

Intestinal obstruction due to congenital mesenteric band in an adult patient

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We report the case of a 30-year-old male patient who was admitted to the Emergency Department with symptoms and signs of intestinal obstruction. There was no history of abdominal surgery or trauma. Abdomen was distended. Abdominal plain X-ray showed intestinal loops with air-fluid levels in the middle area of the abdomen. Computed tomography showed small bowel dilatation and free fluid in the abdomen. A laparotomy was subsequently performed and the intraoperative findings revealed a band extending from the root of the mesentery to the antimesenteric wall of the jejunum. The band was resected; the postoperative course was uneventful. Congenital bands are extremely rare and usually observed in childhood. This case, therefore, represents an unusual surgical problem in an older individual in whom the diagnosis was clinically unexpected.

Key words: Mesenteric band, intestinal obstruction, adult

Erişkin hastada konjenital mezenterik banda bağlı intestinal obstrüksiyon

İnce barsak obstrüksiyonu ince barsağın en sık görülen cerrahi bozukluğudur. Herni, tümör, intussepsiyon, yabancı cisim, safra taşları ve inflamatuvar barsak hastalığını takiben oluşan adezyonlar en sık rastlanan nedenlerdir. İntestinal obstrüksiyonun en nadir nedenlerinden biri de, laparotomi, inflamatuvar hastalıklar, peritonit veya embriyojenik kalıntılar gibi geçirilmiş intraabdominal problemlerle bir ilişkisi olmayan ve çoğunlukla çocukluk döneminde izlenen anormal konjenital banttir. Biz olgu sunumumuzda intestinal obstrüksiyon bulgu ve semptomlarıyla acil servise başvuran 30 yaşında bir erkek hastayı sunmayı amaçladık. Hastada abdominal cerrahi veya travma öyküsü yoktu. Abdomen distandü idi. Çekilen ayakta direk batın grafisinde barsak anslarında hava-sıvı seviyeleri izlendi. Bilgisayarlı tomografide ince barsak dilatasyonu ve batında serbest mayii izlendi. Takiben laparotomi uygulandı, intraoperatif bulgular mezenter kökünden başlayarak jejenumun antimezenterik duvarına kadar uzanan bant yapısı ile uyumlu idi. Bant rezeke edildi, ve sorunsuz bir postoperatif dönem yaşandı. Konjenital bantlar oldukça nadir görülür ve çoğunlukla çocukluk çağında izlenir. Bu vaka, bu yüzden, klinik olarak beklenmeyen tanısı olan, daha yaşlı bir bireydeki sık görülmeyen bir cerrahi problemi temsil eder. Sonuç olarak, geçirilmiş abdominal cerrahi, inflamatuvar hastalık, travma, klinik bulgu veren herni veya peritonit öyküsü olmayan ve barsak obstrüksiyonu bulgu ve belirtileri ile başvuran genç hastalarda, ayırıcı tanıda konjenital bant olasılığı da göz önünde bulundurulmalıdır. Bu klinik durum, diagnostik ve terapötik amaçlı erken cerrahi girişim gerektirmektedir.

Anahtar kelimeler: Mezenterik bant, intestinal obstrüksiyon, erişkin

INTRODUCTION

Small-bowel obstructions are the most common surgical emergencies of the small intestine and are most frequently caused by adhesions followed by hernias, tumors, intussusception, foreign bodies, gallstones, and inflammatory bowel disease (1).

One of the rarest causes of intestinal obstruction is an anomalous congenital band that has no relationship with former intraabdominal problems (e.g. past laparotomy, inflammatory diseases, peritonitis, embryonic remnants) and is usually observed in childhood (2-4).

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In this paper, we report the case of a 30-year-old male patient with symptoms of intestinal obstruction, subsequently treated by resection of a congenital vascular band extending from the root of the mesentery to the antimesenteric wall of the jejunum.

CASE REPORT

A 30-year-old male patient presented to the Emergency Department with a two-day history of abdominal pain and vomiting. His vomiting was bilious, and he had no defecation for two days. There was no history of abdominal surgery, trauma, inflammatory diseases, clinical hernia, or peritonitis. He had no previous hospitalization because of abdominal pain or vomiting.

His abdomen was mildly distended without rebound, tenderness, or a palpable mass. On auscultation, there were active bowel sounds. Rectal examination was normal. At the time of arrival, he had a temperature of 37.0°C, a blood pressure of 110/80 mm Hg, and a pulse rate of 100 beats/min. Laboratory results revealed a white blood cells count of 12000/mm³ and hemoglobin of 14 g/dL. Electrolytes, total protein, and albumin were all within the normal range.

