

Acute Intestinal Obstruction Due to an Anomalous Ileosigmoid Band: A Case Report

Brahmjeet Atrish¹, Parveen Shandil², Gunjan Jain³

^{1,2,3}Junior Resident 3, IGMC SHIMLA

Abstract

We report a case of a 30-year-old female who presented with symptoms and signs of intestinal obstruction. The patient reported no previous history of abdominal surgery or trauma while clinical and radiographic examinations were not diagnostic. Patient planned for exploratory laparotomy in view of complete intestinal obstruction. Exploratory laparotomy with limited resection of gangrenous segment with primary closure of abnormal ileosigmoid communication with proximal ileostomy with distal mucous fistula. Intraoperatively distal 60cm of ileum, caecum and part of ascending colon was gangrenous there was a fibrous band extending from parities to ileum approximately 60 cm proximal to IC junction. Congenital bands are extremely rare. Their exact incidence is still unknown and usually observed in childhood. This case, therefore, represents an unusual surgical problem in an older individual in which the diagnosis was clinically unexpected. Small bowel obstruction is the most common surgical disorder of the small intestine. Adhesions are by far the most frequent causes followed by hernias, tumors, intussusception, foreign bodies, gallstones, and inflammatory bowel disease. Obstruction by a congenital band is extremely rare and usually observed in childhood. This report presents a 30-year-old female with symptoms of intestinal obstruction, subsequently treated by ligation and division of a congenital band.

Keywords: Congenital band, intestinal obstruction

CASE REPORT

A 30-year-old female presented to the Emergency Department complaining of epigastric pain of 6-h duration acute in onset, continuous, moderate in intensity, generalised, non radiating. He also reported multiple episodes of non bilious vomiting. with multiple episodes of non bilious vomiting, with non passage of flatus and stools for 2 days with history of undocumented fever, no history of yellowish discoloration of skin or eyes, no known co-morbidities. There was no history of abdominal surgery or trauma. Abdominal palpation revealed gross distension present, generalized tenderness with rebound tenderness present, bowel sounds increased. Rectal examination rectal ballooning present, finger stained with mucus. At the time of arrival, he had a temperature of 37.0°C, a blood pressure of 104/68 mm Hg, and a pulse rate of 108 beats/min.

Blood Investigations

Hb	13.1 g/dl	Total Bilirubin	0.52 mg/dl
TLC	19900 /mm ³	Direct Bilirubin	0.17 mg/dl

Plt	319000 /mm ³	AST	25 U/L
Na ⁺	140 mmol/L	ALT	19 U/L
K ⁺	3.99 mmol/L	ALP	65 U/L
Cl ⁻	102 mmol/L	Amylase	38.0 U/L
Urea	37 mg/dl	Lipase	8.2 U/L
Creatinine	0.52 mg/dl	Total Bilirubin	0.52 mg/dl
PT/INR	14/1.23	Direct Bilirubin	0.17 mg/dl

Abdominal plain X-ray showed intestinal loops with air-fluid levels on the left side of the abdomen, which remained unaltered in a subsequent X-ray after 2 hrs



