

A Congenital Intraabdominal Band Causing Intestinal Obstruction in a 4-Month-Old Child: Case Report

Dört Aylık Bir Çocukta Barsak Tıkanıklığına Neden Olan Doğumsal İntraabdominal Bant

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ABSTRACT Intestinal obstruction due to compression of bowels by a congenital intraabdominal band is a rarely seen clinical picture in childhood. Herein, we presented a 4-month-old patient who admitted our emergency service with symptoms and signs of intestinal obstruction. Urgent laparotomy revealed, a band compressing terminal ileum lead to intestinal obstruction. There is not any intestinal ischemia or necrosis. Following surgical exploration, the band was transected and intestinal passage was restored. The patient is asymptomatic for 2 years after the surgery. This case showed that congenital band compression should be kept in mind in differential diagnosis of intestinal obstruction during infancy. In addition, appropriate surgical approach ensures a successful outcome.

Keywords: Ileus; abdomen, acute; intestinal obstruction

ÖZET Doğumsal intraabdominal bant basısına bağlı barsak tıkanıklığı çocukluk çağında nadir görülen bir klinik tablodur. Çalışmamızda acil servisimize barsak tıkanıklığı belirtisi ve bulguları ile başvuran 4 aylık bir hasta sunulmaktadır. Laparotomide, terminal ileuma bası yapan bir bantın intestinal obstrüksiyona yol açtığı saptanmıştır. Barsaklarda iskemi veya nekroz görülmemiştir. Cerrahi eksplorasyon sonrası bant kesilerek barsak pasajı sağlanmıştır. Hasta 2 yıldır sorunsuz takip edilmektedir. Bu olgu, süt çocukluğu döneminde görülen intestinal obstrüksiyonların ayırıcı tanısında konjenital bant basısının da akılda bulundurulmasını ve uygun cerrahi yaklaşım ile başarılı bir şekilde tedavi edilebileceğini göstermiştir.

Anahtar Kelimeler: İleus; karın, akut; intestinal obstrüksiyon

Acute abdomen is one of the most common emergencies in childhood. Acute appendicitis, intussusception, ileus and volvulus are common etiologic factors that cause acute abdomen. One of the etiologic factors of acute abdomen is congenital band compression. The bands are accepted as remnants of fetal vessels or ventral mesentery which cannot be resorbed. It is an uncommon pathology seen in childhood that causes intestinal obstruction. Preoperative diagnosis is not obvious and the definitive diagnosis is mostly established intraoperatively.¹ Most common causes of intestinal obstruction at infantile period are intussusception and volvulus. There are very few studies regarding cases of congenital band compression.

Herein we presented a 4-month-old boy who had signs and symptoms of intestinal obstruction for four days due to a congenital band that compresses intestines without causing ischemia or necrosis.

CASE REPORT

A 4-month-old boy was admitted to our emergency department with abdominal distension and inability to defecate for the last 4 days. He was born at 36th gestational week with 3200 g and otherwise healthy. His general condition was poor. His weight was 6200 g. His family denied vomiting and constipation. At physical examination, he had abdominal distension which was tympanic with percussion (Figure 1) and bowel sounds could not be heard. There was no bleeding at rectal examination. Laboratory tests were normal except mild leukocytosis. On plain abdominal X-ray, dilated intestinal loops were seen without air in the colon (Figure 2). Ultrasound examination was reported as normal except dilated intestinal loops. Because of the signs of intestinal obstruction, surgery was performed via right upper quadrant transvers incision. Intraabdominal free serous fluid was detected. Small intestines were totally dilated. At exploration, a very tiny band compressing ileum near to ileocecal valve was found (Figure 3). There was no necrosis or ischemia of the intestine. Complete intestinal passage was provided by the excision of the band. No more pathology was found. Histopathologic examination did not reveal any specific dis-



FIGURE 1: Abdominal distension of the patient.



FIGURE 2: Dilated intestinal loops on the plain abdominal X-ray of the patient.



FIGURE 3: Congenital band compressing the intestine.

ease and fibrous band was reported. He had defecation at 1st postoperative day and was discharged at 2nd postoperative day. He has been free of symptoms for the last 2 years.

DISCUSSION

Intestinal obstruction is an emergency in childhood that is mostly caused by intestinal atresia in newborn period; volvulus, intussusception, annular pancreas or congenital bands in infantile and pediatric age groups.²⁻⁷ Many of these cases presented early in postnatal life can be diagnosed prenatally. However, diagnosing congenital band compression in early period is not always possible. A fibrous band develops when the omphalomesenteric duct fails to regress. It is 10% of omphalomesenteric abnormalities. The other end of the band may be fixed to the umbilicus or any structure in the abdominal cavity or the band may hang free in the peritoneal cavity. These bands are most commonly attributed to the persistent fetal vessels; however, anomalies of mesentery, possibly remnants of ventral mesentery that fails to resorb completely after the 4th week of gestation may be a reason. Grossly, they may persist as aberrant omphalodiverticular, omphalomesenteric or mesodiverticular bands depending on their respective sites of insertion. Diverticula was not found in our case. Instead, the band was originated from mesenteric side of the ileum and inserted into the anti-mesenteric side.

Patient had signs and symptoms of intestinal obstruction such as inability to defecate and abdominal distension for four days. But he could still be fed and he did not vomit at all. Even there was a color change of intestine distal to the obstruction, the color immediately returned to normal after releasing the band. Surprisingly, compression for four

days did not cause any ischemia or necrosis which also suggested why he did not vomit. One can suppose that it is due to not having complete obstruction at the beginning. However, as he continued feeding, abdominal distension was worsened due to obstruction of the intestines.

The reason why some congenital bands give rise to symptoms very early in life but some do not, is not clear. As the age gets older, Meckel diverticula accompanies to the pathology.^{5,6} In our case, the patient did not have prenatal diagnosis and any other postnatal signs or symptoms. There was no reason to explain why the band suddenly compressed the intestines.

As the minimal invasive procedures in children increase in number, there are some reports regarding laparoscopic intervention for intestinal obstruction.⁴ In our case, because the patient had very distended abdomen we decided to perform open surgery. We could not be sure if he would be hemodynamically stable while we performing laparoscopy or not. But after we diagnosed the pathology, it would worth to try at least for the benefit of patient.

It should be kept in mind that, congenital band compression can be the etiology of the intestinal obstruction in the infantile period with or without Meckel diverticula.⁷ Appropriate urgent surgical approach ensures a successful outcome. The exact mechanism of pathology is still not understood. Physicians might give a chance to minimal invasive procedures at least for the diagnosis.

Conflict of Interest

Authors declared no conflict of interest or financial support.

Authorship Contributions

Emrah Aydın.

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