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Rare case of wandering spleen

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Abstract

Wandering spleen is a rare clinical scenerio with fewer than 500 cases reported and an incidence of less than 0.2%. It occurs when there is an acquired or congenital hyperlaxity of the suspensory ligaments of the spleen, resulting in its migration to any abdominal or pelvic position. Here we present rare case of wandering spleen in a 32 year old female who presented with pain in abdomen.

Keywords: Spleen, Symptoms, Parenchyma

Introduction

The spleen is an important component of the reticuloendothelial system, which is involved in immunological defence and can serve as a storage site for red blood cells [1].Wandering spleen is a rare condition in which the spleen migrates from its usual anatomical position, commonly to the lower abdomen or pelvis. The spleen is normally supported by the gastrosplenic, splenorenal and splenocolic ligaments, whereby failure of attachment of these ligaments to the spleen's overlying peritoneum results in a hyper mobile spleen [1, 2]. Cases of wandering spleen have been found associated with long splenic pedicle which consists of the splenic vessels and the tail of the pancreas [2,3].Wandering spleen is rare, with a reported incidence of <0.2%.Diagnosis is most commonly made between the ages of 20-40 years and is more common in multiparous women [4,5]. A wandering spleen can be an elusive diagnosis as its presentation is greatly variable and intermittent torsion can cause non-specific signs and symptoms. It can present as an asymptomatic or painful abdominal mass, intermittent abdominal pain, or as an acute abdomen (e.g. bowel obstruction, acute pancreatitis) [4,6,7].A wandering spleen can be either congenital or acquired. In the congenital condition the ligaments fail to develop properly, whereas in the

acquired form the hormonal effects of pregnancy and abdominal wall laxity are proposed as determining factors [8,9,10]. In addition, failure of fusion of the dorsal mesogastrium during foetal development resulting in the characteristic long vascular pedicle has been attributed [11]. However, the precise aetiology of the wandering spleen is not known [3].

Case report

We present a case of a 32 year old female who came to surgery opd with pain in abdomen since 10 years which had aggravated since 10 days along with constipation, blood in stools and vomiting since 5 days. On palpation, an irregular palpable mass of 10 x 10 cm was noticed in right hypogastric region. On USG, Spleen was ectopic in location, seen in pelvis, antero-superior to uterus (wandering spleen).It was mildly enlarged (13.5 cm) in size and revealed normal echotexture with extensive colonic gases with distention of colon. Splenectomy was performed and sent for histopathological examination. We, received an excised specimen of spleen, which was grey brown, soft to firm and measured

14.5 x 11.5 x 7.5 cm, weighing 680 grams (figure 1). External surface of spleen appeared grey brown, congested and ischemic, soft to firmanterior surface showed a laceration measuring 1.1 cm and posterior surface showed a laceration measuring 2.5 cm. Anterior surface revealed a gap in the notch measuring 2 x 1.5 cm. Cut section of spleen appeared grey brown and red grossly (figure 2). Hilum showed no palpable lymph nodes. Blood vessels of hilum were filled with blood clots (thrombus). Microscopy revealed features of haemorrhagic necrosis with thrombi in blood vessels. No viable splenic parenchyma was noted.(figure 3,4) The patient recovered well without any complications. She was followed up for a month without any complaints.

