

WANDERING SPLEEN: A CHALLENGING DIAGNOSIS

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ABSTRACT

Background: Wandering spleen is a rare entity with only less than 500 cases reported so far. It is diagnosed more commonly in children than in adults.

Methods: In this report we present a 12- year- old Sudanese girl admitted in King Abdul Aziz Hospital with left loin pain and vomiting.

Results: Ultra sound & C.T scan revealed that the spleen was not found in its normal anatomical position. However a well-defined, homogenous mass with a long pedicle was seen in the pelvic region and doppler ultrasonography of the splenic vessels revealed no blood flow consistent with infarction.

Conclusion: Multiple imaging modalities can be used to diagnose this condition but it is still being debated as to which is the most appropriate test. However in our opinion both ultrasonography and C.T scan are valuable diagnostic aids.

KEY WORDS: Wandering spleen, Ultrasound, C.T scan

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INTRODUCTION

Spleen is typically located in the left upper quadrant of the abdomen where it is held in its position by various suspensory ligaments. Congenital peritoneal anomalies may result in splenic displacement. Wandering spleen is a rare clinical entity with only a few hundred

cases reported so far. Spleen can be found anywhere in the abdomen or pelvis owing to its long vascular pedicle. The usual treatment is fixation of the spleen (splenopexy) except in cases of infarction where there is no evidence of blood flow to the spleen after detorsion splenectomy should be considered.

CASE REPORT

A 12-year-old Sudanese girl was admitted in King Abdul Aziz Hospital with left loin pain and vomiting since 02 days. Physical examination revealed she had tenderness over the left lumbar region and a mass which was firm and smooth was palpable in the suprapubic region.

Haematological and biochemical investigations were within normal limits. A plain film of the abdomen showed gas filled bowel loops in the splenic fossa, ultrasonography was performed with 3.5 MHz and spleen was not visualized in its normal position. However a well-defined, homogenous mass with a long pedicle was seen in the pelvic region.

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Figure-1: Longitudinal abdominal ultrasonography shows enlarged spleen with posterior hilum in abnormal inferior position.

Doppler ultrasonography of the splenic vessels revealed no blood flow consistent with infarction. Subsequent Computed tomography (CT) showed that the spleen was not in its anatomical correct position and instead a large comma shaped pelvic unenhanced mass of soft tissue density exhibiting a peripheral rim, and inhomogeneous density was found in the pelvic cavity. The appearance of other abdominal organs on CT scan and sonograms were normal. There was no ascities, pleural effusion or lymphadenopathy. Histological examination showed extensive areas of infarction in the spleen with a few focal areas of congestion.

During laparotomy spleen measuring 14 x 8 x 4 cms and weighing 550 gms was found lying in the pelvis. The clinical and radiological findings were confirmed and splenectomy was done, Spleen was found to be infarcted, it was



Figure-2: Axial C.T scan of lower abdomen showing enlarged, comma shaped spleen in an ectopic position.

covered with omentum, its pedicle was long and twisted and there was complete absence of all supportive ligaments. The patient's post-operative recovery was uneventful and the patient was given prophylaxis against post-splenectomy sepsis syndrome.

DISCUSSION

Wandering or ectopic spleen has two possible etiologies, congenital and acquired. Congenital form occurs due to failure of development dorsal mesogastrium when the lesser sac is formed. The acquired form occurs in mostly multiparous females as the ligaments become lax which are holding the spleen in its position.

Wandering spleen is rare especially in children it is commonly seen in females after the second decade of life. The clinical presentation of wandering spleen is variable patients may be asymptomatic or they may have acute abdominal crises or chronic vague lower abdominal pain. The most common presentation in children is an acute surgical abdomen occurring due to infarction from torsion of the splenic pedicle^{1,2}. Such spleens are usually enlarged as in our case spleen was found to be significantly enlarged and lying in an ectopic position (Fig 1).

Multiple imaging modalities can be used to diagnose this condition but it is still being debated as to which is the most appropriate test. However ultrasonography is still considered to



Figure-3: Post contrast C.T scan showing inhomogeneous parenchymal attenuation with hyperdense capsular rim.

be the most reliable for diagnosis of wandering spleen³⁻⁵. The non-invasiveness of ultrasonography makes it particularly appealing especially in children. Doppler sonography helps in evaluation of organ blood flow⁶, in our case no flow was detected in the patients splenic parenchyma and hence the diagnosis of infarction was made and the patient was immediately operated upon. In the past few years doppler spectra has received considerable attention in assessment of normal as well as abnormal blood flow in various organs. This information is particularly valuable to the operating surgeon especially in children where splenopexy can be done instead on splenectomy. If ultrasonography fails to yield a diagnosis, then CT scan and MRI should be considered as valuable diagnostic aids⁷ (Fig 2 & 3).

Occasionally ascities or necrosis of the pancreatic tail and torsion of the splenic vessels and of the surrounding fat may be seen on C.T, after intravenous contrast. If there is failure of enhancement of splenic parenchyma then it is strongly suggestive of a compromised splenic perfusion.

Non-operative treatment of wandering spleen is associated with a very high complication rate⁸

so the treatment of choice is surgery, splenopexy or splenectomy. In our patient since the patient was symptomatic and on imaging splenic blood flow was compromised so the decision of an urgent splenectomy was made.

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