Case Report

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An Unexpected Acute Abdomen Case: Torsion of a Wandering Spleen Treated with Splenopexy

Mehtap Ilgar, Serkan Ünlü, Mehmet Akçiçek, Gökhan Demirtaş
Medical Doctor, Department of Radiology,Malatya Training and Research Hospital, Malatya, Turkey

Abstract

Wandering spleen is a rare condition resulting from the absence or looseness of the hanging ligaments that keep the spleen in its normal anatomical location. It can lead to an acute abdomen with torsion and infarction of the splenic pedicle. In this article, we present a patient who came to the hospital with a grievance of severe abdominal pain and was diagnosed with wandering spleen torsion. The patient was treated with splenopexy. Although it is rare, a wandering spleen should be considered in the differential diagnosis of acute abdomen.

Keywords: Acute Abdomen, Wandering Spleen, Torsion,

Introduction

Wandering spleen is a rare condition where the spleen is mobilized from the left upper abdominal quadrant. It causes an abnormal position of the spleen secondary to a developmental abnormality or acquired looseness of the spleen's ligaments. Nearly one-third of all cases of wandering spleen occur in young girls older than one year. In adults, women of childbearing age are more frequently affected[1]. Diagnosis of the wandering spleen can be difficult because its symptoms are variable. It may present as intermittent abdominal pain, abdominal mass, or acute abdomen[2,3].

Case Presentation

We describe here a young woman with torsion of a wandering spleen that was managed by splenopexy. A 29-year–old female was admitted to the emergency service of our hospital with complaints of widespread abdominal pain and nausea that continued for three days. On physical examination, there was a palpaple mass and defense in the right lower quadrant. Her blood pressure was normal. Laboratory parameters showed hemoglobin 10.5 gm/dL and white blood cells 3.89/mm^3. The platelet count was normal. Blood electrolytes, urea, creatinine, and random blood sugar analyzes were normal too.

On ultrasound images, the spleen was not at its normal site. Instead, it was located in the right lower quadrant and increased in size (130x97x78mm). The splenic parenchymal contrast enhancement was reduced. Furthermore, capsular rim-like enhancements were spleen in the computed tomography sections (Figure 1a), and there was a whirled view of the splenic vessels (whirl sign) (Figure 1b). Intestinal loops were observed in the left upper quadrant of the abdomen (Figure 1c).

With a preliminary diagnosis of the torsion of a wandering spleen, the patient was referred to another center where she was operated, and the spleen was detorsioned and moved to the left upper abdominal quadrant (Figure 1d).

Figure 1a. Contrast-enhanced abdominal CT in axial view: Splenic enhancement like capsular rim (thin arrow) with reduced parenchymal enhancement (thick arrow) located in the right lower quadrant

Corresponding Author: Mehtap Ilgar **e-mail:** mehtapilgar@gmail.com
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Figure 1b. Contrast-enhanced abdominal CT in axial view showing; the splenic vascular peduncle rotated around itself (whirl sign)

Discussion

Wandering spleen is an unusual clinical condition. Hence, discussions in the literature are limited. Its most common complication (60%) is the torsion of the pedicle which can cause a splenic infarction, sepsis, acute pancreatitis, and gastrointestinal bleeding secondary to portal hypertension or splenic vein thrombosis[4,5]. Other less common complications include intestinal obstruction, gastric volvulus, spontaneous or traumatic spleen rupture[5]. Splenic torsion may be acute or chronic. Acute torsion may mimic peritonitis, acute appendicitis, twisted ovarian cysts, or bowel obstruction[6]. On the other hand, chronic torsion may present as an abdominal mass, which may be located in any quadrant[7]. In this patient, there were signs of a mass in the right lower quadrant with acute abdominal symptoms such as pain, defense, and nausea.

Figure 1c. Coronal reformate image showing the; spleen located in the right lower quadrant (thick arrow) and bowel loops (thin arrow)

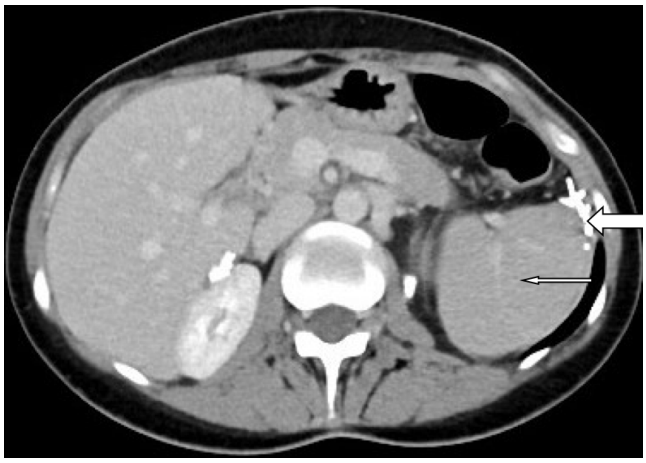

Figure 1d. Spleen (thin arrow) in its normal size and localization and suture materials (thick arrow) after surgery

Radiologists play an essential role in diagnosing the wandering spleen and its complications[8]. The most reliable and least invasive method of making the diagnosis is with ultrasonography, which can demonstrate the characteristics and localization of the spleen. The Doppler ultrasonography provides information about vascular structures, while ectopic position and torsion of the spleen appear on computed tomography and magnetic resonance images. The whirled appearance is a particular sign of torsion of the splenic pedicle[9]. Besides, a loss of parenchymal enhancement and rim enhancement of the splenic capsule are typical findings too In this patient, these findings were present together (Figures 1a, b, and c).

Operative treatment in wandering spleen cases is the definitive option. Splenectomy has been the traditional management of wandering spleen for many years. However, splenopexy may be a suitable method when the splenic vein's recanalization can be exactly proven[10]. Most adult splenic torsion cases in the literature have been treated with splenectomy. On the other hand, this case was admitted to our emergency department relatively early, was diagnosed very quickly, and treated with splenopexy. No complications were found during a one year follow-up.

Conclusion

Wandering spleen is a rare disease. However, increasing awereness and its inclusion in the differential diagnosis enables a rapid diagnosis, prevention of complications, and salvage of the spleen as it was in our case.

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