Torsion in a paediatric wandering spleen: Case report and review of literature

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ABSTRACT

Pediatric wandering spleen is a clinical rarity. Generally it remains asymptomatic, but may present as a painless migratory lump in the left hypochondrium. Rarely it may present as acute abdomen after undergoing torsion over its pedicle leading to infarction and gangrene. Available treatment options include splenectomy or splenopexy. Splenectomy at times is associated with post-operative infections. Splenopexy may result in recurrent torsion.

KEY WORDS: Splenic torsion, splenopexy, wandering spleen

INTRODUCTION

Wandering spleen is a rare anatomical entity associated with a high incidence of splenic torsion and infarction. It is usually seen in the age range of 20-40 years and is rare in children.[1] The 51st case in children up to 10 years was reported in 1992, we found 24 more such cases till March 2005 ours being the 76th case in literature.[2] Increasing use of investigative modalities has made it possible to even recognize an intraperitoneal torsion of a wandering spleen.[3]

Absence or laxity of the splenic suspensory ligaments results in increased splenic mobility thereby allowing it to rotate axially on its long pedicle.[4] Torsion may vary from ½ to 6 complete turns around its axis depending upon the weight of spleen, length of pedicle and degree of ligamentous laxity. Here, we describe a case of wandering spleen complicated by splenic infarction. Early recognition of the condition and timely surgical intervention are highlighted to prevent complications.

CASE REPORT

A previously healthy, 9-year-old male child presented with a history of pain abdomen in left hypochondrium for two days. Pain was sudden in onset associated with episodes of vomiting and mild abdominal distension. Clinical examination revealed a tender, smooth, mobile lump, 15 x 12 cm, in the left flank. Ultrasonography diagnosed this lump to be a mobile spleen with torsion of its pedicle. Contrast enhanced computerized tomography showed no enhancement and thus confirmed the diagnosis of splenic torsion [Figure 1A, B].

Urgent laparotomy was undertaken. An enlarged infarcted spleen approximately 16 x 10 cm, twisted on its pedicle by 360° was found. After derotation, viability of spleen appeared compromised. Emergency splenectomy was done. Postoperatively the child was vaccinated against pneumococcus and H. influenzae along with long acting Penicillins. There was no postoperative complication and the patient was discharged in satisfactory condition.

DISCUSSION

The origin of wandering spleens has been attributed to mesenchymal differentiation in dorsal mesogastrium during embryonal development.

Abell first reported the most comprehensive review of literature on this subject in 1933. Mayo Clinics reported an incidence of 0.02% in the 1003 splenectomies undertaken between 1904 and 1945. It is commonly reported in females of childbearing age and rarely seen in children.[5] Hormonal changes during pregnancy, multiparity, splenomegaly, visceroptosis, and poor abdominal tone are predisposing factors in adults.

A male predominance has been found in children less than 10 years with M: F ratio of 6:1 while a female...
predominance is seen in adults.[4,5]

Wandering spleen may remain asymptomatic or may present clinically in the form of a freely mobile lump in abdomen, acute pancreatitis or intestinal obstruction. Sudden torsion may result in acute abdomen with life threatening complications like splenic infarction, gangrene, splenic abscess or rupture with a mortality rate as high as 50%. Episodes of acute torsion result in intermittent abdominal pain which may cause splenic vein thrombosis leading to left sided portal hypertension, gastric hemorrhage or congestive splenomegaly. Internal herniation of the wandering spleen has also been reported to cause recurrent abdominal pain.[7]

An association of gastric volvulus with wandering spleen has also been described. This is due to the common etiology of abnormal peritoneal visceral attachments. Pre-operative clinical diagnosis of torsion spleen is difficult as symptoms are non-specific. Duplex ultrasonography and angio spiral CT abdomen are diagnostic.[11]

Recently, magnetic resonance imaging and newer modalities such as liver-spleen scintigraphy, blood pool scintigraphy, and radio-labelled leucocytes have been tried.[8-10]

Initially, splenectomy was the treatment of choice. Currently, owing to overwhelming post-splenectomy sepsis and high mortality, splenectomy is indicated only if the blood supply to the spleen cannot be restored on detorsion.[11]

Aiming to preserve splenic function, various techniques of splenopexy have been used. These include pexing the spleen by its capsule to the left upper quadrant laparoscopically, forming a post-erolateral extraperitoneal pocket at the level of 12th rib, mobilizing the splenic flexure of colon and then fixing the greater curvature of stomach to anterior abdominal wall and the use of polyglycolic mesh.[7,12]

Splenopexy is followed by a high relapse rate. Auto transplantation of viable splenic tissue in greater omentum or retroperitoneum is another option if the spleen is viable.

REFERENCES


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