

ACQUIRED COLONIC ATRESIA: A CASE REPORT OF A 15-YEAR-OLD GIRL

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Abstract

A 15-year-old girl presented with abdominal pain, distension, bilious vomiting, and constipation five days after an ileostomy reversal procedure. She had a history of exploratory laparotomy and ileostomy for typhoid ileal perforation a year prior. Physical examination revealed a distended abdomen with visible peristalsis and hyperactive bowel sounds. Laboratory investigations were normal, but abdominal radiographs showed dilated bowel loops with multiple air-fluid levels. Laparotomy revealed extensive adhesions, a narrowed segment (fibrous cord) connecting the proximal and distal bowel segments and marked dilatation of the small intestines and colon. Resection of the atretic segment and end-to-end anastomosis was performed. Histopathology showed chronic inflammatory changes. The patient recovered satisfactorily and was discharged home. This case highlights a rare presentation of acquired type II colonic atresia in an adolescent girl, caused by post-operative adhesions rather than the more common necrotizing enterocolitis. The patient's age and non-NEC cause make this case uniquely rare. The successful surgical intervention emphasizes the importance of timely diagnosis and treatment in such cases. This report contributes to the limited literature on acquired colonic atresia, particularly in adolescents, and underscores the need for clinicians to consider rare diagnoses in patients with persistent symptoms after surgery.

Key words: *Acquired, Colonic atresia, non-NEC cause*

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INTRODUCTION

Intestinal atresias are a group of congenital anomalies of the intestines resulting in obstruction of the intestine, commonly associated with a loss of tissue, with consequent disruption of intestinal continuity. An atresia can occur anywhere throughout the gut with an incidence of approximately 1:4000.¹ Acquired atresias of the intestine are extremely rare.² Acquired colonic atresias have been reported as a consequence of necrotizing enterocolitis and occasionally by some forms of intestinal adhesions, intussusception, systemic cardiovascular diseases and chronic inflammatory diseases.^{2,3,4} In this article, we report a case of 15 year old girl with acquired colonic atresia.

CASE PRESENTATION

A 15-year-old girl was referred to our facility with complaints of abdominal pain and abdominal distension of 5 days duration following an ileostomy reversal procedure done 10 days prior to presentation. The ileostomy reversal was performed at a peripheral hospital where she was commenced on graded oral feeds on the 3rd postoperative day. However, she developed colicky abdominal pain and progressive abdominal distension and associated bilious vomiting and constipation on the 5th postoperative day, she was then commenced on non-operative management. Following the persistence of symptoms 5 days after onset, she was referred to us. She was said to have had exploratory laparotomy for generalized peritonitis for typhoid ileal perforation with segmental ileal resection and ileostomy performed one year prior to the reversal. Other aspects of the history were not contributory.

Physical examination revealed an acutely ill child, febrile (axillary temp. 37.9C), with some dehydration. She was not pale, not jaundiced, not cyanosed and there was no peripheral oedema. Respiratory rate was 22

cycles per minute and her pulse rate 102 beats per minute. The abdomen was distended with visible peristalsis, but no significant tenderness. Auscultation revealed hyperactive bowel sounds. Per rectal examination revealed good perianal hygiene, *digital rectal* examination showed empty rectum, and the examining gloved finger was stained with mucous, no blood. Baseline laboratory investigations including complete blood count, urea, electrolytes and creatinine were within normal ranges. Blood was grouped and cross matched. Plain abdominal radiographs showed dilated bowel loops with multiple air-fluid levels. Our diagnosis at this point was postoperative adhesive intestinal obstruction. The patient and her parents were counseled and informed consent for exploratory laparotomy was obtained.

Exploratory laparotomy revealed extensive intra-peritoneal adhesions including inter-loops adhesions and adhesions between the loops and abdominal wall, marked dilatation of the small intestines and colon up to proximal sigmoid colon. Adhesiolysis revealed a narrowed segment (fibrous cord) about 5cm in length connecting the proximal dilated bowel with the distal collapsed bowel (type II colonic atresia). Resection of the narrowed segment and instillation of warm saline in the distal collapsed segment revealed patency by the egress of the saline at the anus. An end-to-end anastomosis was performed. Histopathological examination of the resected segment revealed chronic inflammatory changes. Normal gastrointestinal motility was achieved on the 4th postoperative day and patient was commenced on graded oral feed which was tolerated. Patient was discharged on the 10th postoperative day and was seen on follow-up 14 days after.

DISCUSSION

This is a rare case of acquired colonic atresia in an older patient who had no pre-existing gastrointestinal obstructive symptoms prior

to the second surgery. We suggested an atresia with non-NEC aetiology. This is comparable with what Fouad et al reported in his theory of the congenital intestinal atresia³. Acquired atresia has been previously reported, but typically involving the small bowel more commonly, whereas in this case it involved the colon. We presumed that the colon is more sensitive to intestinal ischaemia than the small bowel as suggested by Bubberman et al⁵. Acquired atresia of the bowel is known to occur in premature infants after recovery from necrotizing enterocolitis (NEC). Acquired intestinal atresia in non-NEC gastrointestinal conditions is rare¹; however, in this case we found an acquired colonic

their series of 3 infants with acquired atresia and suggested a cardiovascular compromise and likened it to the ischaemic atresia possibly due to entrapment of the bowel segment by adhesive bands. This is comparable to the report by Dian et al in a 15-year-old girl with acquired small bowel atresia following similar adhesive bowel entrapment¹.

CONCLUSION

This our patient presented with intestinal obstruction postoperatively which was confirmed to be a type II colonic atresia which is rare, and in an advanced age of 15 years and due to a non-NEC cause (adhesions).

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