Colonic Atresia: An Unusual Cause of Intestinal Obstruction in a Neonate
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INTRODUCTION

Intestinal obstruction due to colonic atresia is rare, with incidence of 5 – 15 % of all intestinal atresias. They usually result from an intra-uterine vascular insult and is found proximal to splenic flexure. On antenatal ultrasound, this condition may manifest as multiple echo free areas, corresponding to dilated bowel loops or as an isolated dilation of colon. On plain radiograph, diagnosis is usually suspected by the presence of air distended bowel loops, multiple air-fluid levels and absence of air in the rectum. Contrast enema confirms the diagnosis.

CASE REPORT

A one day old male child, weighing 3.2 kilograms, presented with progressive abdominal distension. The child had not passed meconium till 12 hours of life. On examination, the child was irritable, with excessive crying. General physical examination did not reveal any pallor, icterus or lymphadenopathy. Pulse rate was 124/minute, respiratory rate 32/minute, and blood pressure 74/60 mm of Hg. Abdominal examination revealed distended abdomen, with increased peristaltic activity, however no mass was palpable. There was no organomegaly. Per rectal examination revealed empty rectum. Chest, cardiovascular and neurological examinations were unremarkable.

The child was born at term and had normal uncomplicated vaginal delivery. Antenatal ultrasound at 35 weeks demonstrated multiple echo-free areas, corresponding to loops of dilated bowel (Figure-1) suggesting bowel obstruction. Differential diagnosis of small bowel atresia, meconium plug syndrome and hirschsprung’s disease was considered.

Figure 1

Figure 1: Antenatal ultrasound performed at 35 weeks of gestation reveals multiple dilated bowel loops.

Plain abdominal radiograph, at day one of life, showed multiple air filled distended bowel loops, almost occupying whole of abdomen, with a prominent loop of disproportionately dilated bowel, in the distribution of colon.
No gas was seen in the rectum (Figure-2) – findings were suggestive of large bowel obstruction. Subsequent contrast enema (Figure- 3), performed on same day (day one of life) with water soluble non-ionic contrast, revealed reduced caliber of the sigmoid and distal descending colon, beyond which contrast failed to pass proximally. There was complete cut-off of the colon contrast column. Radiological findings were consistent with colonic atresia.

**Figure 2**
Figure 2: Abdominal radiograph performed at day one of life, shows multiple air filled distended bowel loops suggestive of bowel obstruction. Also note the focally dilated segment of bowel (arrow) in the left hypochondrium.

The neonate was operated on second day of life, which revealed atretic cord like segment of descending colon from splenic flexure till sigmoid colon, there by proving this as a case of “Colonic Atresia”. The atretic segment was resected and colo-colic anastomosis was established. Histopathological examination of resected segment of colon did not reveal absence of ganglion cells ruling out association of hirschsprung’s disease. Post operative course was uneventful and the child is doing well.

**DISCUSSION**
Colonic obstruction in neonate can be due to (a) dysmotility states (meconium plug syndrome, small left colon syndrome), (b) Hirschsprung’s disease, and (c) Colonic atresia. Colonic atresias are rare, accounting only 5-15% of intestinal atresias with incidence of 1:40,000 live births. They are believed to result from an intrauterine


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