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Case Report

An Interesting Case of Misdiagnosed Adnexal Mass

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Abstract

A 41-year-old lady, presented with complaints of acute onset lower abdominal pain and vomiting. On clinical examination, a tender mass in the hypogastric region was palpable. Pelvic examination revealed the same mass felt anterior and through one of the fornices, however, there was no cervical motion tenderness. Ultrasonography revealed a pelvic mass. The provisional diagnosis of torsion of adnexal mass was made. Ultrasonogram also revealed an absent spleen in left hypochondrium, which was ignored at that time. Emergency laparotomy was done which revealed a normal uterus and bilateral ovaries. However, a congested spleen was found in the pelvic area with abnormally elongated and twisted pedicle. A total splenectomy was performed in view of infarction of the torted spleen. The patient was discharged uneventfully on the fifth postoperative day with triple vaccination. This case describes a rare presentation of torsion of a wandering spleen being misdiagnosed as torsion of adnexal mass.

Keywords: Adnexal Mass; Spleen; Torsion

Background

A wandering spleen is a rare occurrence and has proven to be a diagnostic challenge. The clinical presentation varies widely [1] and patients usually present with an asymptomatic abdominal mass, an acute abdomen or, most commonly, a mass associated with pain. The clinical diagnosis appears to be difficult due to nonspecific clinical features of abdominal pain and nonspecific biochemical and haematological investigations [2]. A confirmatory diagnosis depends heavily upon imaging studies; ultrasonography and computed tomography scan being preferred modalities [3,4]. We report a rare case of wandering spleen being misdiagnosed as adnexal mass till the time patient underwent laparotomy.

Case Presentation

A 41-year-old lady presented to us with sudden onset lower abdominal pain which was severe in intensity associated with vomiting. Prior to this, the patient had been complaining of an abdominal lump with intermittent pain for the past 2 weeks for which she sought no treatment. There was no history of altered bowel habits, fever or any other constitutional symptoms. Also there were no urinary complaints and no gynaecological complaints. Her obstetric history revealed two spontaneous vaginal deliveries in the past without any complications. She had never undergone any abdominal surgery in the past.

On presentation, she looked sick and was having tachycardia with a pulse rate of 118 beats per minute. Her blood pressure was 90/60 mm Hg. On abdominal examination, a large ovoid mass was identified in the hypogastric region extending to the right iliac fossa which was tender to touch. Pelvic examination revealed the same mass which was felt mainly through anterior and right fornix. The uterus was felt separately from the mass. A provisional diagnosis of torsion of adnexal mass was made on the basis of history and clinical examination.

Investigations

All the laboratory investigations were within normal limits. Ultrasonography of the abdomen-pelvis revealed a well-defined soft-tissue mass in the pelvis on right side measuring approximately 12 × 7 × 6 cm just anterior to the uterus suggestive of adnexal mass. It also made a note on the absent spleen at its usual location, however, this finding was ignored at that time. She was initially resuscitated with intravenous fluids, analgesics, antiemetics, and antibiotics and simultaneously prepared for emergency laparotomy after detailed informed consent.

Treatment

During laparotomy, a huge mass was found to be lying anterior and to the right of the uterus. The mass was found to be adherent

to the surrounding structures including omentum, bladder, small and large gut. After adhesiolysis, the mass was found to be reniform in shape, dull red in colour, firm in consistency and having a long vascular pedicle which showed evidence of torsion. On following the pedicle it was found to be arising from left hypochondrium, thus intraoperatively a diagnosis of wandering spleen was made. Uterus and bilateral ovaries were found to be normal (Figure 1). The wandering spleen was enlarged and infarcted with a long pedicle (8 to 10 cm in length), containing thrombosed vessels (Figure 2 and 3). Pancreatic tail extending into the splenic pedicle was identified, separated and divided. A total splenectomy (Figure 4) was then performed using standard techniques.

Figure 1: Intraoperative image showing wandering spleen in the pelvis (horizontal black arrow). Note is also made of normal uterus (vertical black arrow) and ovaries (horizontal green arrow).

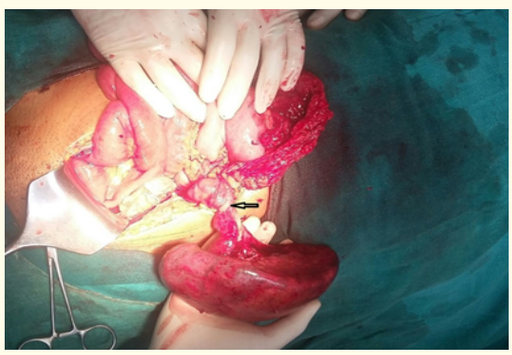

Figure 2: Splenic vascular pedicle showing evidence of torsion intraoperatively (arrowhead).

