

CASE REPORT

Medicine Science 2019;8(2):454-6

Cause of rare acute abdomen: Primary omental torsion**Guleser Akpınar¹, Bedia Gulen², Ali Duman³, Afsin Ipekci⁴, Hilal Hocagil⁵**¹*SBU Istanbul Sisli Hamidiye Etfal Training and Research Hospital, Clinic of Emergency Medicine, Istanbul, Turkey*²*Bezmialem Vakıf University Faculty of Medicine, Department of Emergency Medicine, Istanbul, Turkey*³*Adnan Menderes University Faculty of Medicine, Department of Emergency Medicine, Aydın, Turkey*⁴*Cerrahpaşa University Faculty of Medicine, Department of Emergency Medicine Istanbul, Turkey*⁵*Bulent Ecevit University Faculty of Medicine, Department of Emergency Medicine, Zonguldak, Turkey*

Received 20 August 2018; Accepted 04 October 2018

Available online 30.01.2019 with doi:10.5455/medscience.2018.07.8936

Copyright © 2019 by authors and Medicine Science Publishing Inc.

Abstract

Omental infarction is a rare pathology which develops as a result of impairment of perfusion of the omentum magus, which can imitate almost all acute abdomen symptoms with its clinical findings. The patient who applied to our emergency department with the complaint of abdominal pain that has started three days ago was taken under operation with the prediagnosis of omental infarction as a result of the analyses conducted. In laparotomy, omentum torsioned along normal appendix and long axis and undergone necrosis was observed. Torsioned necrotic omentum tissue has been excised. Our conclusion from the case and literature is that omental torsion and idiopathic omental necrosis should be also considered in patients with abdominal pain complaint.

Keywords: Omental infarction, omental torsion, acute abdomen**Introduction**

Omental infarction is a rare pathology defined almost a century ago. With start of the use of cross-sectional diagnostic methods developed in the recent years, it was understood to be a pathology that is more common than as known. Omental infarction is seen most frequently in the fourth and fifth decades. Its male-female ratio is 2:1. Only 15% of the cases are in the pediatric age group [1].

Omental infarction can occur as a result of torsion of the omentum or without torsion. Omental torsion may be of primary or secondary type. As primary, it can occur especially in obese patients with the effect of the predisposant factors, in association with omentum anomaly, excessive exercise, sudden movements,

hyperperistaltism. Secondary omental torsion most frequently occurs due to the causes such as hernia, tumor, adhesion force [2]. Both cases result in torsion and infarction. The infarctions developing without torsion may be observed as secondary omental infarction or idiopathic segments omental infarction coexisting with systemic conditions such as vasculitis, pancreatitis, hypercoagulability [3]. In this study, we evaluated the case we administered follow-up and treatment of due to the cause of acute abdomen in the light of literature data.

Case Report

28-year-old female patient applied to our emergency department with complaint of abdominal pain that has started 3 days ago. It was expressed that the pain had started instantly and become acute thereafter. Nausea, vomiting, fever, lack of appetite and urinary symptoms were absent. She did not have surgery, illness and continued drug use in her history. In physical examination of the patient, TA:110/60 mmHg, KTA:74/dk, fever:36.7°, in abdominal examination, sensitivity with palpation especially in both lower

*Corresponding Author: Guleser Akpınar, SBU Istanbul Sisli Hamidiye Etfal Training and Research Hospital, Clinic of Emergency Medicine, Istanbul, Turkey
E-mail: guleserakpinarduman@gmail.com

quadrants were present, she did not have distension. She described stools discharge as recent diarrhea, she did not describe dysuria and vaginal secretion. Patient's body mass index was within the normal limits. Results of laboratory analysis were glucose: 142 mg/dl (74 - 106 mg/dl), urea: 17.5 mg/dl (0 - 50 mg/dl), creatinine: 0.57 mg/dl (0 - 0.95mg/dl), SGOT: 11.8 u/l (0 - 32 u/l), SGPT: 5.9 u/l (0 - 33 u/l), LDH: 124 u/l (135 - 214 u/l), total bilirubin: 0.31 mg/dl (0 - 1.2 mg/dl), direct bilirubin: 0.16 mg/dl (0 - 0.3 mg/dl), amylase: 52 u/l (28 - 100 u/l), lipase: 14 u/l (21 - 67 u/l), CRP: 57.12 mg/l (0 - 5 mg/l), WBC: 11,29 K / uL (4-11 K / uL), Hemoglobin: 10 g / dL (13-17.5 g / dL), Platelet: 160 K / uL (150 - 400 K / uL) Electrocardiography was in normal sinus rhythm. The patient first underwent whole abdominal ultrasonography, and no feature was observed. Radiology commented that appendix was normal, density increases that could be consistent with inflammation in omentum were observed in abdominal lower quadrants in iv-contrast abdominal tomography of the patient. The patient for whom consultation was made with general surgery was taken under urgent operation with the pre-diagnosis of omentum infarction. In laparotomy, omentum torsioned along normal appendix and long axis and undergone necrosis was observed. Torsioned necrotic omentum tissue was excised. She was discharged without problem on post-operative day three.

Discussion

Omental torsion is rare clinical condition progressing with hemorrhagic exudates and acute abdomen findings in association with development of necrosis in distal of the torsion due impairment of arterial supply and venous drainage in consequence of rotation of the omental structure and appendices around the long axis. It is more commonly seen in the 3rd and 5th decades. Omental torsion was first defined by Eitel in 1899, and primary omental torsion was encountered at the rate of 0.1% in laparotomies of the children with the pre-diagnosis of acute abdomen [2].

