

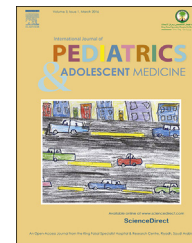
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## IMAGES IN PEDIATRICS

## Torsion of wandering spleen

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## KEYWORDS

Spleen;  
Torsion

A four-year-old boy presented to our hospital with an abdominal mass for more than five months and intermittent abdominal pain for the last two weeks. Clinically, there was a palpable mass extending from the upper abdomen to the right iliac fossa. Abdominal and pelvic ultrasound scans were initially performed to evaluate this mass. The scans show a hypoechoic mass in the right lower abdomen with absence of the spleen in the expected location in the left hypochondrium (Fig. 1a and b). Doppler interrogation of this structure demonstrated absent flow (Fig. 1c). A diagnosis of torsion of wandering spleen was made, and immediate CT scans of the abdomen and pelvis were obtained. The CT scans confirmed the findings of absent spleen in the left upper abdomen (Fig. 2a), and the presence of a hypodense non-enhancing enlarged spleen located in the right lower abdomen with a whorl of concentric arcs involving the splenic pedicle (Fig. 2b and c). A focal area of normal enhancing splenic parenchyma near the hilum was noticed (Fig. 2d). The final impression was torsion of wandering spleen. The child was taken to the

operative room, and the spleen was found in the right lower abdomen, twisted three times around its pedicle. The spleen was derotated, and improved spleen coloration was seen. The child subsequently underwent splenectomy. The post-operative period was uneventful, and the child was discharged after five days with long-term prophylactic antibiotic therapy. Follow-up ultrasound after two weeks showed heterogeneous parenchyma of the spleen with improved splenic vascularity.

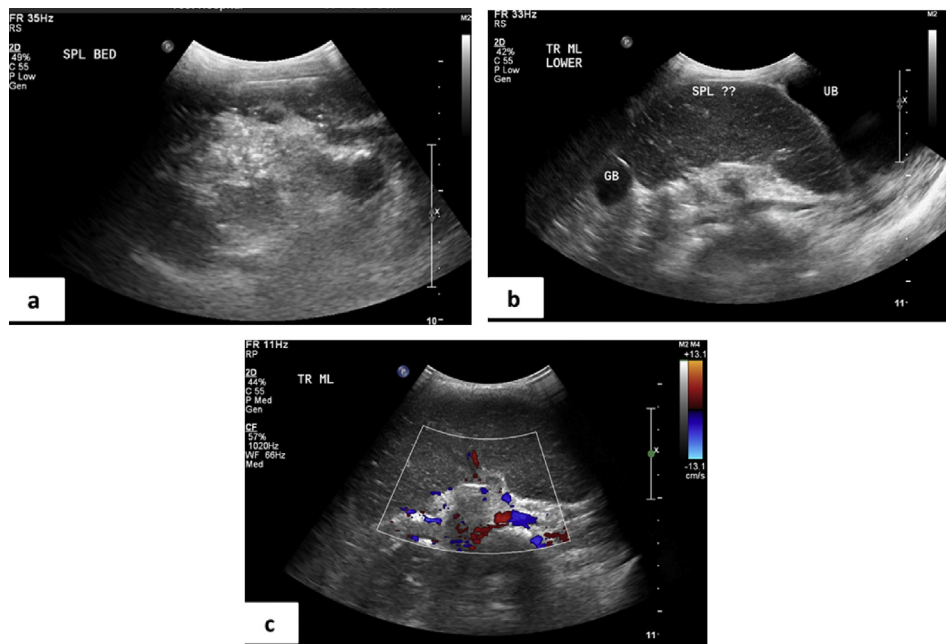
Wandering spleen is when the spleen is in an ectopic position due to laxity of the anchoring ligaments. This results in a long splenic pedicle, predisposing the patient to splenic torsion, leading to partial or complete infarction [1].

