

A Rare Cause of Lower Right Quadrant Pain in Adults: Torsion-Related Omental Infarct

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ABSTRACT

A rare cause of lower right quadrant pain in adults is torsion-related omental infarct. The etiology is not fully known. Because of clinical findings such as acute cholecystitis or acute appendicitis, the diagnosis is frequently established during the exploration. Resection of the ischemic omentum with laparoscopy or laparotomy can be performed for the treatment. We believe that, if the exploration findings during laparotomy fail to explain the clinical picture, omental infarct should be considered among the additional pathologies.

Key words: Omental torsion, Infarct, Acute abdomen

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ÖZET

Erişkin Yaş Grubunda Nadir Bir Sağ Alt Kadran Ağrısı Nedeni: Torsiyona Bağlı Omental İnfarkt

Erişkin yaş grubunda nadir bir sağ alt kadran ağrısı nedeni de torsiyona bağlı omental infarkt. Etiyolojisi tam olarak bilinmemektedir. Akut kolesistit veya akut apandisit gibi klinik bulgular verdiği için çoğu zaman eksplorasyon sırasında tanı konulur. Tedavide laparoskopi veya laparotomi ile iskemik omentumun rezeksiyonu uygulanabilir. Akut apandisit ön tanısıyla laparotomi yapılan olgularda eksplorasyon bulguları klinik tabloyu izah etmiyorsa, ek patolojiler arasında omental infarktın da düşünülmesi gerektiği kanaatindeyiz.

Anahtar kelimeler: Omentum torsiyonu, İnfarkt, Akut karın

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INTRODUCTION

Omental infarct is a rare pathology developing from the impairment of the greater omentum, and it can mimic many causes of acute abdomen with its clinical findings^[1]. A torsioned omentum may present clinical findings such as acute appendicitis, acute cholecystitis, renal colic, or diverticulitis, depending on its location^[2]. In general, the diagnosis is reached during the surgical exploration^[3]. The classical treatment is surgical resection^[4]. In this report, we present a case with signs and symptoms of acute appendicitis, in which omental necrosis as the result of torsion was identified on the laparotomy. We discuss the diagnosis and treatment of omental torsion in light of the data from the literature.

CASE REPORT

A 32-year-old male patient referred to our emergency department with an abdominal pain that had started about three days before and gradually increased. There was no additional disease or history of drug use, smoking or alcohol abuse. On the physical examination, his blood pressure was 130/80 mmHg, pulse 88/minute and temperature 37.6°C. On the abdominal examination, tenderness, defense and rebound were found in the lower right quadrant and costovertebral area. The laboratory tests revealed leukocytes of 10.800/mm³ (67% neutrophils, 25% lymphocytes); the biochemical values were in normal ranges.

A mass lesion with fatty tissue density was detected on the abdominal computed tomography, in a region starting from the lower part of the liver and extending to the upper region adjacent to the cecum (Figure 1). Following assessment of the clinical findings, laparotomy was performed with McBurney's incision on the suspicion of acute appendicitis and secondary omentum emigration. On the exploration, 100-150 cc of serohemorrhagic fluid was present in the abdomen. The appendix was retrocecaly located, but appeared non-inflamed. The mass was palpated, starting from the upper region adjacent to the cecum and extending to below the liver, and the incision was extended toward the upper part. The omentum majus was seen to be torsioned in this area, and the distal portion of the torsion included some necrosis (Figure 2). The necrotic omental segment was resected and appendectomy performed. The patient was discharged on the post-operative fourth day with recovery.

DISCUSSION

Omental infarct is a rare clinical manifestation developing from impairment in omental perfusion. It was first described by Bush in 1896. Omental infarct