X-ray showing intestinal loops with air-fluid levels

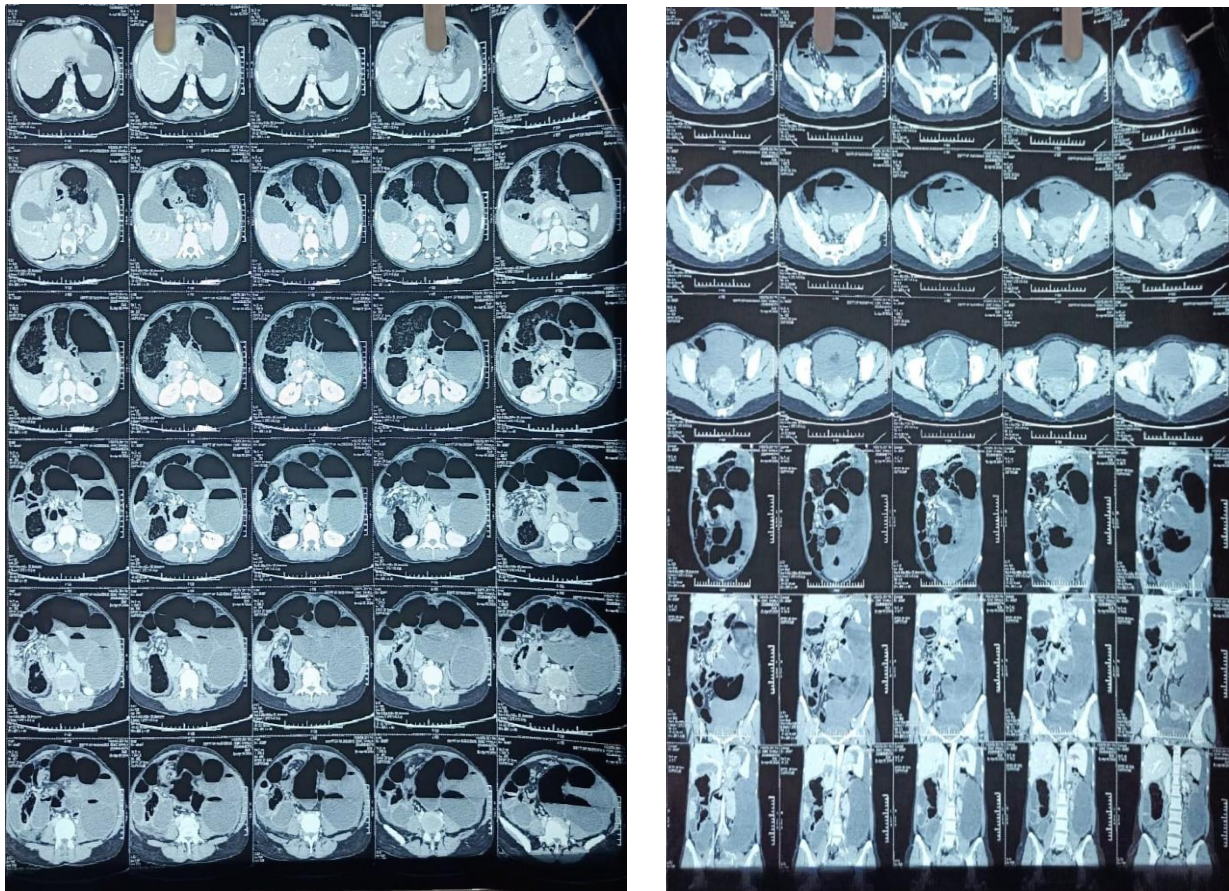
USG Abdomen

Multiple dilated gut loops showing to and fro movements with mild to moderate ascitis f/s/o Intestinal Obstruction.

CECT Abdomen

1. Distal jejunal and ileal loops are dilated with maximum caliber of 7.2cm, however no definite transition point visualized.
2. There is thinning of the wall of small bowel loops with few of them showing air foci within their wall with presence of moderate ascites.
3. Mesenteric lymphadenopathy present.

Impression- F/S/O Small bowel obstruction with few of bowel loops showing air foci in their wall with no definite transition point -? adhesive

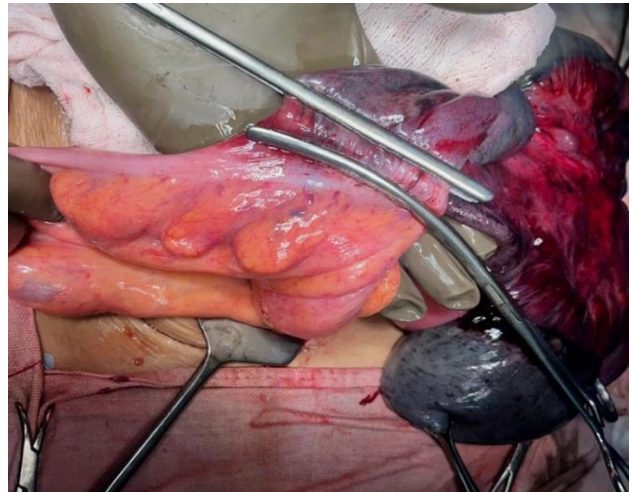
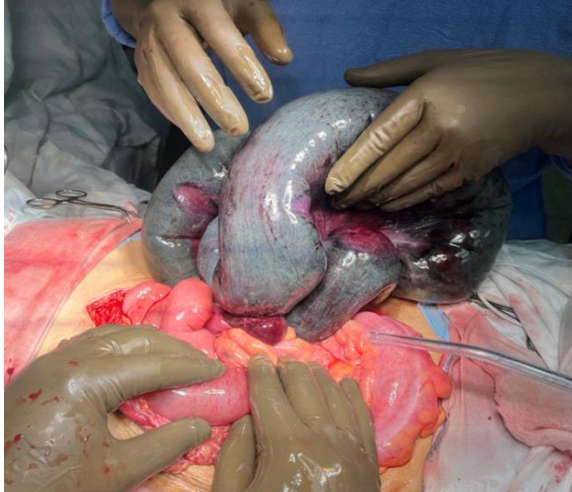


Due to the patient's clinical deterioration, Patient planned for exploratory laparotomy in view of complete intestinal obstruction. Exploratory laparotomy with limited resection of gangrenous segment with primary closure of abnormal ileosigmoid communication with proximal ileostomy with distal mucous fistula done.

