An Unusual Case of Acquired Colonic Atresia: A Case Report

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ABSTRACT

Acquired cases of colonic atresia are extremely rare. These are often found in patients with necrotizing enterocolitis (NEC), other intra-peritoneal infections, and gut adhesions. We report a two-months-old-male who developed acquired colonic atresia following gastroenteritis. Patient had prolonged medical treatment initially at another facility followed by surgical intervention at our institution where stoma was made. Currently patient is thriving well and planned for stoma reversal.

Key words Colonic atresia, Colostomy, Intesstinal obstruction.

INTRODUCTION:

Intestinal strictures in children are a well-recognized sequelae of a number of inflammatory conditions such as necrotizing enterocolitis and Crohn's disease. Less frequently, complete occlusion of the intestine may occur in response to an inflammatory insult or due to an obstructive pathology such as adhesive bowel obstruction or intussusception, thus resulting in an acquired intestinal atresia.[1] These are more common in small bowel.[2] Congenital atresia typically presents in the neonates with intestinal obstruction. The etiology of this type of atresia is often traced to the in-utero vascular accidents or mechanical insult.[3] We report an infant with acquired colonic atresia secondary to gastrointestinal infection. This type of atresia is extremely rare.

CASE REPORT:

A 2-months-old-male infant weighing 3.2-kgs presented with the complaint of loose stools, on and off fever for 20-days, abdominal distension for 15-days and non-passage of stool for two days. Baby had unremarkable birth history. He remained well till the age of one-month. He was on mother and top feed. He then developed loose stools for which oral medications were given. However, his condition did not improve. He was admitted to a hospital and treated as a case of gastroenteritis. During the hospital stay he developed abdominal distension and did not move his bowel. Nasogastric tube was then passed that showed bilious aspirate. Number of investigations were also performed that showed presence of entamoeba histolytica in stool specimen. Staphylococcus aureus growth was documented in blood culture. Serum IgA, IgG and IgM levels were reported as according to the age. Stool, test for reducing sugars was negative. As patient did not improve he was brought to our institute.

On examination the patient was found emaciated with massive abdominal distension. The vitals signs were within normal range. Abdomen was soft with visible bowel loops ((Figure I). Rectal examination was unremarkable with no discharge of flatus and stool. Plain x-ray abdomen was suggestive of intestinal obstruction (Figure II). A contrast enema was done that showed narrowed distal colon with

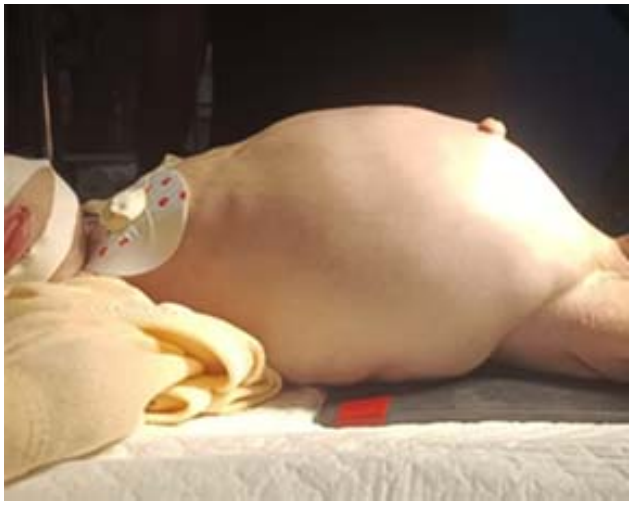

Fig I: Infant with massive abdominal distension is noted.

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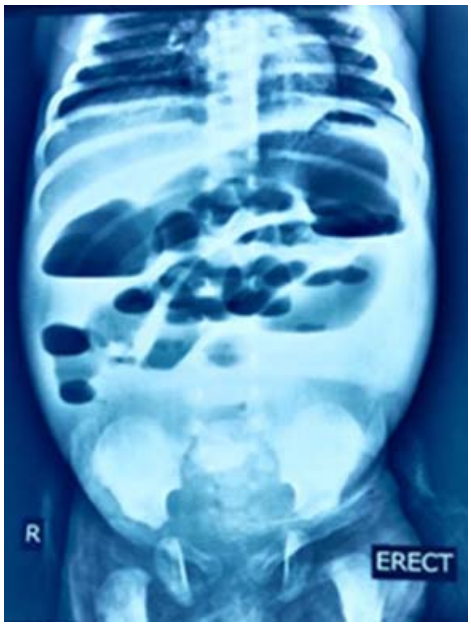

Fig II: X-ray abdomen showing distension with multiple air-fluid levels.

