

# WANDERING SPLEEN WITH TORSION AND RESULTANT INFARCTION: A CASE REPORT

Tahira Nishtar, Ayesha Amin

Department Radiology,  
Postgraduate Medical Institute, Hayatabad Medical Complex, Peshawar - Pakistan

## ABSTRACT

*We present a case report of a 40 -year-old woman presenting with left loin pain and a palpable suprapubic mass and anemia. Ultrasonography and subsequent contrast enhanced CT scan showed that spleen was not seen in its normal anatomical position and a comma shaped spleen was present in pelvis with non-enhancing soft tissue density consistent with infarction. Splenectomy was performed.*

**Key Words:** Wandering Spleen, Infarction, Loin pain.

## 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 40 -year-old woman was admitted with left loin pain radiating to back and to umbilical region for 3-4 months with increase in the intensity of pain since 7 days associated with vomiting. Physical examination revealed tenderness over the hypogastrum and a firm smooth mass was palpable in the suprapubic region reaching up to the umbilicus.

Haematological investigation revealed an Hb of 7.2 gm% while TLC was 10,100/ mm<sup>3</sup>. Ultrasonography was performed with 3.5 MHz probe and spleen was not visualized in its normal position. However there was a hypoechoic, well-defined mass bearing a hilum measuring 19.6 cm in size in the left flank below the lower pole of left kidney (Fig.1). Doppler ultrasonography revealed no blood flow in the hilum consistent with infarction (Fig. 2).

Fig.1 shows an about 19.6 cm spleen in the pelvic region, while Fig.2 shows doppler's ultrasound showing no flow in the hilum of the spleen.

Subsequent Computed tomography (CT) showed that the spleen was not in its anatomical correct position (Fig. 3) and instead a large comma shaped pelvic unenhanced mass of soft tissue density was found in the pelvic cavity with a whorl like pedicle in its hilum (Fig. 4). The appearance of other abdominal organs on CT scan and sonograms were normal.

Fig.3 is contrast enhanced CT scan of the same patient shows that spleen is not seen in its normal anatomical position while Fig.4 shows a comma shaped spleen in pelvis which is non-enhancing soft tissue density consistent with infarction.

There was no ascites, pleural effusion or lymphadenopathy. The diagnosis of a wandering spleen in the left lumbar region below the lower pole of left kidney with torsion of its pedicle and resultant infarction was made. Emergency laparotomy was done and a huge spleen with twisted pedicle was found. Pedicle was untwisted, transfixed, ligated, cut and spleen was removed.

## DISCUSSION

Wandering spleen is a rare entity



Fig.1

especially in children and it is commonly seen in females after the second decade of life<sup>1</sup>. Fewer than five hundred cases have been reported in the literature. The incidence, based on several large series of splenectomies, is less than 0.5%.<sup>2</sup>

Wandering or ectopic spleen has two possible etiologies, congenital and acquired. Congenital form occurs due to failure of development of 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.<sup>3,4</sup> An elongated splenic pedicle is almost always found in a case of a wandering spleen. Malformation or absence of the gastro-splenic and/or lieno-renal ligaments is reported. The elongated pedicle in a case of a wandering spleen can predispose to both acute and chronic torsion, with possible infarction.

Clinical presentation can be acute

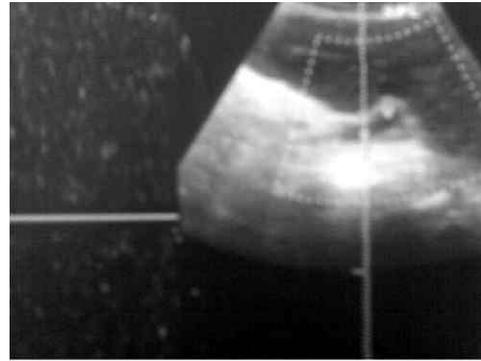


Fig.2

or chronic. In an extensive review 133 cases in the literature by Buehner and Baker (1998), 76 presented with a mass and non-specific abdominal symptoms, 26 patients were asymptomatic, 25 presented with acute abdominal pain, and another six cases had an asymptomatic mass.<sup>5</sup> Mechanical factors resulting in urinary retention and constipation or symptoms due to pathological disturbances of the spleen such as thrombocytopenia, hypersplenism and lymphoma, have been described in the literature. Torsion of the spleen, whether acute or chronic, with infarction can lead to the development of an “acute abdomen” as was seen in our case. Malignant involvement of a wandering spleen is rare and we could find only four reports in the English literature; all four cases had malignant lymphomatous disease.<sup>5-7</sup> 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 be the most reliable for

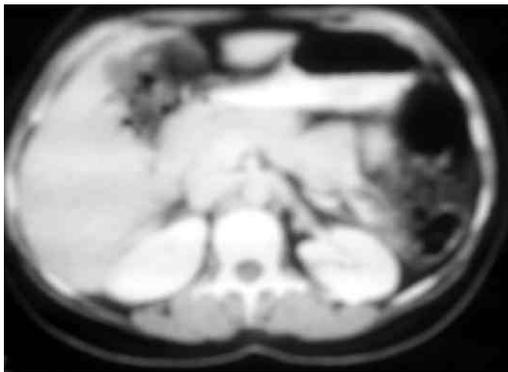


Fig.3

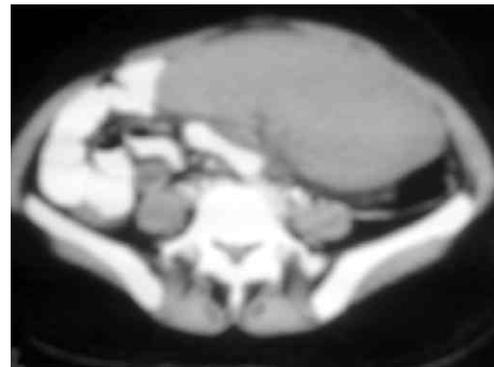


Fig.4

diagnosis of wandering spleen.<sup>8-10</sup> Doppler sonography helps in evaluation of organ blood flow<sup>11</sup>, in our case no flow was detected in the patient's splenic parenchyma (Fig 2) and hence the diagnosis of infarction was made and the patient was immediately operated upon. If ultrasonography fails to yield a diagnosis, then CT scan and MRI should be considered as valuable diagnostic aids<sup>12</sup>. In our case CT revealed a large comma shaped mass of soft tissue density in the pelvis which was non-enhancing with a whorl like pedicle in its hilum (Fig 3 & 4). Occasionally ascites or necrosis of the pancreatic tail and torsion of the splenic vessels and of the surrounding fat may be seen on CT scan, after intravenous contrast. If there is failure of enhancement of splenic parenchyma then it is strongly suggestive of a compromised splenic perfusion as was seen in our case.

Non-operative treatment of wandering spleen is associated with a very high complication rate<sup>13</sup> 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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## Address for Correspondence:

**Dr. Tahira Nishtar**

Department Radiology,  
Postgraduate Medical Institute,  
Hayatabad medical complex,  
Peshawar – Pakistan.