Neonatal jejunal polyp with jejunoojejunal intussusception causing atresia: A novel cause

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A B S T R A C T

Neonatal intestinal obstruction is an acute emergency with varied etiology. Neonatal jejunal polyp leading to intussusception and obstruction is extremely rare. We report a male newborn, diagnosed antenataly with intestinal obstruction. He also presented with abdominal distension. On exploration there was type III jejunal atresia with a 4 cm long segment of jejunoojejunal intussusception with a polyp being the lead point. Resection anastomosis was done. Histopathology report was suggestive of an inflammatory polyp.

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Intestinal obstruction in the neonatal period is one of the most common neonatal surgical emergencies. It may be due to intrinsic developmental defects, abnormalities of peristalsis, or abnormal intestinal contents. Successful management depends on a timely accurate diagnosis. Among these atresia or stenosis of the small intestine could be the cause and are believed to be due to an ischemic insult. This etiological mechanism explains the frequent association of atresias with mesenteric defects and with other conditions that may cause strangulated obstruction of the intestinal tract (e.g., volvulus, intussusception, internal hernias, and gastrochisis). Though a rare cause, intussusception needs to be considered as a differential diagnosis of neonatal intestinal obstruction. Commonest site for same is usually ileoileal or ileocolic, jejunum being a very rare site. We present this rare case of neonatal intussusception in a case of jejunal atresia having jejunal polyp as the lead point.

1. Case report

A two day old full term neonate, delivered normally with a birth weight of 2.2 kg was referred to us from a peripheral hospital with complaints of mild abdominal distension and not having passed meconium. He was antenatally diagnosed at 7 months gestation with small bowel obstruction. There was mild upper abdominal distention. There was no meconium stain on passing per-rectal catheter. The nasogastric tube showed bilious aspirate. An erect X-ray abdomen showed few dilated loops with air fluid levels in upper abdomen with no gas in pelvis. With the working diagnosis of upper small bowel atresia the baby was explored. Intraoperatively, we found a type III jejunal atresia 15 cm from duodenojejunal junction. Proximal jejunum was dilated with terminal pinpoint perforation. The distal bowel had intussuscepted to a segment of 4 cm. On gentle reduction an intraluminal mass could be felt. On enterotomy the lead point was found to be a polyp 1 × 0.5 × 0.5 cm. After adequate resection an end to back anastomosis was done. Rest of the bowel was normal. Histopathology report was suggestive of an inflammatory polyp. The child on follow-up at 8 months is doing well (Figs. 1–4).

2. Discussion

Intestinal obstruction in neonatal period may be due to duodenal or small intestinal atresia or stenosis, malrotation, meconium ileus, meconium plug syndrome, anorectal malformations, Hirschsprung’s disease, ileus related to sepsis, and other rare causes [1]. The most common cause of non-duodenal intestinal
atresia is a vascular accident in utero that leads to decreased intestinal perfusion and ischemia of the respective segment of bowel. This leads to narrowing, or in the most severe cases, complete obliteration of the intestinal lumen. Intussusception is often listed as one of the events that causes in utero vascular accident leading to small bowel atresia. Intussusception is the most common cause of intestinal obstruction at ages between 6 and 18 months but is rare in neonates where it contributes to only 0.3% [2]. Intussusception in infancy, childhood, and full-term neonates occurs most commonly at the level of the ileocolic junction [2]. In all age groups, small bowel intussusception occurs in less than 10% cases of intestinal obstruction. In newborns, it is relatively commoner in premature neonates particularly in the ileum. Of about 6000 published cases in the pediatric population, only 28 occurred in the neonatal period [3,4]. The commonest site was the ileum and jejunum is an uncommon location. The cause of the intussusceptions is idiopathic in majority of the cases. A single case of ileal atresia consequent to intrauterine intussusception has been reported earlier in Indian literature in 2000 [5]. Intrauterine intussusception causing jejunal atresia is even rarer with only occasional cases have been reported in the literature [3,6,7]. It has been suspected that intestinal atresia may be secondary to prolonged bowel ischemia in utero [8]. What makes this case striking is the presence of a jejunal polyp serving as a lead point leading to cascade of in utero intussusceptions followed by atresia. Polyps of the intestinal tract in children, as in adults, are mucosal or submucosal growths that bulge into the lumen of the intestine. Polyps in the pediatric population occur less frequently than in adults. In pediatric age group, polyps are common in pre-school and school aged children (1%) but very rarely reported in neonatal age group. Most common lesions are the juvenile “inflammatory” polyp and the hamartomatous Peutz–Jeghers polyp.
Polyps with malignant potential include adenomatous polyps that are associated with polyposis syndromes such as FAP, Gardner’s syndrome, and Turcot’s syndrome. Juvenile polyps are most common (80%) and are followed by lymphoid polyps (15%). Adenomatous polyps occur in less than 3% of all children with polyps [9]. The etiology, diagnosis, clinical presentation, and management of these intestinal polyps depend on the type of polyp or polyposis syndrome. As evident from index case, inflammatory polyp can occur in neonatal age group. The distinction between an inflammatory and a juvenile polyp is often difficult. Also small intestinal polyps in Juvenile Polyposis Syndrome have been classified as juvenile [10], hyperplastic and/or inflammatory polyps [7,11] and as lymphoid hyperplasia [7,10,11]. Hence a close follow up is required.

3. Conclusion

A juvenile (inflammatory) polyp as a cause of in utero intussusceptions resulting in jejunal atresia is an extremely rare clinical entity and has not been reported in English literature.

References