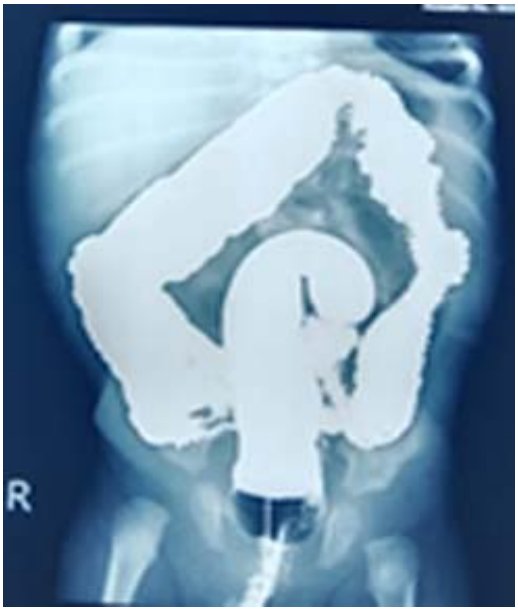

Fig III: Contrast enema showing distal sigmoid narrowing with proximal flow of the dye.

dye entering into the proximal dilated gut (Figure III). Colonoscopy was performed two days after the contrast study, showed a complete obliteration of the colonic lumen about 7-cm from the anal verge. Patient was then explored. At laparotomy multiple inflammatory bands at the level of distal sigmoid colon were found. However, these were non-obstructing (Figure IV). On further exploration an area of complete luminal narrowing (atretic) was found in the distal sigmoid colon. The proximal gut was dilated. The caliber of the distal colon was narrow (Figure V). Atretic segment was resected and divided colostomy made. Biopsy of the resected gut specimen showed partial surface ulceration with granulation tissue formation. There was mild mixed nonspecific inflammation in the wall. The patient is on regular follow and is thriving.

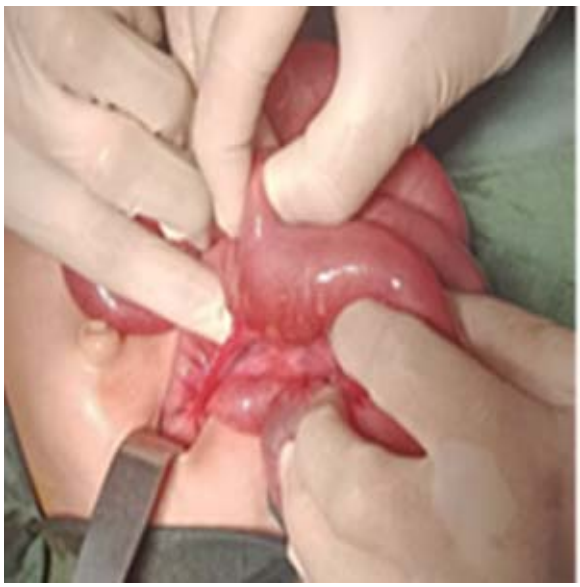

Fig IV. Inflammatory bands found at laparotomy.

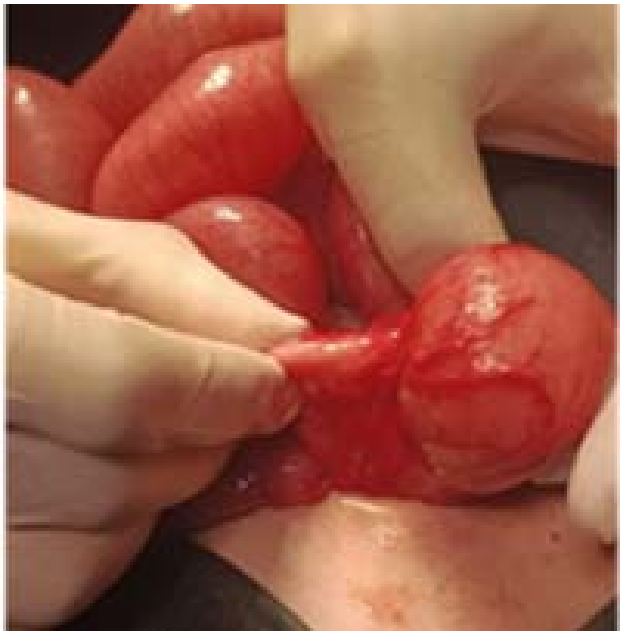

Fig V: Atretic segment in sigmoid colon.

DISCUSSION:

Congenital colonic atresia is rare anomaly, comprising less than 10% of all intestinal atresias.[4] It presents early in new-born period with failure to pass meconium and significant abdominal distension.

In our patient the birth history and early neonatal period were unremarkable. He had no pre-existing gastrointestinal symptoms and tolerated enteral feeds. His stooling pattern was also normal. Thus the condition he developed later is labelled as an acquired pathology.

In acquired colonic atresia allergy to cow's milk protein is often implicated as a causative factor.[5] This allergy is reported in both formula-fed and exclusively breastfed infants. It is assumed that the excretion of cow's milk protein into breast milk can also result in this condition.[6] In our patient the exact etiology is not known. However, symptoms related to gastro-intestinal infection can be considered as a plausible cause. Entamoeba histolytica was found in his stool sample. The extent of damage to the intestinal tract depends on the severity of the inflammatory reaction. The histopathology report of the resected bowel segment points towards that.

Other features that suggest acquired etiology include the absence of classic micro-colon on contrast enema study. In fact, the contrast enema showed a distinct point of narrowing through which contrast was seen delineating the dilated proximal bowel. However, at colonoscopy performed just two days after the contrast study showed completely obliterated lumen suggesting gradual process of luminal obstruction. Stoma formation helped the patient as intestinal obstruction was relieved.

CONCLUSION:

Acquired colonic obstruction secondary to gastroenteritis as noted in our patient is a rare phenomenon. The treatment was tailored according to the needs of the patient and colostomy was a life saving procedure in such a situation

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Amna Nasir Jamil: Concept, data collection, literature search, drafting and revision of the manuscript.

The author is responsible for the content of the article.

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