Case report:

Torsion of wandering spleen presenting as acute pain abdomen: case report

Dr. KANDUKURI MAHESH KUMAR, Dr. BHEEMAVATHI. A, Dr. CHINTHAKINDI SRAVAN, Dr. RAVIKANTH SONI

Department of Pathology, Malla Reddy Institute of Medical Sciences, Suraram, Hyderabad-500055.
Corresponding author: Dr. Kandukuri Mahesh Kumar

Abstract:
Wandering spleen is a rare medical entity. Wandering spleen is the displacement of the spleen from its normal location due to the loss or weakening of ligaments that hold the spleen in the left upper quadrant. It usually occurs between 20 and 40 years of age with female preponderance. Clinical diagnosis is difficult due to lack of symptoms. Most of the wandering spleen cases are diagnosable only when there is torsion of the pedicle of the spleen which causes acute pain abdomen. The possibility of torsion of the spleen is high due to the long and mobile nature of the vascular pedicle. Diagnosis can be made by imaging techniques such as Computerized tomography (CT), Magnetic resonance imaging (MRI). Under conditions of delayed diagnosis, symptoms of splenomegaly left portal hypertension, gastric fundal varices, and hypersplenism may present as a result of development of vascular congestion associated with torsion. There are only a few cases in the literature reporting the wandering spleen and fundal varices. We report this case in view of its rare incidence of wandering spleen occurring in a 19 year old female presented with acute abdomen pain and was clinically misdiagnosed as ruptured appendix with acute peritonitis.

Keywords: wandering spleen, ectopic spleen, torsion, congestion, twisted pedicle.

INTRODUCTION

Torsion of the spleen is a very rare, with an incidence of < 0.2 % (1). A "wandering spleen" is characterized by laxity or absence of the supporting splenic ligaments and where a long pedicle facilitates abnormal positioning of the spleen outside its native left sub-diaphragmatic location. Wandering spleen is most commonly located in the lower abdomen or pelvis. The possibility of torsion is very high as a result of the long and mobile vascular pedicle (2, 3). Wandering spleen predisposes the spleen to torsion, blood-flow impairment and ischemia, and can cause a variety of symptoms from mild intermittent abdominal pain to acute abdominal crisis (4). The non specific signs and symptoms together with the rarity of this condition hamper the clinical diagnosis. Less than 500 cases have been reported in the literature. Alternate names for this disorder reported in the literature are ectopic spleen, displaced spleen, floating spleen and pelvic spleen. Most of the wandering spleen cases are generally asymptomatic. Only Symptomatic cases require either splenopexy or splenectomy.

CASE REPORT

A 19 year old girl presented to the casualty with complaints of abdominal pain since few hours. There was history of two episodes of vomiting since morning, body temperature is raised. On examination abdomen was tender. Patient was advised to undergo routine surgical profile and specific investigations
such as ultrasonography. Patient blood investigations were in normal limits with exception of total leukocyte count which was 14,600 /cu.mm with predominance of neutrophils. Ultrasound diagnosis given was congested splenomegaly. Patient was advised to undergo Computerized Tomography (CT) scan whole abdomen plain. CT scan revealed the following findings: (Fig. 1)

1) Spleen not visualized in the splenic area. 2) Spleen noted in the lower lumbar region, enlarged in size with normal attenuation and measuring 14 cms. 3) Evidence of twisted splenic pedicle. 4) Small bowel loops are shifted towards right side by ectopic spleen. 5) Stomach is grossly distended. Impression- Enlarged ectopic spleen with twisted splenic pedicle.

Explorative laparotomy through a left Kocher’s incision was performed followed by total splenectomy. The operative findings demonstrated an enlarged congested spleen. The spleen was freely mobile on its pedicle with no ligamentous attachments. The excised spleen weighed 235 grams (Fig. 2). On cut sections no gross abnormalities were detected except for tortuous and congested hilar blood vessels, some with thrombi. Histological examination was notable for organizing thrombi within large blood vessels and dilated sinusoids. (Fig 3 & 4). The patient was discharged with appropriate post-splenectomy treatment.
DISCUSSION
The spleen is an organ that is well-fixed by peritoneal ligaments to the left side of the diaphragm. Embryologically, the spleen originates from the mesenchymal remnant of the dorsal mesogastrium, at the left upper quadrant of the abdomen. Wandering spleen is rarely diagnosed clinically due to its very rare occurrence (< 0.2%). Van Horne described a case of wandering spleen for the first time in 1667, while performing an autopsy (1). The long splenic pedicle facilitates hyper mobility of the spleen, thus preparing room for torsion (5). It has a female predominance (1) and the pathogenesis is believed to be failure of development or laxity or elongation of the splenic ligaments, causing a mobile wandering spleen. It may be due to congenital anomalies such as incomplete fusion of the dorsal mesogastrium, acquired conditions such as splenomegaly, or abdominal trauma. According to some authors, the mobility of the spleen is affected by numerous factors, including weakening of the abdominal wall, altering hormonal profile in pregnancy, malaria, trauma, history of benign hematologic disease, and a history of diaphragmatic hernia repair (6). A transient or permanent torsion of the spleen is the major complication of a wandering spleen. The clinical presentation varies from asymptomatic intermittent pain and discomfort to acute abdominal crisis. Non-specific abdominal signs and symptoms (nausea, emesis, etc.) may also occur (7). The major complications related to splenic torsion are splenomegaly due to venous stasis and congestion, and splenic vein thrombosis culminating in impaired arterial supply leading to splenic infarction and necrosis. Patients may clinically present with non-specific complaints, such as nausea, vomiting or mild cramp-like pain due to splenic congestion, and intermittent torsion and spontaneous detorsion (8,9). Gangrene, abscesses, local peritonitis, intestinal obstruction, and necrosis of the tail of the pancreas may occur as a result of acute splenic torsion. Laboratory tests are usually non-specific but may reveal elevated inflammatory markers and evidence of hypersplenism. Since a clinical diagnosis may be difficult, a definitive diagnosis is reached by imaging modalities such as Computerized tomography (CT-plain and contrast enhanced), Magnetic Resonance Imaging (MRI), Doppler sonography, scintigraphy. Wandering spleen may be observed together with various masses, such as epidermoid cysts, simple cysts, cystic lymphangiomas, lymphomas, and inflammatory pseudotumors (10). Our patient did not have any other coexisting pathological entities. Treatment includes splenopexy and splenectomy. Splenopexy is preferred in cases of wandering spleen with no torsion. Splenopexy, which preserves the spleen and avoids the risk of overwhelming post-splenectomy sepsis; however, splenectomy is the general treatment procedure in the presence of torsion, thrombosis of splenic vessels, secondarily developed hypersplenism, co-morbid malignancy, and infarction (6,11).

CONCLUSION
We conclude that this rare encountered wandering spleen, which may be associated with left portal hypertension, gastric fundal varices, and hypersplenism, should be considered in the differential diagnosis of female patients presenting with acute pain abdomen with proper utilization of the imaging techniques such as ultrasound, Computerized tomography, Magnetic Resonance imaging and Doppler ultrasonography.
REFERENCES


Date of submission: 22 May 2013      Date of provisional acceptance: 27 May 2013
Date of Final acceptance: 22 June 2014      Date of Publication: 15 July 2014
Source of support: Nil; Conflict of interest: Nil

www.ijhbr.com      ISSN: 2319-7072