

# Unraveling the Enigma: Omental Torsion in a Patient with Non-specific Abdominal Pain

## CASE REPORT

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### ÖZET

Omental torsiyon, akut karın ağrısının nadir bir nedenidir ve görülme oranı %0,37'den azdır. Spesifik olmayan semptomları nedeniyle sıklıkla akut apandisit gibi diğer akut karın ağrısı nedenleriyle karıştırılır. Bu olgu sunumunda acil servise karın ağrısı şikayeti ile başvuran ve peroperatif omental torsiyon tanısı konulan 26 yaşındaki erkek hastayı tartışacağız. Spesifik olmayan semptomları nedeniyle omentum torsiyonunun tanısı zordur. Akut ağrıda tanı konulamadığında tanısal laparoskopi geciktirilmemelidir. Omentum torsiyonu laparoskopik omentektomi ile kolaylıkla tedavi edilebilir.

**Anahtar kelimeler:** Akut batın, Karın ağrısı, Laparoskopik cerrahi, Omentum torsiyonu

### ABSTRACT

Omental torsion is a rare cause of acute abdominal pain, with an incidence rate of less than 0.37%. Due to its non-specific symptoms, it is often confused with other causes of acute abdominal pain, such as acute appendicitis. In this case presentation, we will discuss a 26-year-old male patient who presented to the emergency department with complaints of abdominal pain and was diagnosed with perioperative omental torsion. The diagnosis of omental torsion is challenging due to its non-specific symptoms. When a diagnosis cannot be established in acute pain, diagnostic laparoscopy should not be delayed. Omental torsion can be easily treated with laparoscopic omentectomy.

**Keywords:** Acute abdomen, Abdominal pain, Laparoscopic surgery, Omentum torsion

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## INTRODUCTION

Acute abdominal pain is one of the most common reasons for emergency department visits. The leading cause of acute abdominal pain necessitating surgery is acute appendicitis (1). Omental torsion, on the other hand, is a rare cause of acute abdominal pain, more frequently observed in males aged 30-50, with an incidence rate of less than 0.37%. The number of cases mentioned in the literature is fewer than 300 (2). The preoperative diagnostic rate in patients is below 5% (3).

Patients often present to the emergency department with non-specific symptoms such as localized abdominal pain in the right lower quadrant, nausea, vomiting, and loss of appetite. Elevated levels of leukocytes and C-reactive protein (CRP) can be observed in patients. Although imaging techniques can assist in diagnosis, their specificity is low (3).

In this case presentation, we describe a patient who presented with acute abdominal pain, and the definitive diagnosis of omental torsion was made intraoperatively.

## CASE PRESENTATION

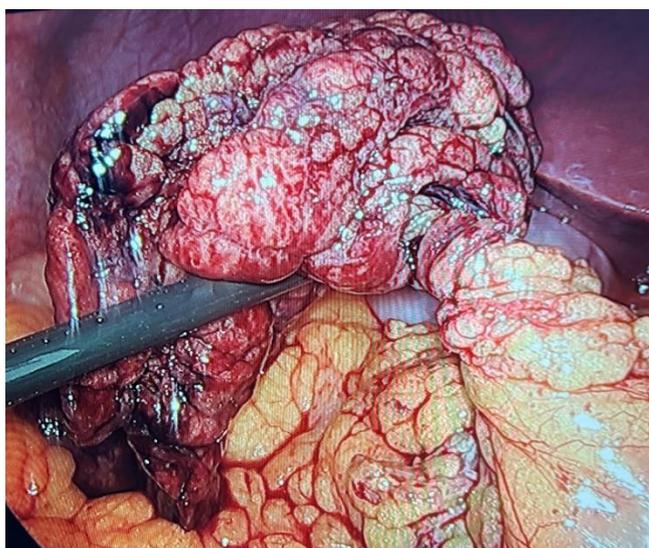
A 26-year-old male patient presented to the emergency department with a complaint of abdominal pain persisting for 48 hours. There was no nausea, vomiting or decrease in appetite in the patient's anamnesis. There was no previous surgery in the patient's history. Physical examination revealed tenderness in the right iliac fossa along with signs of peritoneal irritation. Laboratory results at the time of admission showed a hemoglobin level of 15.6 g/dL, a total leukocyte count of  $13.56 \times 10^3/\mu\text{L}$ , and a CRP level of 2.2 mg/dL. Abdominal ultrasound failed to detect the appendix. Therefore, the patient underwent intravenous contrast-enhanced abdominal computed tomography (CT). No pathology was identified in the appendix region on abdominal CT. However, dirty appearances in the mesenteric tissues in the right central abdomen and minimal free fluid in the pelvis were observed (Figure 1).



**Figure 1.** Image of omental torsion on abdominal computed tomography

Diagnostic laparoscopy was planned for the patient. During laparoscopic evaluation, distal free omental torsion was identified in the

right upper quadrant. Despite detorsion of the omentum, the segment displaying necrotic appearance was resected (Figure 2).



**Figure 3.** Laparoscopic view of omental torsion

The patient was discharged 24 hours after the surgery. No symptoms developed during the one-month follow-up.

## **DISCUSSION**

Omental torsion can be classified as primary or secondary based on whether the distal end is free. In primary omental torsion, the distal end is free, while in secondary omental torsion, adhesions due to previous surgeries cause the distal end to be attached (3). Omental torsion, whether primary or secondary, can arise from various factors such as intra-abdominal tumors that increase intra-abdominal pressure, obesity, excessive physical exercise, and overeating (4). In our patient, no pathology causing an increase in intra-abdominal pressure was identified.

In omental torsion, intestinal blood supply is often not compromised, and bowel peristalsis remains unaffected. Therefore, most patients with omental torsion do not exhibit significant gastrointestinal symptoms (5). These patients typically present with constant, localized abdominal pain exacerbated by movement. High fever may be detected in cases where the blood supply to the omentum is severely compromised (5). As in our case, these non-specific symptoms can often lead to misdiagnosis, failure to diagnose, or diagnostic delays. Diagnosis can often be confused with acute appendicitis, acute cholecystitis, or epiploic appendicitis (3).

In addition to these non-specific symptoms, laboratory values are not specific to omental torsion. Preoperative CT scans are valuable in excluding other pathologies and partly demonstrating edema in the omental fatty tissue (6). Despite all these, laparoscopy is the definitive diagnostic method in cases where omental torsion is suspected (6).

The treatment approach in patients diagnosed with omental torsion is controversial. Although there are conservative treatment approaches due to the self-limiting nature of omental torsion, surgical resection is the primary treatment, especially in symptomatic patients (7,8). Delayed diagnosis or consideration of conservative treatment can mask the progression of the disease due to antibiotic and anti-inflammatory treatment. Therefore, it is crucial to avoid delays when the diagnosis is certain.

Laparoscopic surgical approach has many advantages over conservative treatment. The most important benefit is the confirmation of the diagnosis (6). Another benefit is the early removal of anti-inflammatory agents related to necrotic tissue. When omental torsion is rotated and blood supply is restored during laparoscopic surgery, omentum resection may not be performed if the omentum is not necrotic. Additionally, abdominal lavage is another advantage of the laparoscopic approach. Due to these and many other benefits, it is important not to delay the laparoscopic surgical approach.

## CONCLUSION

The diagnosis of omental torsion is challenging due to its non-specific symptoms. When a diagnosis cannot be established in acute pain, diagnostic laparoscopy should not

be delayed. Omental torsion can be easily treated with laparoscopic omentectomy.

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