

Primary Omental Torsion in an Adolescent Male: Case Report

Adolesan Yaşta Primer Omentum Torsiyonu

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ABSTRACT Primary omental torsion is an extremely rare condition which is usually encountered in adults. Clinical presentation of primer omental torsion usually mimics a variety of acute abdominal surgical diseases including acute appendicitis, cholecystitis and ovarian torsion. We reported a twelve years old boy presented with suspected acute appendicitis whose final diagnosis at laparotomy revealed primary omental torsion with a normal appeared appendix. The patient was treated with resection of twisted omentum. When an abdominal exploration is negative for appendicitis or other common abdominal pathologies, primary omental torsion should be considered and resection of involved omentum should be the treatment of choice.

Key Words: Child; adolescent; omentum; laparotomy

ÖZET Primer omentum torsiyonu genellikle erişkin yaş grubunda görülen ve oldukça nadir rastlanan bir durumdur. Primer omentum torsiyonu genellikle akut apandisit, kolesistit ve over torsiyonu gibi birçok cerrahi nedenli akut batın tablosunu taklit etmektedir. Bu yazıda akut apandisit şüphesiyle ameliyat edilip apendiksi normal bulunan ve primer omentum torsiyonu tespit edilen 12 yaşında bir erkek hasta sunulmuştur. Hastamızda tedavi yöntemi olarak torsiyone olan omentumun rezeksiyonu tercih edildi. Apandisit veya diğer cerrahi akut batın nedeniyle abdominal eksplorasyon yapılan hastalarda apandisit ve diğer cerrahi nedenler tespit edilemediği zaman omentum torsiyonu mutlaka akla gelmelidir. Tedavi yöntemi olarak ise torsiyone olan omentum kısmının rezeksiyonu tercih edilmelidir.

Anahtar Kelimeler: Çocuk; adolesan; omentum; laparotomi

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The torsion of omentum majus is an extremely rare cause of acute abdomen.¹ If this condition occurs as omental twisting around a narrow neck without an accompanying pathology, it is called primary omental torsion (POT), and is reported by Eitel for the first time in 1899.¹ POT is usually encountered by 4th-5th decades of life.² Patients usually have non-specific symptoms such as nausea, vomiting, and anorexia with right lower quadrant abdominal pain pretending acute appendicitis, therefore preoperative diagnosis is usually not possible.² We reported a twelve year old boy presented with colic abdominal pain in whose preoperative diagnosis was primary omental torsion.

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CASE REPORT

A twelve years old boy with obese appearance suffering from abdominal pain for the last two days was admitted to our hospital. Patient was complaining of nausea, vomiting and subfebrile fever simultaneous with the abdominal pain. He had right lower quadrant tenderness and abdominal guarding on physical examination. Laboratory studies were unremarkable except 18.5 mg/L serum C-reactive protein level (normal range; 0-4 mg/L). Plain abdominal X-Ray and abdominal ultrasonography did not demonstrate any pathologic sign. With the presenting clinical symptoms acute appendicitis was suspected and the patient underwent laparotomy. Exploration via Rocky-Davis incision demonstrated a necrotic, edematous omental mass in the right lower quadrant, moderate amount of serosanguineous fluid, and normal appeared appendix (Figure 1). The loose distal portion of omentum was twisted twice on clock-wise, and this necrotic omental portion was resected. Postoperative course of the patient was uneventful and the patient was discharged on postoperative day 2.

DISCUSSION

Omental torsion occurs in two different types including primary and secondary torsion.³ POT is relatively uncommon in children.^{4,5} POT is usually encountered in obese boys, and the diagnosis is made during explorative laparotomy.² Similar with the presented case, the distal tip of the omentum is mobile in POT and there is no concomitant pathology.⁶ Secondary omental torsion is more frequent



FIGURE 1: Intraoperative image of torsed omentum.

than POT and is most commonly associated with groin hernia. Furthermore, tumors, cysts and foci of intra-abdominal inflammation may accompany secondary omental torsion.^{1,6}

The pain in omental torsion has a sudden onset and its localization depends on the extent and portion of omentum involved in torsion.² Usually the tip of right side of omentum twists thus patients suffer from a colic pain on the right lower quadrant of the abdomen as presented in our patient. Anorexia, nausea and vomiting are common symptoms of omental torsion and simultaneous subfebrile fever with leukocytosis may be encountered. Physical examination of the patient may reveal a right lower quadrant mass.

The etiology of POT is not clear but factors such as anatomic variations of omentum itself, tongue-like elongation of omentum, bifid omentum, accessory omentum, and irregular fat distribution caused with obesity are blamed in the etiology of POT.³ It is proposed that venous vasculature redundancy in proportion to arterial vessels may lead to kinking and further twisting of omentum around arterial vasculature.⁴

Additionally local trauma, high vibration works, and predisposing factors causing omental displacement such as heavy diet, violent exercise resulting in increased intra-abdominal pressure, coughing or sneezing are also proposed in the etiology of POT.³ We could not determine any predisposing factor except obesity in the presented case.

Omental torsion usually occurs around the long axis of omentum and twisting mostly occurs on clock-wise fashion as seen in this case. Following torsion, omental portion distal to the twisting becomes edematous and swells. Further hemorrhagic infarct, omental necrosis, and hemorrhagic extravasation cause fluid accumulation in the peritoneal cavity. Since the right side of omentum is longer, heavier and more mobile than the left side, torsion of omentum on the right side is more common, as observed in the presented case. Left sided omental torsion is an extremely rare condition.⁶

The differential diagnosis of POT includes acute appendicitis, cholecystitis, and ovarian tor-

sion. However the clinical signs and symptoms are milder in POT.

The traditional and widely accepted treatment of POT is resection of twisted omental portion.² However, some authors suggest conservative treat-

ment after excluding other causes considered in the differential diagnosis. Since this approach requires long period analgesic use and has the risk of intra-abdominal abscess development, long-term follow-up is crucial in order to prevent complications.⁷

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