



CONGENITAL ADHESION BAND- A RARE CAUSE OF SMALL BOWEL OBSTRUCTION IN PAEDIATRIC AGE GROUP.

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ABSTRACT congenital anomalous bands are rare cause of small bowel obstruction which have been describe in various literature. we present a case of 3 year old male child with six months history of abdominal pain , intermittent vomiting and no history of previous surgical intervention. our investigation includes x-ray abdomen , usg abdomen , cect abdomen and pelvic. Surgical intervention revealed multiple congenital bands causing obstruction of distal ileum with mesenteric defect with internal hernia with mobile caecum and enlarged mesenteric lymph nodes. As small bowel obstruction due to congenital bands is rare , presence of mesenteric defect with internal hernia makes this an unique case.

KEYWORDS : congenital band , internal hernia , mesenteric defect , sub-acute intestinal obstruction

INTRODUCTION

Intestinal obstruction is a common surgical condition in paediatric age group, in which intussusception is commonest. Other causes includes post operative adhesions, meckel's diverticulum or band, malrotation, abdominal tuberculosis. Congenital band is a rare cause of small bowel obstruction that should considered as a differential diagnosis in patients with clinical signs of obstruction having prior no surgical intervention. We present a case of 3 years of male child with 6 months history of abdominal pain, intermittent bilious vomiting and not passing motion since 1 day. We decided to explore as radiological investigation are not land up to any surgical conditions and patient suffering since 6 months.

CASE REPORT

A 3 year old male child present with chief complaint of abdominal pain since 2 days vomiting and not passing motion since 1 day. as per patient 's parent he was apparently alright 2 days back then he develops abdominal pain of sudden onset, severe colicky in nature and get some relief on medication. Then patient develops greenish vomiting multiple episodes, aggravate by taking fluid and not passing motion, associated with abdominal distension and moderate grade fever which relieved on medication.

Patient had similar complaints 6 months back with two episodes at interval of 3 months, for which he was admitted and managed conservatively and partially relived.

On clinical examination, patient general condition is poor, pulse rate 118/min, temperature 100.2° f. dehydrated, pallor present, no clubbing, cyanosis, icterus, no lymphadenopathy present.

On per abdomen examination, distended abdomen with visible bowel loops. On palpation epigastric tenderness was present without guarding and rigidity.

On per rectal examination decrease anal tone with empty rectum and no palpable growth found.

On investigation – TLC mildly increased, serum urea is elevated 76.0mg/dl, serum creatinine and electrolytes are normal.

X-RAY abdomen suggestive of dilated bowel loops with multiple air fluid level.

USG abdomen suggests enlarged retroperitoneal lymph nodes, dilated bowel loops filled with fluid and gas, no evidence of intra-peritoneal collection.

CECT whole abdomen- fluid filled dilated bowel loops seen, few of them with air fluid levels predominantly involves small bowel loops with point of transition loops in ileal loops showing circumscribed wall thickening of terminal ileum with collapsed distal large bowel loops and associated mesenteric lymph nodes- suggestive of inflammatory stricture with sub-acute intestinal obstruction.

The patient is planned for exploratory laparotomy and abdomen is opened with right supra-umbilical transverse incision and found dilated small bowel with bands having vessels with in, around distal ileum causing narrowing of lumen which are originating from falciform ligament and attached to anti-mesenteric border of ileum. Congenital bands are four in numbers which are separated and excised.

On further mobilisation of bowel we found that one loop of small bowel is herniating through defect in mesentery and mesenteric lymph nodes are enlarged. Small bowel reduction was done and defect is closed.

We also found mobile caecum which was slightly upward and more medially and can be easily movable towards the left side and we decided to do appendectomy. A passable stricture found, ten cm proximal to ileocaecal junction.

Specimen of excised band, enlarged mesenteric lymph nodes and appendix send for histopathological examination. HPR suggestive of vascular band showing fibrosis , congestion and dilated blood vessels with area of haemorrhage. No granuloma or evidence of malignancy seen.

Mesenteric lymph node shows reactive hyperplasia with sinus histiocytosis. Appendix with lymphoid hyperplasia with serosal congestion. The patient was discharged on 7th post operative day after passing motion and having good oral intake.

