

Wandering spleen with torsion of the pedicle

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ABSTRACT

Wandering spleen is a rare medical entity. It usually occurs at 20-40 years of age, and most cases are seen in women. Clinical diagnosis is difficult due to lack of symptoms, unless splenic torsion has occurred and clinical symptomatology of acute abdomen develops. The diagnosis can be confirmed by imaging techniques. Treatment is operative due to complications of splenic infarction. Splenopexy is the usual treatment, except for cases of splenic infarction. Splenectomy should be carried out when there is no evidence of splenic blood flow after detorsion of the spleen and in cases of excessive splenomegaly.

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The wandering spleen is a rare condition, which may be incidentally detected as an abdominal pelvic mass or presents with torsion, causing an acute abdomen. 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, or pelvic spleen. The early preoperative diagnosis of the wandering spleen is difficult due to lack of specific symptoms and needs radiological aids. The treatment is operative with 2 surgical options, splenopexy or splenectomy.

Case Report. A 15-year-old female was admitted to our department with the history

of lower quadrant abdominal pain for 4 days. On physical examination, a large lower abdominal mass was revealed, which appeared to arise from the pelvis. She reported a protuberant abdominal for more than one year, that she and her mother attributed to excess weight. The hematological tests were all normal apart from white blood count (11,400/mm³). The ultrasonogram (US) showed a large, solid, highly transonic mass in the lower abdomen, and MRI revealed the spleen in the pelvis (Figures 1 & 2). At operation, the spleen was removed and it was found to weigh 500 gr, measuring 15.5 x 10.5 x 7 cm. The spleen was connected to an elongated twisted vascular pedicle with dilated veins.

Discussion. The spleen normally lies in the posterior part of the left upper quadrant of the abdomen, fixed in position by the lienogastric, lienorenal, and the phrenicocolic ligaments. Splenic displacement is probably due to congenital abnormal development in the fetal dorsal mesogastrium or ligament laxity. "Acquired" wandering spleen may occur during adulthood due to injuries or other underlying conditions that may weaken the ligaments that hold the spleen in its normal position (such as, connective tissue disease or pregnancy). Furthermore, an acquired factor could be the splenic enlargement usually of hematological etiology, which causes an increased weight burden. The incidence of an ectopic spleen on several large series of splenectomies is less than 0.5%.¹

A review of the English literature from 1962 to 1992 by Dawson and Roberts,² documented 148 cases, which include both pediatric and adult cases. The spleen may "wander" in the lower abdomen or pelvis and be mistaken for unidentified abdominal mass. This medical disorder is mainly found in children and in women aged 20-40 years. Women are affected 7 or 8 times more than men.³ The symptoms of wandering spleen are usually related to splenomegaly or the unusual position of the spleen in the abdomen, and may include abdominal pain and discomfort, nausea, vomiting, frequent urination, and menstrual abnormalities. As the clinical presentation of wandering spleen is varied and non typical, the diagnosis is often elusive. Furthermore, the preoperative diagnosis of the wandering spleen is infrequently made even with conventional radiologic studies (upper gastrointestinal series, barium enema, intravenous pyelogram, plain abdominal films). A nuclear medicine scan could be helpful if this diagnosis is suspected preoperatively.⁴ The advent of modern imaging

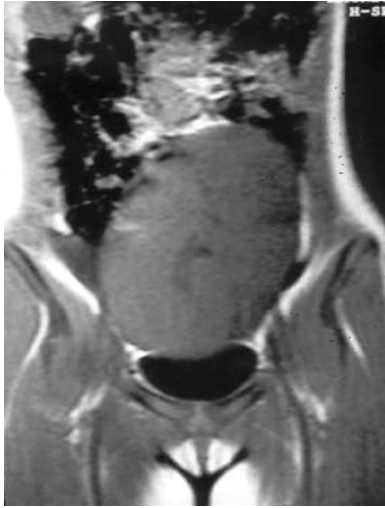


Figure 1 - Coronal T1-weighted magnetic resonance image of the pelvis showing the wandering spleen.

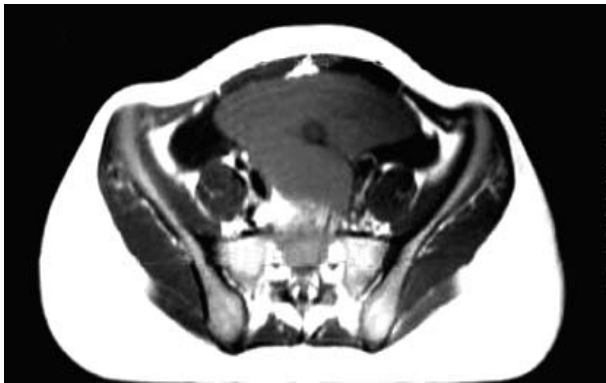


Figure 2 - Axial T1-weighted magnetic resonance image of the pelvis showing the wandering spleen.

modalities such as, US, CT, and MRI has resolved the problem with their assistance in making this diagnosis. The imaging findings of the wandering spleen include the absence of the spleen in its normal position, and a mass lesion located some where else in the abdomen or pelvis. Following intra venous contrast (CT scan), if the spleen is partially or non enhanced, acute infraction due to torsion of the pedicle is a likely diagnosis. The main significance of ectopic spleen is its predisposition for

torsion, which could have a high mortality rate. There is controversy in the literature regarding the management of the wandering spleen. The risk of post splenectomy sepsis supports a conservative approach especially in asymptomatic patients. However, definitive treatment of wandering spleen is operative, since non operative treatment is associated with a complication rate as high as 65%.⁵ Complications of wandering spleen includes infarction, splenic abscess, variceal hemorrhage, and pancreatic necrosis. In patients presenting with acute abdomen due to torsion of the pedicle, 2 surgical options are recognized; splenopexy and splenectomy. The decision to perform splenopexy versus splenectomy depends on both the timing of clinical presentation and the appearance and viability of the spleen intra operatively. Splenopexy is a reasonable option when the spleen appears viable after detorsion and the splenic vein is not thrombosed.^{5,6} Splenectomy is indicated in any complication of the wandering spleen in excessive splenomegaly and if recurrence has occurred.

In conclusion, although the wandering spleen is a rare medical disorder, the observation of an abdominal mass without the spleen in its normal location and no history of splenectomy should suggest this diagnosis.

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