

## Case Report

### Wandering spleen: A common presentation of an uncommon anomaly

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#### Abstract:

**Background:** With the advent of real time ultrasonography of the abdomen, the spleen is no longer an inaccessible organ. Wandering spleen is a rare entity with only less than 500 cases reported so far. **Method:** This case report presents a 16-year-old Nigerian girl admitted in a medical centre but referred for ultrasonography on account of a clinical history of lower abdominal tenderness. **Result:** Ultrasonography examination revealed that the spleen was not found in its normal anatomical position. However, a well defined acoustic signature of the spleen was seen in the pelvis. **Conclusion:** Ultrasonography which is far cheaper than magnetic resonance imaging (MRI) and computed tomography (CT) is a valuable diagnostic aid in this condition.

**Key Words:** Wandering spleen, ultrasonography, Nigeria

### Introduction:

The spleen develops from the mesoderm in the dorsal mesogastrium. It lies in the left hypochondrium behind the stomach, and is about 12cm long and 7cm broad.<sup>1</sup> The spleen is fixed in position by the lienorenal and gastrosplenic ligaments; the phrenocolic ligament provides additional support. The ligaments are embryological condensations that take place in the peritoneum and congenital peritoneal anomalies may result in splenic displacement.

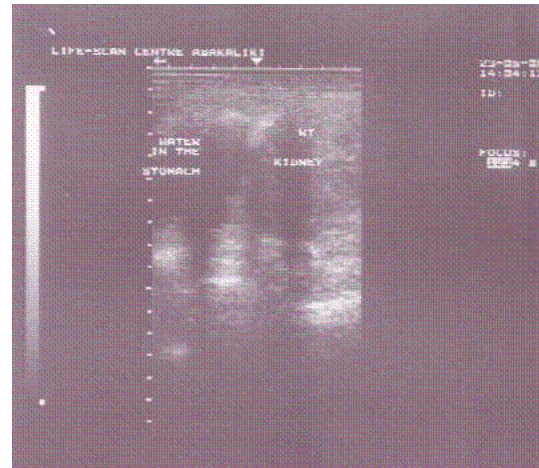
Wandering spleen is a rare clinical occurrence with fewer than five hundred cases reported in literature. The incidence based on several large series of splenectomies is less than 0.5%.<sup>2</sup> The spleen can be found anywhere in the abdomen or pelvis owing to its long vascular pedicle. The usual treatment is fixation of the spleen (splenopexy) except in case of infarction where there is no evidence of blood flow to the spleen after detortion, splenectomy should be considered.<sup>3</sup>

We present a rare case of wandering (pelvic) spleen showing a normal acoustic signature.

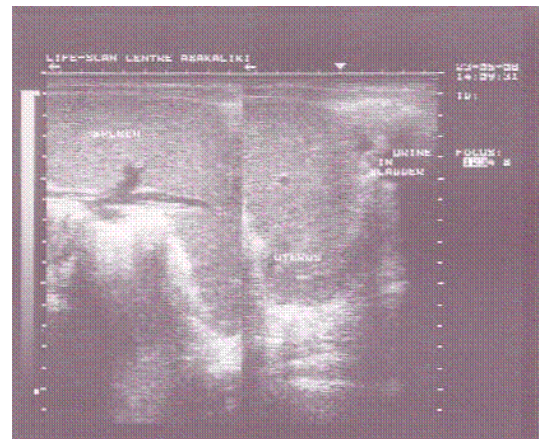
### Case Report:

A 16 year old Nigerian girl of Ibo origin presented to the gynecological clinic, with a one week history of anorexia and lower abdominal tenderness. After a clinical examination, provisional diagnoses of appendicitis and pelvic inflammatory disease (PID) were made.

Haematological and biochemical investigations were normal. Ultrasonography was performed with a 3.5 MHz linear transducer. The spleen was not visualized in its normal position (Fig 1). However, a well defined, homogenous mass with vascular channels (Fig 2) was seen in the pelvic region, anterior to the uterus and a little bias to the left adnexa. A diagnosis of a normal sized wandering (pelvic) spleen was made.



**Fig 1: Ultrasound scan of the left upper quadrant of the abdomen showing the right kidney and water in the stomach. The spleen is absent in the splenic bed**



**Fig 2. A dual B- mode (ultrasound) display of the abdomen and pelvis showing the spleen, uterus and urine in urinary bladder**

### Discussion:

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 mostly in multiparous females as the ligaments which are holding the spleen in its position become lax.<sup>3</sup> Synonyms of wandering the spleen include: displaced spleen, drifting spleen, floating spleen, splenic ptosis, splenoptosis, systopic spleen and pelvic spleen. A review of the English literature from 1960 to 1992 by Dawson and Roberts,

documented 148 cases which included both pediatric and adult cases.<sup>4</sup>

Wandering spleen is commonly seen in females in the second decade of life (the patient under review is a female in her second decade of life -16 years). The clinical presentation of a wandering spleen is variable; patients may be asymptomatic or they may have acute abdominal crises or chronic vague lower abdominal pain.<sup>3</sup> The most common presentation in children is an acute surgical abdomen occurring due to infarction from torsion of the splenic pedicle.<sup>5,6</sup>

The clinical diagnosis of wandering spleen may be quite difficult and the haematological and biochemical investigations may be non – specific. Non – invasive imaging procedures such as ultrasonography, scintigraphy, computed tomography (CT) and magnetic resonance imaging (MRI) are usually diagnostic. However, ultrasonography is still being considered to be the most reliable for diagnosis of wandering spleen.<sup>7</sup> The non – invasiveness of ultrasonography makes it an acceptable modality, especially in children. Doppler sonography helps in the evaluation of organ blood flow.<sup>8</sup> In the absence of infarction, thrombosis and hypersplenism, in patients presenting with an acute abdomen, detorsion and splenopexy is a recognized surgical option.<sup>9</sup>

In summary, we present a rare occurrence of pelvic spleen on ultrasonography. Awareness of this rare anomaly and the diagnostic utility of ultrasonography may be helpful for guiding both doctors and imaging scientists in the assessment of patients with similar clinical and sonographic presentations.

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