

Small bowel obstruction due to anomalous congenital band in young adult

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Abstract

Introduction: Acute small bowel obstruction in adults with no previous history of abdominal surgery, trauma or hernia is not very common and has various etiologies. Among these, congenital band is an extremely rare cause.

Case presentation: A 16 year old male presented to emergency room with colicky abdominal pain and distention for two days. He had multiple episodes of vomiting for one day .He had no history of previous abdominal surgery. Patient was diagnosed as small bowel obstruction due to suspected terminal ileal band. Diagnostic laparoscopy was done and band was released.

Discussion: Congenital adhesion bands are usually identified in pediatrics patients. But they may give rise to small bowel obstruction at any age. In our case the presentation with complication is at age of 19.The most common anatomical location of a congenital adhesion band is around the terminal ileum, followed by the mesentery root, jejunum, liver, and omentum.

Laparoscopic procedure could be an excellent method for the diagnosis and management in cases of a small bowel obstruction caused by a congenital adhesion band. In our case we managed this patient in early presentation and we managed to cut the band before gangrene formation.

Conclusion: Congenital band is a rare condition with diverse clinical presentation across age groups .Early diagnosis and management of this band results in good outcome. Congenital band can present with international obstruction at any age .Early intervention can prevent complication like bowel gangrene and laparoscopic approach is one of best available surgical modality.

Keywords: Anomalous Congenital Band, Small Bowel Obstruction, Adhesive Band, Laparoscopic Band Release.

Introduction

Small bowel obstruction in adults most commonly associated with previous surgical scar adhesion. Acute small bowel obstruction in adults with no previous history of abdominal surgery, trauma or hernia is not very

common and has various etiologies. Among these, congenital band is an extremely rare cause [1]

Anomalous congenital band first described by Touloukian in 1979[2]. There are four types of congenital bands described by Wayne and Burrington. Their exact incidence rate is unknown [3]. The internal herniation of small bowel between this band and mesenteric entry causes intestinal obstruction [4]. Anomalous congenital bands causing intestinal obstruction is a rare entity accounting for 3% of total cases of intestinal obstruction. In this case report we are presenting a case of congenital band presented in 19 years of age with intestinal obstruction.

Case Presentation

A 16 year old male presented to emergency room with colicky abdominal pain and distention for two days. He had multiple episodes of vomiting for one day. He had no history of previous abdominal surgeries. Patient was hemodynamically stable at the time of evaluation. The patient had a distended abdomen with diffuse tenderness. Guarding was noted with signs of peritoneal irritation. Plain abdominal radiograph showed dilated small bowel loops.

Contrast enhanced CT scan abdomen showed minimal free fluid in the pelvis, prominent mesenteric lymph nodes, appendix 7mm in diameter and small bowel narrowing near ileo cecal junction. Proximal small bowel dilatation with suspected band like structure near terminal ileum was also noted in CT scan.

Blood test showed low potassium (3.1mmol/l) level which was corrected with IV fluids. Other blood parameters were normal. In view of doubtful diagnosis diagnostic laparoscopy was done and thick anomalous congenital band was identified over terminal ileum 5cm from ileo cecal junction causing collapse of caecum and dilatation of proximal small bowel loops with no signs of ischemia.

The fibrous band was divided and obstruction was relieved. After removal of band normal peristalsis was started and distal collapsed bowel became normal. Reactionary peritoneal fluid was aspirated and removed. Postoperative period was uneventful.

Figure 1: X-ray abdomen erect shows dilated small bowel



Figure 2: CECT shows dilated small bowel with narrowing near terminal ileum with collapsed caecum.

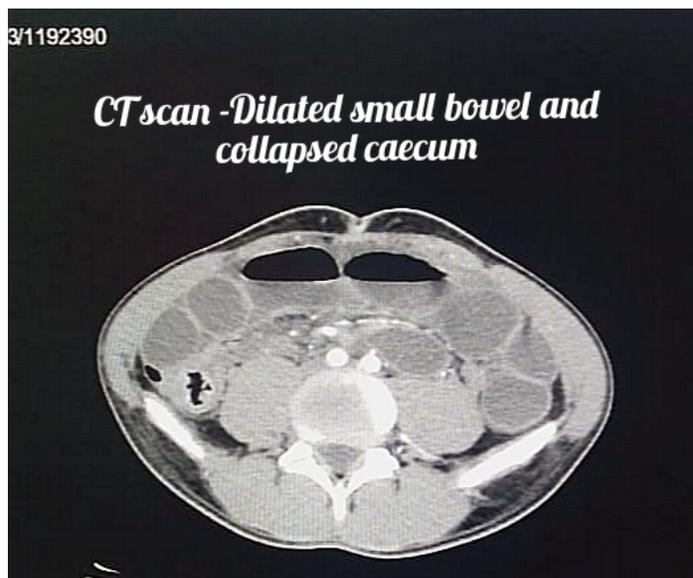


Figure 3: congenital band near terminal ileum causing obstruction to the small bowel identified in laparoscopy



Discussion

Congenital adhesion bands are usually identified in pediatric patients. But they may give rise to small bowel obstruction at any age. In our case the presentation with complication is at age of 19. The incidence rate for congenital adhesion bands is still uncertain. Without previous surgery adhesion was reported as 3.3 to 28% [5]

The most common anatomical location of a congenital adhesion band is around the terminal ileum, followed by the mesentery root, jejunum, liver, and omentum [6]. In our case band was located at terminal ileum which is the commonest type. However the location of band does not appear to affect the degree of clinical presentation or the management.

Intrauterine exposure to certain infectious agents or ischemic events can lead to development of congenital adhesive band. In addition to this immunological mechanism in both in-vitro and in-vivo experiment demonstrated the relationship of immunological causes of adhesive band [7, 8]. In our case etiology of this congenital case was not identified.

In paediatric patients congenital adhesion bands may cause an obstruction by an internal hernia [9]. Anomalous congenital band may cause serious morbidity due to

intestinal ischemia when diagnosis and intervention is delayed. So small bowel obstruction due to anomalous congenital band requires immediate surgical intervention as diagnostic and therapeutic to avoid ischemic complications of bowel.

Surgical management of this congenital band is done either open surgery or laparoscopic surgery. Now a days laparoscopic procedure has been increasingly used with a high success rate in intestinal obstruction (46 ~ 87%)[10] Although many paediatric patients are managed with laparotomy and band excision, more successful results with laparoscopic excisions have also been reported[11]

So laparoscopic procedure could be an excellent method for the diagnosis and subsequent management in cases of a small bowel obstruction caused by a congenital adhesion band. In our case we managed this patient in early presentation and we managed to cut the band before gangrene formation. In our case complete procedure was done with laparoscopy.

Conclusion

Congenital band is a rare condition with diverse clinical presentation across age groups. Early diagnosis and management of this band results in good outcome. So congenital band can be considered as a possible cause of a small bowel obstruction not only in pediatric age group but also in adult patients, even though there is no history of abdominal surgery. Small bowel obstruction due to anomalous congenital band requires immediate surgical intervention as diagnostic and therapeutic to avoid ischemic complications of bowel. Laparoscopy release of band is one of the best available modality for congenital band especially in adult patients.

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