Figure 3: Per-operative image showing abnormally long pedicle containing thrombosed vessels (arrowhead).

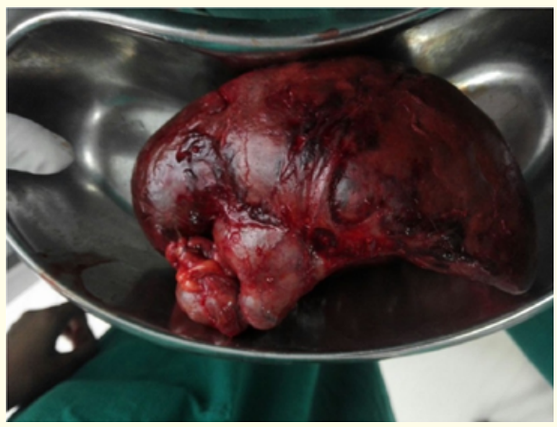

Figure 4: Gross specimen showing an enlarged, congested and partially infarcted spleen.

Outcome and Follow-Up

The postoperative recovery was uneventful and the patient was subsequently discharged on the fifth post-operative day. Histopathological examination revealed splenic tissue with focal areas of infarction. Triple vaccination against *Pneumococcus, Meningococcus* and *Haemophilus influenza* were administered as per the protocol.

Discussion

A wandering spleen is a rare clinical entity with a reported incidence of less than 0.2% [5]. The spleen is normally supported by the gastrosplenic, splenorenal and splenocolic ligaments. The failure of attachment of these ligaments results in excessive mobility and migration of spleen from its normal position in the left hypochondrium to ectopic positioning in the abdomen or pelvis [6]. It most frequently affects women of child-bearing age, in whom the hormonal changes and acquired laxity of splenic ligaments is usually the underlying cause [6]. Both congenital and acquired conditions result in a long pedicle, which is predisposed to torsion.

The clinical presentation varies widely, with the spectrum ranging from an asymptomatic abdominal mass or splenic incidentaloma, intermittent abdominal pain to the acute abdomen. Torsion of wandering spleen usually presents as an acute abdomen which makes physical examination more difficult and thus making preoperative diagnosis less accurate as in our case.

Due to the non-specific clinical features, imaging plays an important role in diagnosing wandering spleen. The initial imaging method is usually ultrasonography which reveals comma-shaped spleen in an ectopic position and lack of splenic tissue in the left upper quadrant. To see any abnormalities in the blood flow, colour and duplex sonography is carried out. Other non – invasive imaging modalities include contrast-enhanced computed tomography (CECT), magnetic resonance imaging and scintigraphy. CT scan remains the investigation of choice and can demonstrate organ's circulation and viability of splenic parenchyma [7]. However, since our patient presented acutely with hemodynamic compromise, and clinical diagnosis of torsion of adnexal mass was fairly evident, we proceeded directly with exploratory laparotomy and did not wait for contrast computed tomography or the colour Doppler tests. We admit that we ignored the ultrasonography report of the absence of the spleen in the left hypochondrium. This was mainly due to the ignorance about the rare diagnosis of wandering spleen.

The treatment of wandering spleen is usually operative and type of surgical intervention is mainly governed by the vascularity of the spleen. Torsion of spleen with consequent infarction necessitates splenectomy as in our case. However, for a viable spleen, splenopexy either open or laparoscopic is the treatment of choice. In this subset of patients, splenic pedicle detorsion and splenic fixation are done either to the diaphragm or to the abdominal wall [8]. Splenectomy is not recommended in young patients due to the risk of overwhelming post-splenectomy sepsis. Individuals undergoing splenectomy should be offered prophylactic combined vaccination against Haemophilus influenza, pneumococcus, and Neisseria meningitides [9].

Learning Points/Take Home Messages

- Wandering spleen is a rare condition that often presents as a complex clinical situation. A clinician should have a high degree of suspicion for wandering spleen, particularly in women of child-bearing age who present with acute abdominal pain and a mobile abdominal mass.
- An awareness of the condition with use of appropriate modern imaging techniques can lead to correct diagnosis.
- Early surgical intervention, in the form of either splenopexy or splenectomy, is necessary to reduce the risk of splenic infarction and other complications.

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Consent

Obtained from the patient.

Conflicts of Interest

No conflicts of interest.

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