SAS Journal of Surgery
Abbreviated Key Title: SAS J Surg
ISSN 2454-5104
Journal homepage: https://www.saspublishers.com

OPEN ACCESS

Medicine

Acute Torsion of a Wandering Spleen in Adults: A Case Report

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DOI: 10.36347/sasjs.2024.v10i07.018 | **Received:** 22.04.2023 | **Accepted:** 17.05.2023 | **Published:** 16.07.2024

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Abstract **Case Report**

Wandering spleen is a rare anomaly [1] due to a lack of anatomical fixity of the spleen with neighboring organs [2, 3]. Although it is mostly a congenital condition, it can also be acquired. The twisting of the vascular pedicle is its main potential complication, with subsequent development of splenic infarction [4]. In this article, we report the case of a 42-year-old female patient who presented to the emergency department with acute abdominal pain and vomiting. Radiological examinations showed splenic infarction. Surgical exploration revealed torsion of the splenic pedicle with advanced tissue ischemia. The spleen was devoid of ligamentous attachments. Detorsion did not allow preservation of the spleen, and splenectomy was performed.

Keywords: Wandering spleen, pedicle torsion, abdominal computed tomography, ultrasound, and splenectomy.

INTRODUCTION

Wandering spleen is a rare condition defined as a mobile spleen attached only by its pedicle. It can be complicated by volvulus, which constitutes a surgical emergency. Prevention of infarction is the goal of rapid surgery, which allows preservation of the spleen and subsequent splenopexy. We report a rare case of acute torsion of a wandering spleen.

OBSERVATIONS

We report the case of a 42-year-old female patient who had undergone surgery for an ovarian cyst 2 years ago and presented to the emergency department with abdominal pain associated with vomiting for 10 days. On physical examination, the patient was in fairly good general condition, afebrile, with pale conjunctivae, a pulse rate of 110 bpm, and a blood pressure of 120/70. Abdominal palpation revealed a tympanic abdomen with diffuse exaggerated sensitivity on the right flank, without an identifiable mass. We performed a computed tomography scan, which showed an enlarged spleen located in the right flank (Figure 1), not enhancing after contrast injection, with the presence of 3 turns of spiral involving the splenic vessels near the hilum: an aspect suggesting, first and foremost, torsion of the splenic pedicle on a wandering spleen. The patient was taken to the operating room, and an emergency laparotomy was performed. Exploration revealed a necrotic spleen on the right flank with a twisted pedicle. The spleen had no adhesions to the diaphragmatic dome. After detorsion, the spleen remained ischemic (Figure 2), and splenectomy was necessary. Pathological examination described necrotic tissues without benign or malignant splenic lesions. The postoperative course was uneventful, and we performed pneumococcal vaccination under antibiotic coverage with Oracilline.