The presentation of wandering spleen varies widely from abdominal mass, ranging from intermittent abdominal pain to being asymptomatic, found by incidental imaging [1,2]. Because it is a rare condition, for the most part, clinical diagnosis is difficult and imaging by ultrasound with Doppler interrogation, CT scan and MRI with intravenous contrast plays a major role in establishing a diagnosis. The radiological diagnostic criteria include absence of spleen in the left upper abdomen, lower abdomen, or pelvic mass, whorled appearance of splenic vessels, ascites and necrosis of the pancreatic tail. The whorled appearance of splenic vessels and surrounding fat at the splenic hilum is specific for torsion of wandering spleen [1,3]. Patients are either treated with

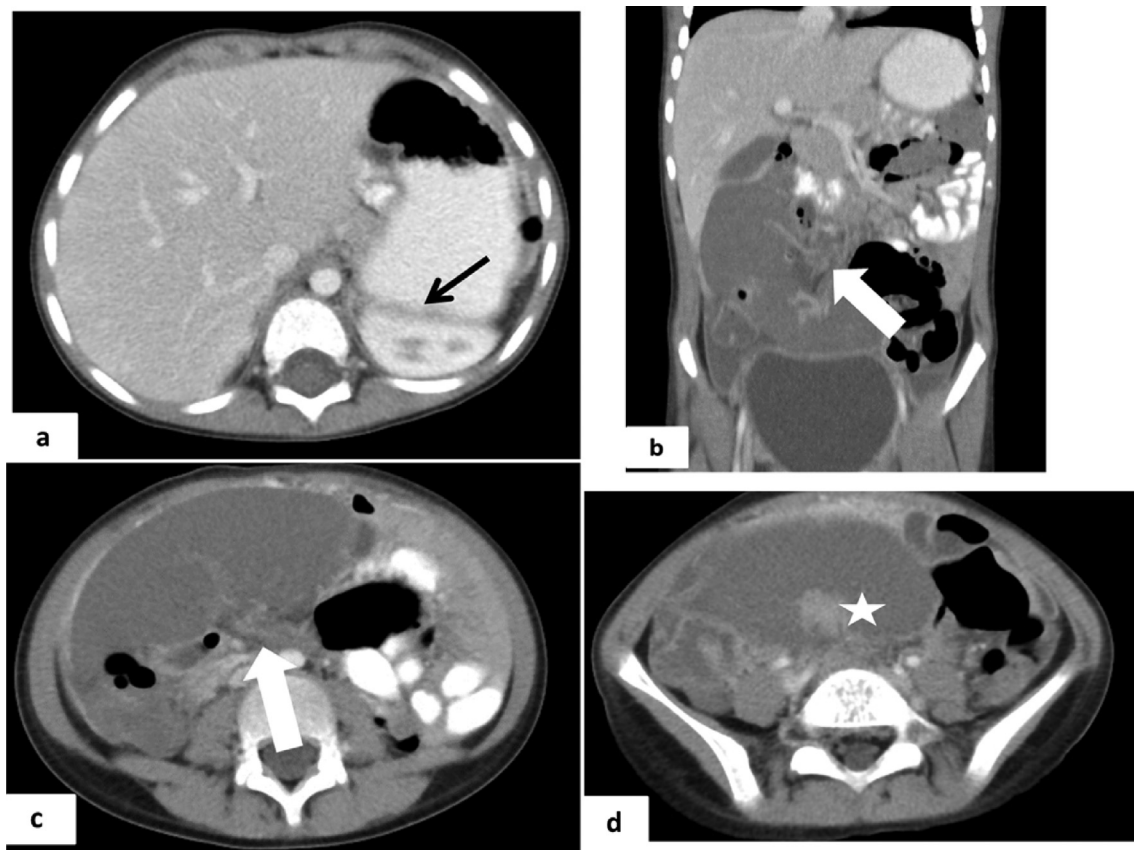
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**Figure 1** Ultrasound images of the abdomen and pelvis show (a) absent spleen in the left hypochondrium. Avascular wandering spleen in the right lower abdomen (b, c).



**Figure 2** Axial and coronal post contrast CT scans of the abdomen show (a) absent spleen in the left upper abdomen (black arrow) and (b & c) enlarged non-enhancing hypodense wandering spleen in the right lower abdomen with whorled appearance of splenic vessels (white arrow) and (d) focal enhancing splenic parenchyma near the hilum (star).

splenopexy, which allows anatomical placement of the spleen, or splenectomy, which is performed in splenic torsion with massive infarction and thrombosis of splenic vessels.

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