

Intestinal Obstruction Due to a Congenital Band: Two Cases of Congenital Bands in Adults

Bounouar Ibtissam^{1*}, El Manjra Chama¹, Nacir Oussama¹, Lairani Fatima Ezzahra¹, Ait Errami Adil¹, Oubaha Sophia², Samlani Zouhour¹, Krati Khadija¹

¹Department of Hepato-gastro-enterology, Mohamed VI Teaching Hospital, Cadi Ayyad University, Marrakesh, Morocco

²Department of Physiology, Faculty of Medicine, Cadi Ayyad University, Marrakesh, Morocco

DOI: [10.36347/sjmcr.2024.v12i06.020](https://doi.org/10.36347/sjmcr.2024.v12i06.020)

| Received: 08.04.2024 | Accepted: 23.05.2024 | Published: 08.06.2024

*Corresponding author: Bounouar Ibtissam

Department of Hepato-gastro-enterology, Mohamed VI Teaching Hospital, Cadi Ayyad University, Marrakesh, Morocco

Abstract

Case Report

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. During embryogenesis, abnormal adhesion of the peritoneal folds induces a congenital band which can cause small bowel obstruction. It is extremely rare and usually observed in childhood. We report two cases of small bowel obstructions in adults due to congenital bands. The first patient is a woman of 47 years-old admitted for chronic abdominal pain, and the second one is a 20 years-old man admitted for the etiological assessment of chronic constipation. Surgical exploration was performed revealing a small bowel obstruction due to congenital band with complete resolution of the symptoms after surgery.

Keywords: Intestinal Obstruction, Small Bowel, Congenital Band, Adults.

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INTRODUCTION

Small bowel obstruction primarily results from adhesions, hernias, tumors, intussusception, foreign bodies, gallstones, and inflammatory bowel disease also contributing to its occurrence [1]. Congenital band-induced bowel obstruction is an uncommon condition, accounting for less than 3% of all cases of intestinal obstruction [2]. Typically observed in infancy and childhood, this condition is exceptionally rare in adults [3]. Its diagnosis may pose challenges, potentially leading to intestinal necrosis. Herein, we present two cases involving small bowel obstruction attributed to a congenital band with a medical history characterized by chronic abdominal pain and constipation.

CASE REPORT

Case 1

A 47-year-old female patient, who has never undergone surgery, was admitted for the etiological assessment of chronic abdominal pain especially in the right lower quadrant persisting for the past 6 months. The pain is described as a feeling of heaviness, ranging from moderate to intense, with intermittent episodes. Importantly, it is not associated with dietary factors and is not relieved by bowel movements or the passage of

gas. The clinical examination showed tenderness in the right lower quadrant without muscle guarding and laboratory findings were as follows: hemoglobin 11 g/dl, NA 130 mmol/L, K 2.9 mmol/L. The rest of the laboratory findings were normal. A computed tomographic (CT) scan of the abdomen showed a stenosis of the terminal ileum extending over 40mm, leading to dilation of the proximal small bowel loops. A colonoscopy detected the presence of a stenosis of the ileocecal valve with negative histopathological findings. Due to the patient's clinical deterioration, an exploratory laparotomy was performed and revealed the presence of a band located between the greater omentum and the terminal ileum, which was responsible for ileal strangulation. There was no sign of bowel ischemia or necrosis. The band was ligated and sectioned. The postoperative course was uneventful, and the patient was discharged on sixth day postoperative.

Case 2

A 20-year-old man was admitted to our service for the investigation of chronic constipation, he reported absolute constipation with vomiting and diffuse abdominal pain lasting for 2 days. The clinical examination revealed abdominal distention without palpable mass or infectious syndrome. Rectal examination was normal. A contrast-enhanced CT of the

Citation: Bounouar Ibtissam, El Manjra Chama, Nacir Oussama, Lairani Fatima Ezzahra, Ait Errami Adil, Oubaha Sophia, Samlani Zouhour, Krati Khadija. Intestinal Obstruction Due to a Congenital Band: Two Cases of Congenital Bands in Adults. Sch J Med Case Rep. 2024 Jun 12(6): 1051-1052.

abdomen showed only a distention of small bowel loops. An exploratory laparotomy was decided, a fibrous band was found that went from the terminal ileum to the mesentery, compressing the ileum at 50 cm from the ileocaecal valve, which showed signs of ischaemia. The fibrous band was cut and ligated. After resecting the adhesion, circulation to the intestine recovered satisfactorily. No further pathology was found in the intestine, and therefore the cavity was closed. The patient made satisfactory progress, tolerating oral feeding, and was discharged from hospital 4 days later.

DISCUSSION

Small bowel obstruction (SBO) by the congenital band (CB) is a rare pathology representing 0.7%-2% causes of mechanical obstructions of the small bowel and colon. CB also represents 2%-6% of mechanical small bowel obstructions by band [4, 5]. Most common causes of mechanical bowel obstructions are represented by adhesions caused by previous abdominal surgery and rarely by abdominal inflammatory conditions (primary or secondary peritonitis, tuberculosis, chronic inflammatory bowel disease, etc.) [6]. Therefore, rigorous questioning is needed before asserting the congenital nature of a band. Exceptionally, small bowel occlusion due to a band occurs in the absence of a medical or surgical history [5]. The congenital band could be explained during embryogenesis by an abnormal joining of the peritoneal layers giving rise to a congenital band [7]. It can come from embryonic structures such as the vitelline duct, vitelline artery, vitelline vein, and urachus and could also be observed in cases of common mesentery [8, 9]. Obstruction is caused by entrapment of the intestine between the band and mesentery or by compression of the bowel [3]. Direct visualization of a band on CT is exceptional. In our case, it was not visible. CT must also specify the presence or absence of signs of ischemic bowel which determines the decision for nonoperative treatment or surgical intervention [10]. Surgical treatment, whether performed laparoscopically or via laparotomy, involves resecting the adhesion and, if necessary, resecting the necrotic small bowel loop [2].

CONCLUSION

The possibility of a congenital band must be included in the differential diagnosis of 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.

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