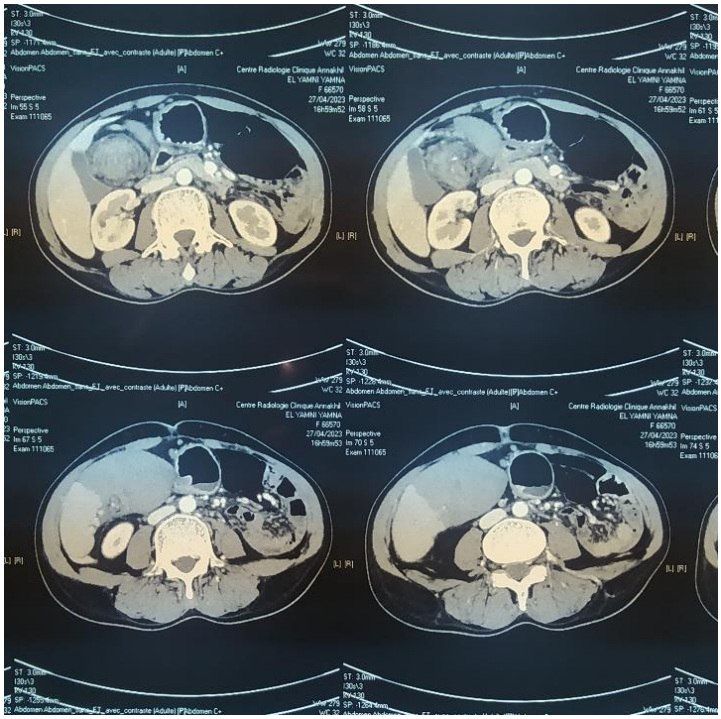

Figure 1: CT- scan view showing the spleen located in the right flank

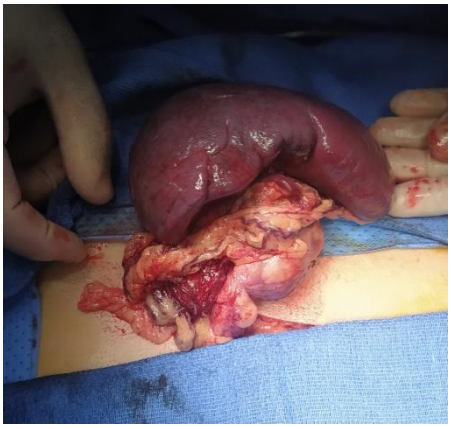

Figure 2: Per operative view showing the torsion of the spleen

DISCUSSION

The spleen is entirely covered by the peritoneum, and is primarily fixed by its pedicle and peritoneal folds, including the gastrosplenic omentum and the pancreaticosplenic omentum. In the latter, the splenic pedicle reaches the spleen. Occasionally, the pancreaticosplenic omentum can extend toward the vertical part of the diaphragm and give rise to the phrenicosplenic ligament or toward the transverse colon to form the splenomesocolic ligament.

A wandering spleen results from a defect in splenic fixation with neighboring organs and can occur in two forms, congenital and acquired, with different etiopathogenic factors. Wandering spleens can remain asymptomatic or manifest as minor episodes of abdominal pain due to intermittent twisting with spontaneous detorsion. Often, the diagnosis of splenic volvulus is delayed, and it may not be considered initially. Patients may be referred for appendicular syndrome, intestinal obstruction, or adnexal torsion in females.

On a radiological level, a plain abdominal X-ray can suggest the diagnosis of a wandering spleen by showing the absence of the normal splenic shadow, sometimes with an opacity occupying the center of the abdomen or pelvic region. Abdominal ultrasound is very helpful in diagnosing a wandering spleen, showing the absence of the spleen in its normal position and the presence elsewhere in the abdomen of a hypoechoic mass with an echostructure and vascularization resembling those of the spleen. Contrast-enhanced computed tomography is the preferred test for diagnosing complicated wandering spleen with torsion, as it allows for better evaluation of splenic vascularization and may show spiral twists at the splenic vascular pedicle (the whirl sign).

Surgery is the treatment of choice for wandering spleen, as it has been shown that non-surgical management in asymptomatic patients has a higher complication rate. When a wandering spleen is detected incidentally or when torsion can be corrected and the spleen is viable, the preferred treatment is splenopexy, especially in children, which preserves the organ and prevents further complications. Splenectomy is the treatment of choice when torsion is irreducible, the spleen is necrotic, or there is hypersplenism or functional asplenia due to torsion. After splenectomy, patients should receive long-term antibiotic therapy (Penicillin V) along with pneumococcal vaccination. Splenic volvulus can occur on an accessory spleen and requires excision surgery.

CONCLUSION

Wandering spleen is a rare but potentially serious condition that can present with acute abdominal pain and vomiting. It can be complicated by torsion of the splenic pedicle, leading to infarction and necrosis of the spleen. Radiological examinations are essential for diagnosis, and surgical exploration remains the gold standard treatment. In cases of advanced tissue ischemia, splenectomy may be necessary, as was the case with our patient. Early diagnosis and prompt surgical intervention are crucial for preserving the spleen and avoiding potentially life-threatening complications.

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