Splenic torsion, an unusual cause of acute abdominal pain.

M Murthy, S Rajani, K Bhagheerathi

Citation

Abstract
Torsion of spleen is a rare cause of acute abdominal pain leading to splenic infarction. We report a case of splenic torsion in a middle aged female and highlight the role of CT in its diagnosis.

CASE HISTORY
A 36 yrs old female reported to the Casualty Department with complaints of severe abdominal pain all over the abdomen of few hours duration. Clinical examination revealed nondistended abdomen with tenderness and guarding in the left hypochondrium. USG revealed moderately enlarged spleen in a more anterior location in left hypochondrium. Plain CT showed an enlarged spleen in ectopic position anterior to stomach (Fig. 1).

Figure 1

with a hyperdense foci in the vascular pedicle of spleen [black arrow in (Fig. 2)].
Splenic torsion, an unusual cause of acute abdominal pain.

Figure 2

representing acute thrombus secondary to stasis. CECT scan revealed a nonenhancing enlarged spleen in the ectopic position (Fig. 3).

Figure 3

with a classical whorled appearance of the splenic vascular pedicle [black arrows in (Fig 4)].

Figure 4

suggesting torsion with infarction. In view of these findings laprotomy and splenectomy was done. Intraoperatively the splenic vascular pedicle was twisted at least to 540 degrees.

DISCUSSION

Splenic torsion is a rare cause of acute abdominal pain due to hypermobile wandering spleen. It has been diagnosed in approximately 0.3% of 1,413 cases of splenectomy in a study by Eraklis et al [1]. Wandering spleen is an uncommon condition.
characterized by laxity of the supporting ligaments [2].

Incomplete development/laxity of the anchoring ligaments of spleen – gastrolienal, lienorenal ligaments leads to the hypermobility resulting in wandering of spleen to an ectopic position and subsequently torsion [3,4]. The laxity of ligament is due to the incomplete fusion of dorsal mesogastrium with the peritoneum that overlies the left kidney leading to the development of long vascular pedicle contributing to hypermobility [5].

In adults especially women, splenic torsion is attributed to acquired abnormality such as ligament laxity, splenomegaly, trauma and hormonal effects of pregnancy [6].

Symptoms vary with the degree of torsion 90 – 2160 degrees, presenting as an incidental mass on physical examination, mild abdominal pain due to vascular congestion, acute abdomen due to torsion of splenic pedicle with infarction [5]. Pain is usually caused by the capsular stretching and local peritonitis [6].

In plain radiograph, it may appear as an abdominal mass with absence of splenic shadow in left upper quadrant or as a large mass in the left flank [7]. Ultrasound reveals splenomegaly with heterogenous echotexture in ectopic position. Color Doppler shows decreased perfusion due to torsion [8]. CECT reveals the ectopic position of the enlarged spleen with little or no contrast enhancement [5,8]. Swischuk et al [3] described the whorled appearance of the twisted vascular pedicle of spleen as a valuable finding in making the diagnosis.

The current treatment for splenic torsion with infarction is Splenectomy [4,7].

References
Splenic torsion, an unusual cause of acute abdominal pain.

Author Information

MGK Murthy, MD, DNB
Consultant radiologist Yashoda Hospital, Hyderabad, Andhra Pradesh, India.

S. Rajani, DNB
Consultant radiologist, Prime and Yashoda Hospital, Hyderabad, Andhra Pradesh, India

K. Bhagheerathi, DNB
Radiology Resident, Yashoda Hospital, Hyderabad, Andhra Pradesh, India