state of development. There can be no doubt that the tumour is a teratoma. There is cartilage and a calcified area in the section, but no actual bone formation. The period of partial isolation from the main mass of the foetus must have been quite early.

It would appear to be a matter of doubt whether this tumour was highly malignant or benign. Some of the sections suggest the former, but several cases have been described in which similar tumours have eluded discovery until fairly late in life.

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REFERENCE.

¹ Bland-Sutton: *Tumours, Innocent and Malignant*, sixth edition, p. 512.