It is very difficult to diagnose omental torsion preoperatively. Diagnosis can be usually made intraoperatively. In the studies conducted, it is reported that 0.2% to 4.8% of all cases can be diagnosed correctly preoperatively [4]. Diagnosis was made preoperatively in our case, too.

In the clinic, subfebrile fever and moderate leucocytosis may be seen in 50% of the patients. Our cases had moderate leucocytosis. In the literature, omental torsion and pain in infarct is seen to be characterized as starting instantly, continuous, non-spreading, and having intensity increasing with time and motion. In physical examination, sensitivity and rebound may be frequently present in the right lower quadrant, this may be accompanied by nausea and vomiting [2,3]. In our case, pain onset was instant before 3 days and continued constantly. In physical examination, she had common sensitivity, she did not complain of nausea and vomiting. Patient's body mass index was within the normal limits and she was young.

Findings usually imitated acute appendicitis, cholecystitis, or over cyst torsion, and if left-sided, misdiagnosis of diverticulitis or renal colic might be made, albeit rarely. In physical examination, palpable mass and localized peritonitis findings were identified in the right lower quadrant in half of the patients [5]. It differs from acute appendicitis with absence or insignificance of gastrointestinal

symptoms such as nausea, vomiting, lack of appetite, absence or subfebrile course of fever, duration of the symptoms, and lower significance of the peritoneal findings [6].

Mostly radiological imaging techniques such as ultrasonography and computerized tomography may be utilized in diagnosis tests. However, precision of ultrasonography may vary depending on the intestinal gas and experience of the performer. With computerized tomography, preoperative diagnosis rates increased, cases approached conservatively and recovered without complications were reported. Computerized tomography is accepted as the golden standard in tomography. Typical ultrasonographic appearance is in the form of mass lesion showing moderate hyperchogenicity, uncompressible, oval, peritoneal adhesion, and peritoneal fluid may also be observed [7]. Ultrasonographically, there was no feature in our case. In the evaluation performed with computerized tomography, inflammation was detected in the abdominal lower quadrant.

While etiologies and physiopathologies of omental torsion and necroses are different, similar clinical pictures emerge in all cases. Natural pathological course of omental infarction is termination of the inflammation process as retraction, fibrosis and finally, as complete or autoamputation. Sepsis, abscess formation and adhesion development are among late complications [8].

Publications stating that conservative therapy may be tried in a selected part of the patients diagnosed preoperatively. With the increasingly common use of CT, number patients on whom conservative therapy may be tried increased. Analgesics, anti-inflammatory drugs and prophylactic antibiotics are used in conservative therapy. Potential complications (abscess, adhesions, sepsis, etc.) should be kept in mind while administering conservative therapy. In the cases with necrosis, treatment option is resection of the necrotic segment. First option in surgical treatment should be laparoscopic approach [9,10].

Conclusion

In conclusion, while omental torsions are usually conditions which start instantly and present acute abdominal findings, they may sometimes be among the causes of chronic pain, i.e. nonspecific abdominal pain. Often intraoperative diagnosis is made, nevertheless, with the increased use of CT, there was increase in the number of patients diagnosed preoperatively.

Competing interests

The authors declare that they have no competing interest

Financial Disclosure

The financial support for this study was provided by the investigators themselves.

Guleser Akpinar ORCID: 0000-0001-8559-5098

Bedia Gulen ORCID: 0000-0002-7675-0014

Ali Duman ORCID: 0000-0001-9461-5812

Afsin Ipekci ORCID: 0000-0001-6125-4061

Hilal Hocagil ORCID: 0000-0001-7314-752X

References

1. Schwartzman GJ, Jacobs JE, Birnbaum BA. Omental infarction as a delayed complication of abdominal surgery. Clin Imaging. 2001;25:341-3.
2. Nina Breunung, Paul Strauss. A diagnostic challenge. primary omental

- torsion and literature review - a case report. *World J Emerg Surg.* 2009;4:40.
3. Parr NJ, Crosbie RB. Intermittent omental torsion—an unusual cause of recurrent abdominal pain? *Postgrad Med J.* 1989;65:114-5.
 4. Efthimiou M, Kouritas VK, Fafoulakis F, et al. Primary Omental Torsion. Report of Two Case. *Surg Today.* 2009;39:64-7.
 5. Tsironis A, Zikos N, Bali C, et al. Primary torsion of the greater omentum: report of two cases and review of the literature. *J Emerg Med.* 2013;44:45-8.
 6. Saber A, LaRaja R. Omental torsion. *EMedicine*, article 191817;2007. [<http://emedicine.medscape.com>].
 7. Al-Bader I, Said Ali AA, Al-Sharraf K, et al. Primary omental torsion: two case reports. *Med Princ Pract.* 2007;16:158-60.
 8. Stella DL, Schelleman TG. Segmental infarction of the omentum secondary to torsion: ultrasound and computed tomography diagnosis. *Australas Radiol.* 2000;44:212-5.
 9. Coulier B. Segmental omental infarction in childhood: a typical case diagnosed by CT allowing successful conservative treatment. *Pediatr Radiol.* 2006;36:141-3.
 10. Occhionorelli S, Zese M, Cappellari L, et al. Acute abdomen due to primary omental torsion and infarction. *Case Rep Surg.* 2014;2014:2082-3.