We present two infants with postoperative intussusception following stoma formation for stricture bowel due to necrotizing enterocolitis. They had unusual clinical features which need a high index of suspicion to diagnose.

Keywords: Ileoileal intussusceptions, postoperative complications, postoperative intussusception

INTRODUCTION

Postoperative intussusception is a rare cause of obstruction after surgery. Delayed diagnosis can lead to loss of bowel with subsequent morbidity; hence, a high degree of suspicion and early management are of utmost importance.

We present two patients with postoperative intussusception following stoma for post-necrotizing enterocolitis (NEC) stricture.

CASE REPORTS

Case 1

A 4-month-old female child (second twin) presented with sudden onset of abdominal distension and bilious vomiting. She was an intrauterine growth retardation (IUGR), preterm twin, who had stage 1 NEC treated with conservative management in the newborn period. On examination, she had palpatble bowel loops and an X-ray was suggestive of intestinal obstruction. She underwent a laparotomy, which showed a stricture at the level of the hepatic flexure, and an end colostomy was done. On postoperative day 3, the child had abdominal distension and blood-stained watery stools from the stoma. On examination, small bowel loops were palpable, the stoma appeared healthy, and nasogastric aspirated were minimal. In view of a drop in hemoglobin and no improvement in the general condition, the child was reexplored and ileoileal intussusception was found with gangrene of 100cm of small bowel. There was 40 cm viable bowel from the duodenojejunal junction with 20 cm of terminal ileum, with an intact ileocecal valve. The gangrenous bowel was resected, and ileocecal anastomosis was done. In view of shortened small bowel, the colostomy was closed and colonic continuity was restored. The child passed stools on postoperative day 3 and was discharged on postoperative day 7 on full feeds. At present, she has been on follow-up for 6 months. She has gained adequate weight for age and is thriving well [Figure 1a].

Case 2

A 2-month-old preterm child (second twin) presented with features of intestinal obstruction, for which she was admitted and evaluated. She had suspected NEC in the newborn period, which was managed conservatively. The child underwent a laparotomy, which revealed a sigmoid stricture for which an end sigmoid colostomy was done. On postoperative day 2, she was found to have persistent abdominal distension with blood-stained watery output from the stoma. On examination, she had abdominal distension with palpable bowel loops. She underwent exploration which revealed an ileoileocolic intussusception with the apex of intussusception at the splenic flexure. There was gangrene from the mid...

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ileum up to 5 cm distal to ileocecal junction. Resection anastomosis was done between the ileum and ascending colon leaving the stoma intact. The residual small bowel was approximately 80 cm. The child resumed feeds on postoperative day 3. She had sepsis and a prolonged Pediatric Intensive Care Unit (PICU) stay. She was discharged after 15 days. Her colostomy was closed after 8 months. She is on follow-up and thriving well [Figure 1b].

DISCUSSION

Postoperative intussusception is a well-described entity after any surgical procedure. The incidence is 0.01%–0.25% after laparotomies.[1] It is usually seen after surgeries on the gastrointestinal tract. The etiology is likely due to bowel manipulation, altered peristalsis, neurogenic factors, electrolyte imbalance, and anesthetic drugs.[1-3] The most common type is ileoileal intussusception followed by jejunoileal.[1-4] The presentation is similar to a dynamic postoperative ileus. A high index of suspicion is required when there is prolonged postoperative ileus with delayed institution of feeds. In postoperative ileus, there may be an absence of bowel sounds; however, in mechanical obstruction, the bowel sounds are usual hyperactive. An abdominal X-ray may show multiple air-fluid levels.[1-4] An ultrasound may be more specific in diagnosing intussusception but more difficult in view of postoperative abdominal tenderness, dilated small bowel loops. Computed tomography abdomen may not be able to differentiate intussusception from postoperative ileus due to the paucity of mesenteric fat rendering visualization of intussusception difficult.[4]

In a series by Abukhalaf et al.[1] and Ein and Ferguson,[2] their patients presented with abdominal distension and vomiting, none had rectal bleeding or mass palpable per abdomen. Rectal bleeding in intussusception is usually seen in ileocolic intussusception,[2] hence unlikely in postoperative intussusception. Most patients present within 2 weeks of surgery, unlike postoperative adhesions which present after 2 weeks.[2-4] In view of the atypical presentation, a high degree of suspicion is required for diagnosis.

Both our patients had a similar profile – they were preterm babies with NEC managed conservatively. They presented with intestinal obstruction due to stricture of bowel and end stomas were done. They presented with unusual symptoms in the early postoperative period with abdominal distension without aspirates and high output from their colostomies. They were explored in view of persistent symptoms and blood-stained output from the stoma. Etiology of postoperative intussusception in our patients is likely due to the hyperdynamic peristalsis due to previous obstruction in addition to the risk factors described in the literature.

CONCLUSION

Postoperative intussusception, though rare in presentation, needs a high index of suspicion for diagnosis. Any postoperative child presenting with prolonged ileus after surgery with features of obstruction needs evaluation and early exploration.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/them consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initial s will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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