A CONGENITAL MALFORMATION OF THE INTESTINE

MULTIPLE POINTS OF COMPLETE OBSTRUCTION

L. M. DRENNAN, M.D., AND H. C. CLARK, M.D.
ANCON, CANAL ZONE

According to various authors, congenital malformation of the intestine is not very frequent, aside from imperforate anus. When the rectal malformations are left out of consideration it is stated that the large bowel is much less commonly the site of congenital variations than the small bowel.

Leichtenstern[1] found the proportion of cases in the different situations as follows: 375 at the anorectal junction, 75 in the small intestine, and 10 in the colon.

Holt[2] says that stenosis or atresia may occur at one or more points in the small bowel, but that obstruction is much more frequent in the upper portion, the common seat being the duodenum. Atresia is more often seen than stenosis, the causes suggested for their formation being fetal peritonitis and volvulus.

A review of the literature indicates that but one point of actual obstruction is usually found, while beyond this are sometimes found one or more points of stenosis. The clinical picture produced by such a malformation is that of intestinal obstruction and, as a rule, even surgical intervention can offer little hope of a cure. The duration of life depends on the location of the obstruction. The nearer the stomach the lesion is, the shorter the duration of life.

In view of the infrequency of this condition, and because of the very limited number of cases, if any, of complete multiple congenital obstructions of the jejunal type, we offer this brief case report taken from the surgical service of Dr. A. B. Herrick.

CASE REPORT

Hospital No. 169112, Baby S., white, male, aged 4 days, local residence, Paraiso, Canal Zone.

Family History.—Mother and father in good health; no accident to mother during gestation, so far as could be determined. First childbirth normal and the child continues in good health up to the present. No family history of such an accident in either the maternal or paternal records.

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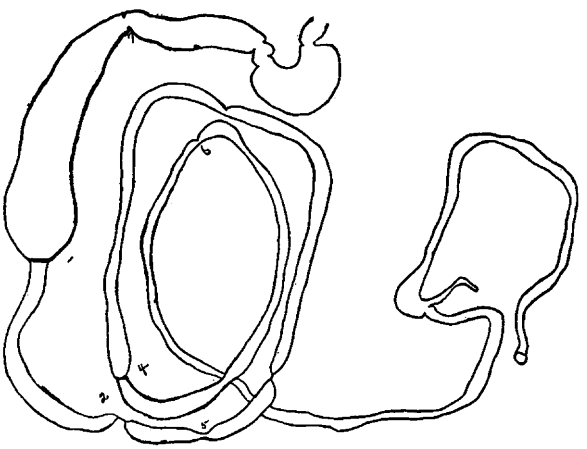
1. Leichtenstern: Osler's Modern Medicine, Lea & Febiger, Philadelphia and New York, 1908, v, 458.
2. Holt, L. E.: The Diseases of Infancy and Childhood, D. Appleton & Company, New York and London, 1909, p. 353.

Previous History.—The child was born on November 15 at 3 p. m., after a normal, easy delivery. Vomiting began as soon as the child was put to the breast and was repeated after every feeding. The vomited matters were bile-stained mucus and milk. On account of the fact that the bowels did not move, on the following day calomel was given without result, and after an enema a small amount of inspissated meconium was passed. The vomiting continued until the child was brought to the hospital. Repeated enemas were given without result. The urine was normal.

The infant was put to the breast regularly and given about a dram of warm water after each feeding. All feedings were retained about four hours and then a small amount of milk was regurgitated. Three hours later it had another attack when about four ounces were vomited in somewhat of a projectile manner. Little vomiting attacks then continued at intervals and the child became fretful. The day following its birth the infant appeared dull, listless and was somewhat jaundiced. A loss of four ounces in weight was noted. There was



The bowel was fixed in a formaldehyd solution and then arranged so that an exact tracing could be made of its shape and length. This tracing was then photographed and the figure presents, on a smaller scale, the true relations of the stenosed and obstructed points. There were three compartments in the small bowel that were entirely closed at either end. Other points of stenosis were apparent at 5, 6, 7, etc., as indicated in the figure. The entire length of the small bowel was 175 cm., that of the large bowel 30 cm.

no bowel movement. Congenital obstruction was suspected and Dr. Herrick advised and performed a laparotomy. Exploration revealed a high congenital malformation causing complete obstruction of the small bowel, and other points indicating stenosis of the small intestine. Surgical interference appeared hopeless and further operative efforts were abandoned. The abdomen was closed and the child removed to the ward. Death occurred a few hours later.

Necropsy.—A small, male, white child; skin and conjunctiva jaundiced; head not examined. Nothing abnormal was found in the thoracic or any of the abdominal organs excepting the gastro-intestinal tract.

The stomach appeared normal but the peculiar formation and arrangement of the large and small bowel necessitated a careful removal and rearrangement before all segments could be recognized.

Four complete congenital occlusions of the small bowel were found. The first one was 28 cm. from the pyloric ring and the form of occlusion was that

of a thin tissue diaphragm lined on its upper surface by the usual type of mucous membrane, while below, it had a smooth parchment-like surface. The duodenum and the portion of the jejunum above this partition had been a large food reservoir for all the food taken, and therefore was tremendously dilated and the wall thickened. This portion of the bowel and that which immediately followed it were so modified in appearance that the first impression on opening the abdomen was that some peculiar transposition of the viscera had taken place, because it resembled a large cecum and appendix. This enlarged portion had gravitated to the right iliac fossa. Only a complete dissection of the esophagus, stomach and bowel allowed a proper orientation.

The second obstruction was found 15 cm. below the first one mentioned, but instead of a membranous partition the bowel simply tapered off to a fine solid cord of tissue measuring 3 or 4 mm. in length and about 1 mm. in diameter. No food had ever had access to this portion of the bowel. The content was a clear, mucous fluid.

The third obstruction was 10 cm. below the second one just described and was similar in nature.

The fourth obstruction was 42 cm. below the third and was a membranous partition like the first one described except that the segment of the bowel and the partition were of course small. On the peritoneal coat there was no evidence of this occlusion and even though the surgical intervention had removed the first, second and third obstructions, this one would have defeated their efforts. This point was found only by injecting water through a syringe into all portions of the bowel to see how many compartments really existed.

When water was injected above the first obstruction it eventually escaped through the stomach and esophagus and when injected below the fourth obstruction it escaped through the large bowel by way of a catheter in the rectum. No imperforate state of the ano-rectal region existed.

No evidence of a congenital malformation was found in the body other than a small, persistent foramen ovale.

The case not only presents an unusual number of congenital malformations in the jejunum but shows how difficult and hopeless surgical treatment may be under such conditions.