

LETTER TO EDITOR

Sigmoid Colon Atresia in a Neonate: Something Else Lies in Store

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Dear Sir

A 1-day-old full-term male neonate with birth weight of 3.5 kg was referred to us at 46 h for generalized abdominal distension and multiple bilious vomiting episodes. He was born to the second gravidae mother through normal vaginal delivery. Routine antenatal visits did not show any abnormality. At 30 h of life, he developed progressively increasing distension of abdomen and multiple vomiting episodes, which were non-bilious in nature initially. Till that time, he had not passed meconium. On examination, the abdomen was distended, tense with exaggerated bowel sounds. On rectal examination, no meconium was present. X-ray abdomen revealed gaseous dilation of bowel loops, multiple air-fluid levels with the absence of pelvic gas shadow (Figure 1). Screening ultrasonography skull and two-dimensional echocardiography were normal.

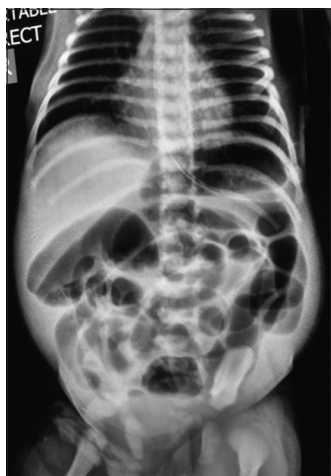


Figure 1: X-ray abdomen showing gaseous dilation of bowel loops, multiple air-fluid levels with the absence of pelvic gas shadow

Contrast study was precluded by worsening status, and he was posted for immediate exploration. Exploratory laparotomy revealed Type II rectosigmoid atresia with dilated proximal colon and narrow caliber rectum [Figure 2]. Resection of distal sigmoid colon atresia part was done with end-to-end recto-

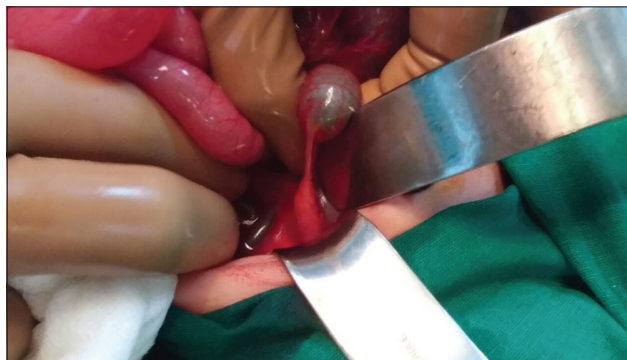


Figure 2: Type II sigmoid colon atresia with dilated proximal colon and narrow caliber rectum

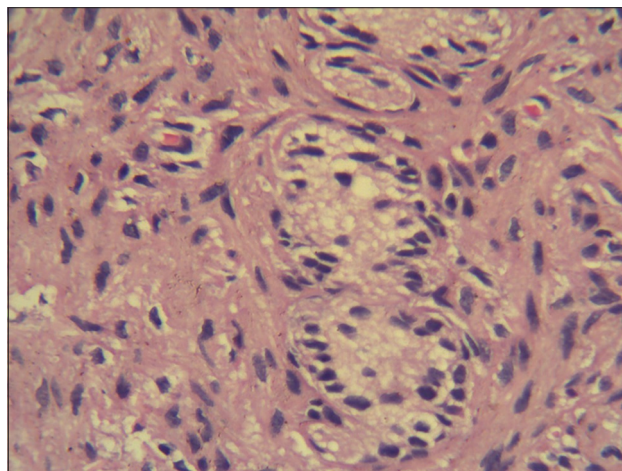


Figure 3: Distal segment conspicuous for the absence of ganglion cells

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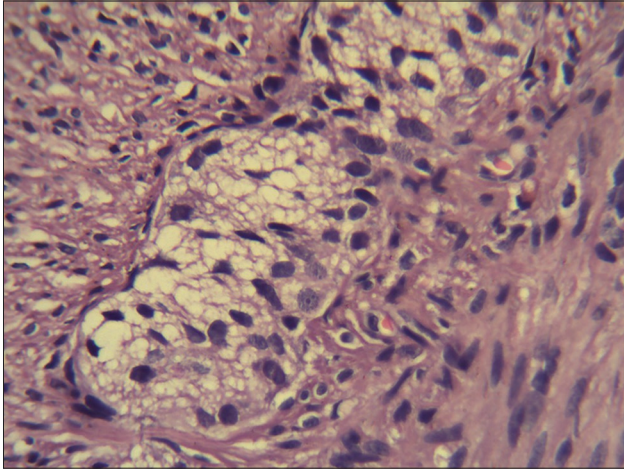


Figure 4: Proximal dilated segment showing the presence of myenteric plexus and ganglion cells

sigmoid anastomosis along with the right transverse loop colostomy.

Histopathological examination showed the presence of myenteric plexus and ganglion cells in the proximal dilated portion. Distal segment revealed irregular muscular layer without any lumen or mucosa and conspicuous for the absence of ganglion cells [Figures 3 and 4]. At 6 months of age, rectal suction biopsy was repeated to confirm Hirschsprung disease, and Duhamel pull-through was performed with closure of colostomy.

Functional immaturity of the colon is the most common diagnosis in neonates who fail to pass meconium for more than 48 h [1]. Other differential diagnoses are Hirschsprung disease and colonic and anal atresias. Colonic atresia is a rare cause of congenital intestinal obstruction with an incidence of between 1:20,000 and 1:66,000 live births [2]. In majority of cases, it is detected intraoperatively, while in others, by pre-operative contrast studies of 12 cases, 8 cases were diagnosed only intraoperatively, either at exploration for low intestinal obstruction or while correction of abdominal wall defects, in a series presented by El-Asmar et al. [3] Since the description of association between colonic atresia and Hirschsprung disease by Akgur et al. in 1993 [4]. Many other authors have noted this association. Of late, this has reduced the incidence of usual detection of Hirschsprung disease after several failures of intestinal anastomoses. Intraoperative predictor of aganglionosis (a foreshort-

ened, non-fixed colon coiled in the pelvis) was noted by Fishman et al. [5] Colonic atresias require a surgical decision-making for either primary anastomosis or creation of stoma. Unfamiliarity with this association makes one erring on the side of primary anastomotic closure, only leading to complicated post-operative period with anastomotic dehiscence, recurrence of intestinal obstruction, episodes of enterocolitis, and sepsis needing additional operative procedures. Rectal biopsy is warranted either at initial exploration or before closure of stoma and restoration of intestinal continuity.

Early diagnosis and management, atresias at multiple intestinal sites, associated major and minor anomalies and undiagnosed Hirschsprung disease are the factors, which decide prognosis.

Author's contribution

All authors contributed equally in concept, design, literature review, drafting the manuscript, and approval of the final manuscript.

Consent statement

Authors declared that they have taken informed written consent, for publication of this report along with clinical photographs/material, from the legal guardian of the patient with an understanding that every effort will be made to conceal the identity of the patient however it cannot be guaranteed.

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