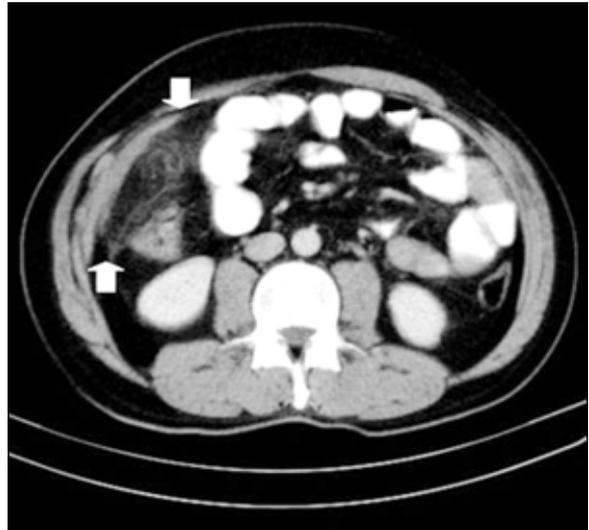


Figure 1. A mass in fatty tissue density is seen in a localization lying from the inferior part of the liver to the cecum.



Figure 2. 8 x 7 x 2 cm size, torsione and ischemic part of the omentum.

is defined in about 0.1% of cases with laparotomy performed due to acute abdomen^[1]. It is most commonly seen in the fourth and fifth decades, and the male to female ratio is 2:1^[2]. The clinical findings are non-specific^[3]. There is a mild irritation of the peritoneum. On rare occasions, mild fever, nausea and a minimal increase in the leukocyte number may be seen^[3]. There was tenderness of lower and upper right quadrants in our case. Complaint of fever, nausea or vomiting was absent. The leukocyte value was 10.800/mm³ in the laboratory examinations, and other values were in normal ranges.

Because the right part of the omentum majus is more mobile, ischemia and necrosis are mostly seen in this region and may be mixed with appendicitis^[4]. In the present case as well, necrosis was defined in the right part of the omentum majus.

Preoperative diagnosis of omental torsion is difficult, and diagnosis is usually achieved during laparotomy. In suspected cases, computed tomography may reveal a mass of fatty density localized in the torsioned omentum^[5]. In this case, computed tomography was ordered since the findings were non-specific, and it demonstrated a lesion of fatty tissue in the region starting from the lower part of the liver and extending to the region adjacent to the cecum. With these findings, laparotomy was decided in the patient, primarily considering acute appendicitis and related peri-appendicular migration of the omentum.

Considering the possibility of omental necrosis, a detailed abdominal exploration should be performed in patients with serohemorrhagic fluid in the abdomen found on the laparotomy without any other pathology^[4,6]. In this case as well, the incision was further extended, and a detailed abdominal exploration was carried out, since 100-150 cc of serohemorrhagic fluid was seen on the laparotomy performed with McBurney's incision.

Resection of the torsioned omentum is recommended for the treatment of omental torsion^[1,4,6]. In the present case, the omental tissue including infarct was resected. A successful treatment with laparoscopy is possible in cases with a preoperative diagnosis^[3]. Kavalakat et al. treated a case with omental necrosis using a laparoscopic approach^[3].

On the pathological examination of the resection material, an omentum measuring 8 x 7 x 2 cm, brown-colored, with bleeding cross-sectional surfaces was defined, while on the histological examination, necrotic fat cells, congestion of the vascular structures, extravasation of erythrocytes, organized thrombus, secondary inflammatory cell infiltration, and in one area, presence of fibroblastic reaction were observed (Figure 3). With these findings, the case was diagnosed as "hemorrhagic infarct and non-specific inflammation in the omentum".

In conclusion, if the exploration findings during laparotomy fail to explain the clinical picture, omental infarct should be considered among the additional pathologies.

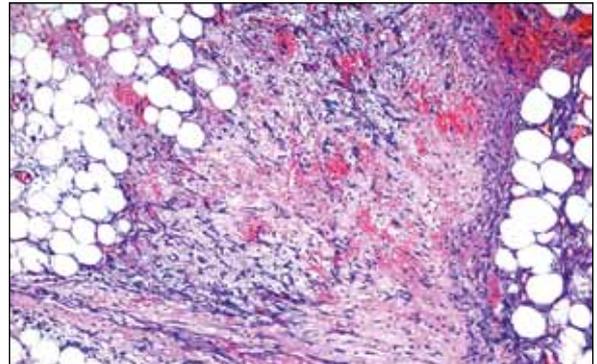


Figure 3. In histopathologic examination of the specimen, necrotic fat cells, congestion in vascular tissue, extravasation of the red blood cells, organised thrombus, infiltration of the secondary inflammatory mediators observed.

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