

Laparoscopic Treatment of Two Patients with Omental Infarction Mimicking Acute Appendicitis

Dimitrios Danikas, MD, Spero Theodorou, MD, Jose Espinel, MD, Catherine Schneider, MD

ABSTRACT

Background: Omental infarction is a rare entity that usually causes symptoms similar to those of appendicitis. Ultrasound or computerized tomography scan can diagnose omental infarction preoperatively.

Methods: We treated two patients with omental infarction by performing a laparoscopic omentectomy in each one.

Results: The pathology verified the operative diagnosis, and both patients were discharged home on the first postoperative day.

Conclusion: Omental infarction can be accurately diagnosed and safely treated with laparoscopy.

Key Words: Laparoscopy, Omental infarction, Acute abdominal pain.

INTRODUCTION

Omental infarction occurs rarely. Most patients with this anomaly present with right lower quadrant tenderness and guarding, which can lead to a misdiagnosis of appendicitis.¹ Ultrasound or computerized tomography (CT) have been used to obtain a preoperative diagnosis.² However, diagnosis is most often established intraoperatively. We report here 2 cases that we diagnosed and treated laparoscopically.

CASE REPORT 1

A 20-year-old male presented with a 2-day history of acute onset of right-sided abdominal pain, localizing to the level of the umbilicus and radiating to the right flank. He had associated anorexia but no history of fever or vomiting. The clinical examination revealed a patient with right-sided guarding and tenderness. The point of maximal tenderness was over the lateral edge of the rectus muscle. The patient had bowel sounds but no rebound tenderness. The patient's white blood cell count was 11.5. CT of the abdomen showed inflammatory changes in the right upper quadrant under the gallbladder. Based on these findings, we made the diagnosis of retrocecal appendicitis. The patient was taken to the operating room, and during diagnostic laparoscopy a portion of the right omentum was found to be ischemic and hemorrhagic with severe edema. We resected a piece of omentum measuring 1.5 x 8.0 x 1.2 cm. The appendix appeared normal. We performed the omentectomy with two 11-mm ports placed at the inferior rim of the umbilicus and the right lower quadrant and another 5-mm port placed in the left lower quadrant. We then resected the omentum with a stapler.

The pathology revealed acutely congested adipose tissue containing dilated and focally thrombosed blood vessels, thus verifying the intraoperative findings. The postoperative course was uneventful, and the patient was discharged home on the first postoperative day, tolerating a regular diet.

Departments of Surgery, Newark Beth Israel Medical Center, Newark, New Jersey and Monmouth Medical Center, Long Branch, New Jersey USA (all authors).

Address reprint requests to: Dimitrios Danikas, MD, 762 Greens Avenue, Apt 3B, Long Branch, NJ 07740 USA. Telephone/Fax: (732) 870-1675, E-mail: ddanikas@onebox.com

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CASE REPORT 2

A 15-year-old black male presented with a 1-day history of acute onset abdominal pain localized to the right lower quadrant. The patient did not have nausea, vomiting, anorexia, or fever. The physical examination revealed mild tenderness without guarding in the right lower quadrant. Bowel sounds were present. Psoas and obturator signs were positive. The white cell count was 6.7. An abdominal film showed paucity of bowel gas in the right lower quadrant. We made a diagnosis of appendicitis; however, the diagnostic laparoscopy revealed a healthy appendix. In the area of the cecal fossa, we discovered a small amount of seropurulent fluid. Next to the cecum, a portion of omentum was twisted, ischemic, and appeared nonviable. Using an endo-loop, we resected a 9 x 4 x 3-cm piece of omentum, using an 11-mm port at the inferior rim of the umbilicus and two 5-mm ports at the right and left lower quadrants. The histologic examination of the omentum revealed foci of hemorrhage, vascular congestion, inflammatory changes, and fibrin deposition consistent with segmental omental infarction. The patient was discharged home on the first postoperative day, tolerating a regular diet.

DISCUSSION

Omental infarction occurs more often in the fourth and fifth decade of life although it may present at any age.³ Torsion of the omentum is the most commonly reported cause of omental infarction. It may be caused by anatomic variations. A right tongue-like excrescence of the greater omentum has been reported. Obesity and heavy exercise can be predisposing factors for omental torsion.^{1,4,5} We noted torsion of the omentum in our second reported patient.

In the first patient, we did not observe torsion of the omentum; instead he presented with idiopathic infarction. Possible mechanisms are arterial microthrombosis or omental venous thrombosis secondary to stretching of the omental veins.⁶ Johnson first described this entity in 1932.⁷

Omental infarction is a rare entity and preoperative diagnosis is difficult to establish. The differential diagnosis should include epiploic appendicitis because omental infarction can be due to torsion or inflammation of the epiploic appendices. Ultrasound and computerized tomography visualize epiploic appendices as small mass-

es lateral to the colon. In omental torsion, the mass is usually larger and medial relative to the position of the ascending or descending colon.^{8,9} Mazza et al¹⁰ have reported that laparoscopy can provide an accurate diagnosis and treatment.

The patient with omental infarction usually presents with acute onset of abdominal pain. The area of tenderness can be in a characteristic superficial periumbilical location, between the rectus abdominis muscle and the transverse colon corresponding to the greater omentum.¹¹ Usually the diagnostic impression is of an atypical case of acute appendicitis. The clinical picture of acute appendicitis however is not complete.¹¹ Our first patient presented with identical symptomatology. Right lower quadrant symptoms occur due to the greater length of the omentum on the right.¹ Some patients have generalized peritoneal signs. Right upper quadrant symptoms have also been reported. Preoperative diagnosis can be made but is difficult. CT and ultrasound can be helpful,² but laparotomy or laparoscopy best establish the definitive diagnosis. Conservative treatment with bedrest and anti-inflammatory medications are advised.² This approach has been associated with the development of omental abscesses in some patients.¹² Laparoscopic resection of the involved omentum provides definitive treatment with a short hospitalization and quick recovery.

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