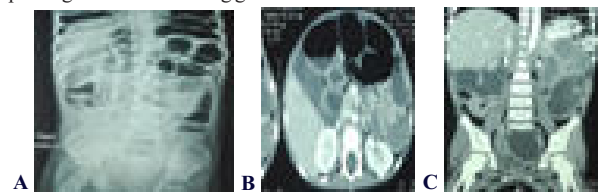


FIG.1.A-X-RAY Abdomen shows multiple air fluid levels suggestive of small bowel obstruction

B,C- CT abdomen shows fluid filled dilated small bowel suggestive of SAIO.

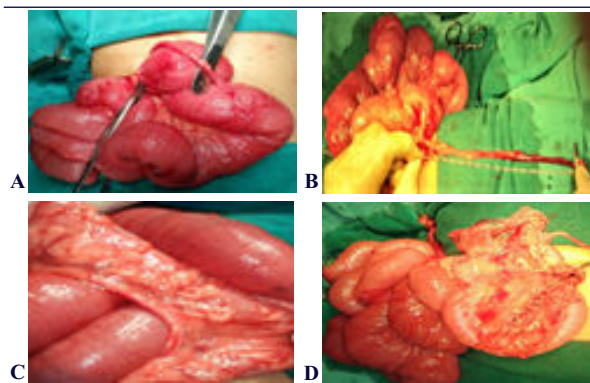


Fig. 2. A and B showing congenital bands originating from the anti-mesenteric side of small bowel.

C- Mesenteric defect with internal herniation of bowel

D- Mesenteric defect repair.

DISCUSSION-

Among the causes of intestinal obstructions and chronic abdominal pain in paediatric age group, congenital bands excluding the remnants of known structures are given in small sentences without much information. [2]

The thorough investigation of cases described under the title of congenital band makes this term confusing rather than descriptive.

This subject has been clarified and discussed in detail by Touloukian[3]. He had two patients with anomalous bands without apparent embryonic origin and not associated with evidence of peritonitis.

As this case initially present with sub-acute intestinal obstruction with mesenteric lymphadenopathy and relived on conservative treatment, simulates intestinal tuberculosis, transient intussusception. But in third episode, it present as acute intestinal obstruction and needed exploration.

This situation should be kept in mind for the possibility of intestinal obstruction due to congenital bands in paediatric patients who do not underwent previous surgery.

As meckel's diverticulum band, intussusception are common cause in paediatric age group, one should also consider, the rare cause like congenital bands.

According to the classification given by Kerkeni et al (1) that highlight the fact that anomalous band is a complicated disorder that can develop from innumerable reasons. The first group comprise congenital bands that have definite origin. The second group contain of congenital anomalous bands that are not recruited from mentioned embryo genic structures. [1]

The congenital bands may represent the remnant of omphalo-mesenteric duct (vitelline duct) or vitelline vessels. Vitelline remnants are present in 2% of population and have more incidence in boys.

Vitelline duct generally begins to undergo obliteration after about six week of embryonic life. If obliteration does not occur, it leads to a series of anomalies that may result in various lesion, including patent omphalo-mesenteric duct, meckel's diverticulum, an omphalo-mesenteric sinus, an umbilical mucosal polyp, an omphalo-mesenteric duct cyst, an omphalo-mesenteric band.

The vitelline vessels may fail to obliterate and persist, and the remnant of vessel is differentiated from meckel's because vessels generally joins mesentery, anti-mesenteric border of intestine, and even near by structures.

The mechanism of intestinal obstruction due to vitelline remnant includes intussusception, internal hernia or volvulus.

The aetiology of congenital bands is unknown. There might be possibility of intrauterine meconium peritonitis, which is ruled out by

presence of vessel in bands and by fewer number of bands, as in meconium peritonitis, the bands are multiple and avascular.

The other possibility on the basis of origin and extension of congenital bands is mesenteric anomaly rather than gastrointestinal. so these congenital bands might be the remnant of ventral mesentery between liver and mesentery that failed to reabsorb completely.

CONCLUSION:

Diagnosis is often difficult to achieve before surgery because there are no radiological examinations that allow a definitive preoperative identification of extrinsic intestinal obstruction.

As they are uncommon, early diagnosis of congenital bands is important to prevent complications.

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