Intestinal Obstruction Due to Omphalomesenteric Duct Cyst in an Adult Patient: Case Report

Erişkinde İntestinal Obstrüksiyona Yol Açan Omfalomesenterik Kanal Kisti

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ABSTRACT Omphalomesenteric duct abnormalities are detected generally in childhood secondary to complications of Meckel diverticulosis. Intestinal obstruction due to omphalomesenteric cyst in adult age is so rare. A 29 years old female patient presented with abdominal pain and nausea. Patient was hospitalized with diagnosis of intestinal obstruction. At laparotomy ileal obstruction due to omphalomesenteric cyst was detected and removed. Histopathological examination of extracted tissue was compatible with omphalomesenteric duct cyst. Obstruction secondary to omphalomesenteric cyst is rare cause of small bowel obstruction with very few cases reported in the literature. Surgical intervention must be planned in patients with obstruction as soon as possible.

Key Words: Intestinal obstruction; meckel diverticulum; vitelline duct

ÖZET Omfalomesenterik kanal anomalileri genellikle çocukluk çağında Meckel divertikülüne bağlı komplikasyonlarla ortaya çıkar. Erişkinde intestinal tıkanıklık ile ortaya çıkması ise çok nadirdir. 29 yaşında kadın hasta karın ağrısı ve kusma şikayetleri ile kliniğimize başvurdu. Yapılan değerlendirmeler sonrası hasta intestinal tıkanıklık tanısıyla yatırıldı ve takip edildi. Laparotomi sırasında ileumda tıkanıklığa yol açmış omfalomesenterik kanal kisti görülerek eksize edildi. Histopatolojik incelemede ameliyatta çıkarılan lezyonun omfalomesenterik kanal içeriği ile uyumlu olduğu görüldü. Erişkinde omfalomesenterik kanal kistine bağlı intestinal tıkanıklık nadirdir ve literatürde az sayıda olgu bildirilmiştir. Obstrüksiyonla başvuran hastalarda erken dönemde cerrahi girişim planlanlanması gerekmektedir.

Anahtar Kelimeler: İntestinal obstrüksiyon; meckel divertikülü; vitellin kanal

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Omphalomesenteric duct (OMD) anomalies are detected generally in childhood secondary to complications of Meckel diverticulitis. It may induce intestinal obstruction, abdominal pain, melena, and umbilical hernia or drainage that tend to occur most frequently during childhood.[1] Intestinal obstruction due to OMD cyst in adult age is so rare. In this article we report an adult patient, operated because of small bowel obstruction due to OMD cyst.

CASE REPORT

A 29 years old female patient presented with abdominal pain and nausea going on for 2-3 days. She didn't have any history of abdominal operation

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or an illness like this. On her physical examination, general status was fine, blood pressure was 110/70 mmHg, pulse rate was 88 beat per min and increase in bowel sounds, abdominal distention, diffuse sensitivity were detected. Diffuse air-fluid levels were detected in plain abdomen X-ray. There wasn't any pathological results in laboratory examination. Patient was hospitalized with diagnosis of intestinal obstruction. The patient was managed with restriction of oral intake, intravenous hydration and nasogastric suction. There was 300-400 ml drainage from nasogastric tube per day. There was no gas or gaita passage during first 3 days of follow up. Patient's abdominal pain has gone worse, abdominal distention has increased. On abdominal X-ray increase in bowel diameter and increase in gas-fluid levels were observed. Need for operation was explained to the patient but she refused to go under. At fifth day of follow up, her complaints got worse and she accepted to undergo operation. At laparotomy through midline incision, a fibrous cord originating from 60-70 cm proximal to ileocecal valve than changing shape to a cyst with dimensions of 2 cm diameter and 7-8 cm length, ending up at umbilicus was recognised. This tissue caused ileal obstruction by pressing ileum. This cystic tissue was resected from small bowel to umblicus. Primary repair applied to tissue defect of small bowel resulting from this resection. Histopathological examination of extracted tissue was compatible with omphalomesenteric duct cyst. Gas passage was occured at first postoperative day, then nasogastric tube was withdrawn. At second postoperative day oral intake was given. Discharge from hospital was at forth day. Informed consent was obtained from patient for presentation.

DISCUSSION

Acute mechanical small bowel obstruction is a common disease. In these group of patients, appropriate surgical treatment after correct and early diagnosis is really important. Most frequent causes are adhesions, Crohn's disease, incarcerated hernias and obstructions secondary to malignancy.[2]

Omphalomesenteric duct connects yolk sac and primitive midgut. Its' closure is spontaneously at fifth to ninth weeks of gestation.[3] If closure or resorption of duct is incomplete, some anomalies can occur.[2] Mostly seen is Meckel diverticulum. Other than this, residual bands can be seen as free lying bands in peritoneum or as bands originating from ileum, ending at umblicus, or other intraabdominal organs.[4,5] Omphalomesenteric duct can be observed as an enteric fistula or sinus tract under umbilicus, or as a cyst when both ends are closed. In community OMD anomalies seen in 2%. In literature, its mostly seen in men population like 2-4 times more.[5-7] Meckel diverticulosis is most commonly seen OMD anomaly. But OMD cyst is a rare disease. In one study just 3 cysts were determined among 217 children with OMD anomalies.[7] Especially among adults, omphalomesenteric cyst is rarely seen.[5]

Omphalomesenteric duct anomalies are rarely seen in adults. It is diagnosed generally before age of four.[1] The most commonly reported symptoms include gastrointestinal obstruction (13-36%), abdominal pain (31%), and rectal bleeding (5-22%).[8,9] In adults, obstruction is unusual. Obstruction can come out with different mechanisms. Mostly seen way is like in our case, compression of small bowel due to band. Other than this closed-loop obstruction or volvulus can be seen.[1] In patients with obstruction, fluid-gas levels are detected on abdominal X-ray. Preoperative diagnosis is difficult. Significant cysts can be seen by ultrasonography or computerized tomography.[10] Surgical treatment is indicated in symptomatic patients with OMD anomalies but not necessary for asymptomatic patients.[11] Laparoscopic surgical approach can be preferred.[8,12]

In conclusion, obstruction secondary to OMD cyst is rare cause of small bowel obstruction with very few cases reported in the literature. Although preoperative diagnosis is different, it can be remembered in patients with no previous history of surgery. Surgical intervention must be planned in patients with obstruction as soon as possible.

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