Intra-operative Findings:-

1. Distal 60cm of ileum, caecum and part of ascending colon was gangrenous.
2. There was a fibrous band extending from parietes to ileum approx. 60 cm proximal to IC junction. ? anomaly of vitellointestinal duct.
3. Cut end of fibrous band extending from antimesenteric border of ileum to posterior surface of umblicus.
4. Approx. 60 cm of terminal ileum was rotated around this band and was gangrenous. Limited resection of gangrenous segment of terminal ileum, caecum and part of ascending colon was done
5. There was an abnormal communication of terminal ileum approx. 10 cm proximal to IC junction with sigmoid colon and ileum was also twisted around this communication, which was divided between the clamps and the opening in the sigmoid colon was primarily closed in two layers.
6. The abnormal communication we encountered in our case intraoperatively, was neither consistent with a fistulous communication nor there were other findings in favour of Crohn's disease / Carcinoma / Lymphoma.
7. Rather it was an isolated abnormal ileosigmoid communication ?congenital, with a lumen of calibre similar to that of large gut.

HPE :- Gangrenous bowel and abnormal communication showing features of ischemic bowel disease.



DISCUSSION

Congenital bands are a rare cause of intestinal obstruction in infancy and childhood. Their occurrence in adults is an extremely rare condition^[1,2] Obstruction is caused by entrapment of the intestine between the band and mesentery or by compression of the bowel. Akgur *et al.* have recently reported in a series

of eight patients that bands principally were located between ascending colon and terminal ileum followed by ligament of Treitz and terminal ileum; between the right lobe of liver and terminal ileum; and between the right lobe of liver and ascending colon.^[1] Lin *et al.* have reported a band extending from the iliac fossa to the sigmoid mesocolon.^[3] while Itagaki *et al.* reported the presence of a jejuno-jejuno congenital band.^[4] As far as we know, there are no reports of a band running from the root of mesentery to the jejunum. In addition, its location excluded known embryogenic remnants such as mesourachus or vitelline arteries, veins or omphalomesenteric ducts.^[5,6] In all the reported cases, the band was well vascularized as was the case in the present study.

Patients usually present with symptoms of intestinal obstruction, and despite the availability and wide use of modern imaging techniques, preoperative diagnosis is very difficult to establish. Plain films are nonspecific. Ultrasound scan might provide details of localized distended intestinal loops or indirect signs of peritonitis, but it is not specific while barium-contrast gastrointestinal series may provide clues to narrow the differential diagnosis. In the present case, plain abdominal X-ray revealed air-fluid levels located on the left side of the abdomen, which remained unaltered in a subsequent image after 2 hours.

Concerning the management of a congenital band, surgical treatment is the cornerstone. Traditionally, laparotomy is indicated, whereas with the advent of minimally invasive surgery, laparoscopy has been proposed as an alternative. Wu *et al.* have recently reported that laparoscopy may be safe and feasible in the diagnosis and treatment of a congenital band.^[7]

In conclusion, the possibility of a congenital band must be included in the differential diagnosis of young patients with symptoms and signs of bowel obstruction and no history of abdominal surgery, trauma or clinical hernia, although this entity is very uncommon. This clinical situation requires early surgical intervention that will be diagnostic and therapeutic.

REFERENCES

1. Akgur FM, Tanyel FC, Buyukpamukcu N, Hicsonmez A. Anomalous congenital bands causing intestinal obstruction in children. *J Pediatr Surg.* 1992;27:471–3. [[PubMed](#)] [[Google Scholar](#)]
2. Habib E, Elhadad A. Small bowel obstruction by a congenital band in 16 adults. *Ann Chir.* 2003;128:94–7. [[PubMed](#)] [[Google Scholar](#)]
3. Lin DS, Wang NL, Huang FY, Shih SL. Sigmoid adhesion caused by a congenital mesocolic band. *J Gastroenterol.* 1999;34:626–8. [[PubMed](#)] [[Google Scholar](#)]
4. Itagaki MW, Lema R, Gregory JS. Small bowel obstruction caused by a congenital jejuno-jejuno band in a child. *Pediatr Emerg Care.* 2005;21:673–4. [[PubMed](#)] [[Google Scholar](#)]
5. Dammert W, Curraino G. Mesourachus and colon obstruction. *J Pediatr Surg.* 1983;18:308–10. [[PubMed](#)] [[Google Scholar](#)]
6. Kleinhaus S, Cohen MI, Boley SJ. Vitelline artery and vein remnants as a cause of intestinal obstruction. *J Pediatr Surg.* 1974;9:295–9. [[PubMed](#)] [[Google Scholar](#)]
7. Wu JM, Lin HF, Chen KH, Tseng LM, Huang SH. Laparoscopic diagnosis and treatment of acute small bowel obstruction resulting from a congenital band. *Surg Laparosc Endosc Percutan Tech.* 2005;15:294–6. [[PubMed](#)] [[Google Scholar](#)]