Abdominal plain X-ray showed intestinal loops with air-fluid levels in the middle area of the abdomen. Abdominal computed tomography revealed a dilation of the small bowel and free fluid in the pelvis. After an initial treatment with intravenous fluid and nasogastric suction, an exploratory laparotomy was performed and revealed a congenital vascular band extending from the root of the mesentery to the antimesenteric wall of the jejunum and causing obstruction of the jejunum. The band was vascularized by one of the branches of the superior mesenteric artery, and no sign of ischemic bowel was noted (Figure - 1). The band was ligated and resected. Postoperative outcome was uneventful, and the patient was discharged on the fourth postoperative day.

DISCUSSION

Congenital bands are a rare cause of intestinal obstruction in infancy and childhood and their occurrence in adults is an extremely rare condition (2,3).

Obstruction is caused by entrapment of the intestine between the band and the mesentery or by compression of the bowel. Akgur et al. reported

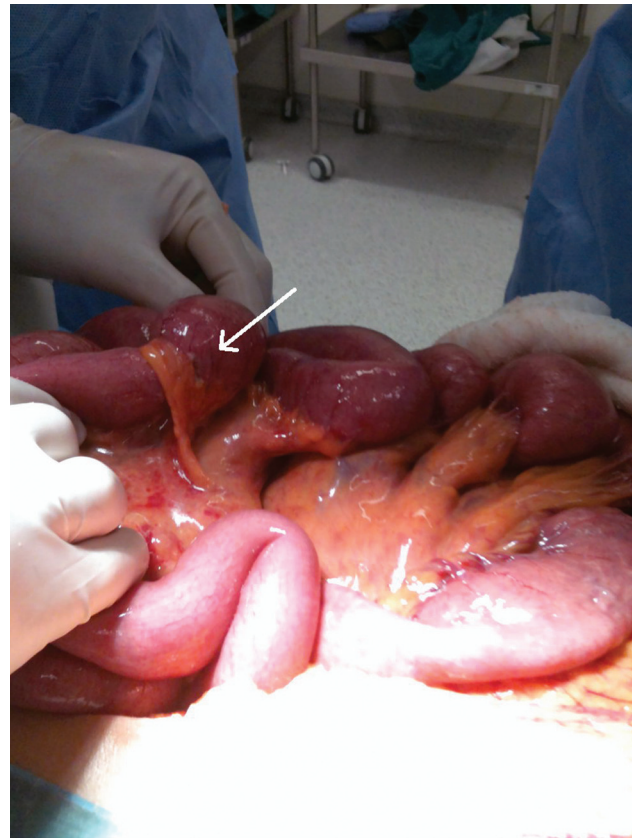


Figure 1. A congenital vascular band extending from the root of the mesentery to the antimesenteric wall of the jejunum.

the largest series of eight children with anomalous congenital band; a single thick band with blood vessels was found to be the cause of obstruction at laparotomy. One of the terminations of this band was attached to the terminal ileum or to the terminal ileum mesentery in all patients. The other end of the band was attached to the ascending colon in four cases, the Treitz' ligament in two cases, and the right lobe of the liver in two children (2).

In our case, the congenital vascular band was extending from the root of the mesentery to the antimesenteric wall of the jejunum and returned to the root on the other side of the mesentery.

Etensel et al. reported the case of a 7-year-old boy with acute intestinal obstruction caused by a anomalous congenital band which extended from the sigmoid mesentery to the ileum (5).

Dimitrios et al. described the case of a 20-year-old male patient who presented with symptoms and signs of intestinal obstruction. Intraoperative findings were consistent with an anomalous congenital band extending from the antimesenteric wall of the jejunum to the root of the mesentery (1).

Lin et al. presented a 6-month-old male with a band extending from the iliac fossa to the sigmoid mesocolon (6).

Itagaki et al. reported the case of a 4-year-old boy who presented with small bowel obstruction caused by a jejuno-jejunal congenital band (7).

In all reported cases, the band was well-vascularized as was the case in the present study. The etiology of these anomalous congenital bands is obscure, but their localization is not similar to that of well-known embryonic remnants such as vitelline vessels or omphalomesenteric ducts (2,8,9).

To our knowledge, our patient is the oldest individual ever reported with the diagnosis of a congenital vascular band which extends from the root of the mesentery to the antimesenteric wall of the jejunum causing jejunal obstruction in an adult.

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. With

absence of abdominal and pelvic surgery which excludes postoperative adhesions, a congenital band must be included in the differential diagnosis of young patients with symptoms and signs of bowel obstruction.

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 (10).

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

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