

ENTEROGENOUS CYST CAUSING CONGENITAL INTESTINAL OBSTRUCTION

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Cysts whose walls reproduce completely or incompletely the structure of gut, whether discovered in the wall of the gut, attached to the gut, or even more or less remote from the gut, must have been derived from the gut (Evans, 1929). They originate either in the vitello-intestinal tract or in diverticula normally found in the developing embryonal endoderm (Lewis and Thyng, 1908). One or more of these diverticula may persist as diverticula and increase in size, or they may become closed off from the bowel and form separate cystic structures. They have been found and described in all parts of the alimentary tract from the oesophagus to the sigmoid colon. The commonest site is in relation to the small intestine, with the ileo-caecal angle and the duodenum as the next most common sites.

Most of these cysts, when they occur in infancy and childhood, have been found incidentally during post-mortem examinations.

In looking through the literature it appears that no case has been found of a cyst being the cause of congenital intestinal obstruction. In adults the cysts present clinically as simple abdominal tumours or as a result of complications. The complications which have been described are (1) intestinal obstruction including pressure, volvulus, intussusception, carcinoma; (2) inflammation, acute and chronic (tuberculous condition of a cyst and related bowel); and (3) neoplastic conditions which may be primary in the cyst or secondary from direct spread from related bowel.

The case reported showed an enterogenous cyst in the upper jejunum causing congenital intestinal obstruction with a second large cyst in the lower ileum.

Case Report

A boy, weighing 9 lb. 6 oz., was born at 10.30 p.m. on July 20, 1949. The mother had marked hydramnios; otherwise the pregnancy and parturition were normal. The baby was cyanosed at birth, had distension of the abdomen, vomited liquor and vernix, but had no bowel action in the first few hours after birth.

On examination 15 hours after birth the baby showed normal development. There was slight dusky cyanosis,

and numerous petechiae of the head and neck were noted. The fontanelles were normal, and also the chest and cardiovascular system.

Marked distension was present in the abdomen. A visible and palpable cylindrical mass, almost filling the whole abdomen and extending more or less transversely across it, was found and thought to be distended colon. There were no bowel sounds on auscultation. The little finger could be inserted about $1\frac{1}{2}$ in. into the rectum when there appeared to be some narrowing. A clinical diagnosis of intestinal obstruction probably due to large bowel obstruction, was made.

A straight x-ray film was taken of the abdomen with a metal probe in the rectum. The film showed gas in the upper abdomen only, corresponding roughly to the stomach and duodenum. There was no gas in the rest of the abdomen.

A laparotomy was performed as the clinical picture of obstruction with distension suggested a colonic or rectal lesion, although the radiograph showed gas in the upper abdomen only.

Pre-operative treatment included aspiration of the stomach, and the administration of penicillin (30,000 units), vitamin K (10 mg.), and DOCA (2 mg.).

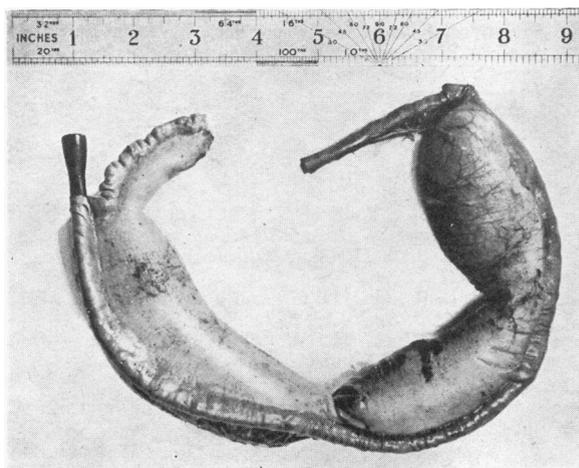


FIG. 1.—Cyst at lower end of ileum with catheter passed through lumen of ileum.

Operation on July 21, 1949, was performed under continuous ether vapour and oxygen, and a right paramedian incision was employed.

A large cylindrical cyst, about 12 in. long, filling the central abdomen was found, extending to within 6 in. of the ileo-caecal junction (Fig. 1). The cyst was tense and lying between the two layers of the mesentery with the ileum stretched over its outer surface. The mesentery was oedematous, congested, with petechial haemorrhages, suggesting that there had been some partial volvulus of the involved region. A second cyst, containing 40 ml. of fluid, was found 8 in. from the duodeno-jejunal flexure. This cyst had twisted together with the jejunum *in utero*, and, on untwisting, an area of complete atresia (1½-2 in.) of the jejunum was found. This appeared as a fibrous cord connecting two parts of the jejunum. The remainder of the abdominal organs appeared normal.

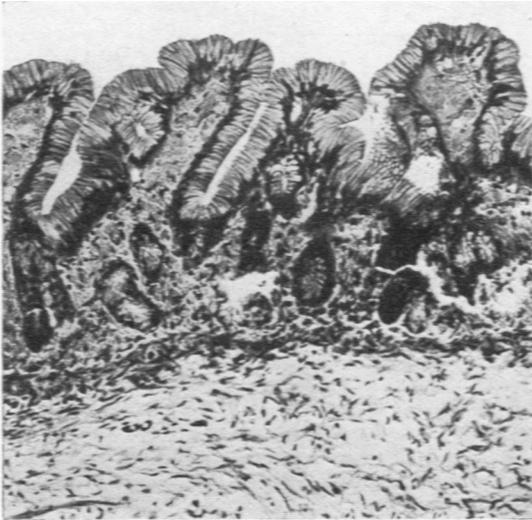


FIG. 2.—Section showing columnar mucus-secreting epithelium lining the cyst. $\times 140$.

A section 12 in. long of lower ileum and cyst were resected and anastomosis performed. A side-to-side anastomosis of the jejunum, short circuiting the cyst and the atretic portion, was performed. The cyst was aspirated and partially excised, the edges being oversewn. The wound was closed without drainage.

Continuous oxygen was instituted immediately after operation, and 30 ml. of saline given subcutaneously every four hours. Penicillin, 150,000 units, was given twice daily.

The baby improved for the first two days, and normal bowel actions occurred. On the third day the abdomen became distended and some flatus and meconium were passed following a rectal wash-out. But the infant's general condition gradually deteriorated in spite of treatment, and he died on July 26, 1949.

Post-mortem Examination. The heart and chest were normal apart from small foci of consolidation in the lungs.

Some peritonitis was present in the abdomen with a small pocket of pus near the anastomosis of the lower ileum. Inspection showed thrombosis of the mesentery in this region, with an area of necrosis in the mesenteric border of the anastomosis and leakage from the ileum.

The liver was enlarged and bile-stained.

The cyst wall showed a lining of a thin layer of mucus-secreting tall columnar epithelium (Fig. 2), possessing shallow crypts. The remainder of the wall showed a thin submucous layer and three well defined muscle layers. The whole cyst showed all the main elements of bowel histology thereby proving its origin.

Summary

A case of congenital intestinal obstruction due to intra-uterine volvulus of an enterogenous cyst in the jejunum, with a second large cyst in the lower ileum, has been described. No other record of a cyst causing congenital obstruction has been found in the literature.

REFERENCES

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 Lewis, F. T., and Thyng, F. W. (1908). *Amer. J. Anat.*, 7, 505.