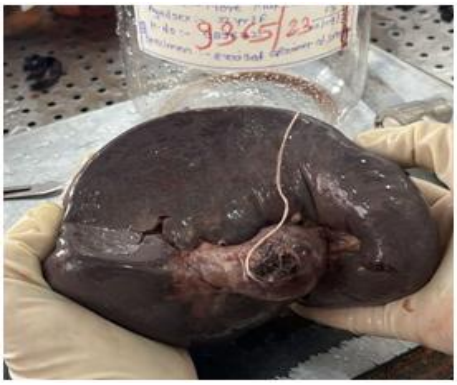

Figure 1

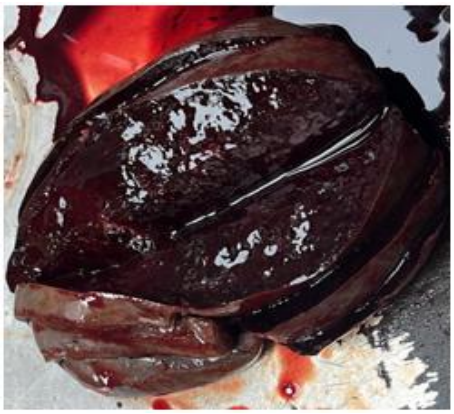

Figure 2

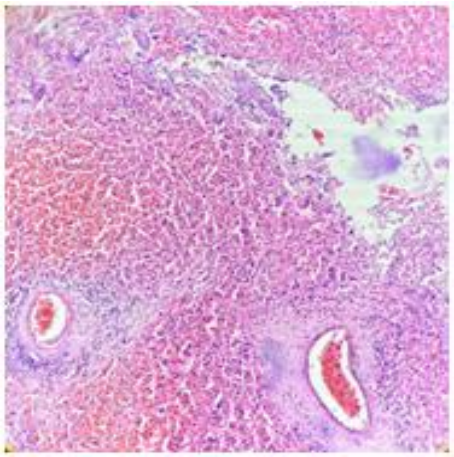

Figure 3

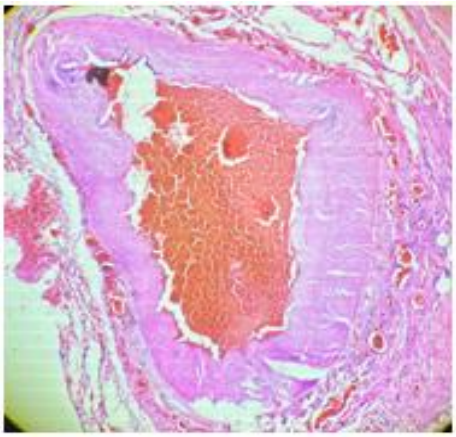

Figure 4

Discussion

With a frequency of less than 0.25 % in patients who need splenectomy, a wandering spleen is a rare condition [12]. While symptoms may go unnoticed for extended periods of time, complications are linked to vascular pedicle torsion and splenic infarction or to other abdominal organ compression. Among them are pancreatitis, intestinal blockage, duodenal and gastric volvulus, and compression [13,14,15]. A wandering spleen is not frequently diagnosed on plain film radiography, but findings on abdominal x-ray may include (4,16).

- Absence of splenic shadow in the left upper quadrant
- Space-occupying soft tissue mass in an abnormal location
- Distended bowel loops

Pathologically, the abnormal mobility of the spleen is caused by an abnormality of its suspensory ligaments. Wandering spleen is characterized by laxity of splenic ligaments and secondary to this phenomenon there is lengthening of splenic vascular pedicle which makes spleen more prone to torsion, hypoperfusion, congestion of splenic parenchyma ischemia and necrosis. Etiology of this condition may be congenital or acquired. There may be a congenital absence or underdevelopment of these ligaments, or an acquired laxity of the ligaments caused by various conditions, such as pregnancy or diseases causing splenomegaly. Due to these abnormal ligaments, a long vascular pedicle may form, containing the splenic vessels, predisposing the spleen to torsion and consequently splenic infarction [6.] .

Conclusion

Wandering spleen is a rare differential diagnosis and very challenging due to vast variety of symptoms mimicking other abdominal pathologies and intrabdominal tumor that must be considered if a patient presents with a palpable abdominal mass. Intermittent nature of symptoms can make it a diagnostic challenge The best method of confirming the diagnosis seems to be a CT scan, however, US imaging is an equally helpful modality in hospital settings where patient cannot afford CT. Surgical exploration and splenectomy is the definitive treatment. Histopathological examination is important in such cases for revealing the complications that occur due to wandering spleen like ischemia, necrosis, torsion and infarction as seen in our case. Apart from complications, microscopy also helps to rule out other causes of splenomegaly like Budd–Chiari syndrome, polyspleniea etc. Inspite of newer evolving diagnostic modalities, this disorder remains misdiagnosed and high index of suspicion is needed for proper diagnosis and treatment.

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