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Torsion of wandering spleen, an unusual cause of acute abdomen; a report of two cases

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Abstract

Background: Wandering spleen is an uncommon entity that is rarely considered in the evaluation of patients with acute abdominal conditions.

Objective: To report two cases of wandering spleen presenting with acute abdominal pain.

Methods: The clinical records of the patients including preoperative evaluation, intra-operative findings and postoperative care were reviewed

Result: A 6 year old boy presented with right lumbar pain which worsened over a 36 hour period with findings of a tender right lumbar mass. Abdominal ultrasound showed a mass with echogenicity consistent with that of the spleen with no blood flow and an empty splenic bed. The pre-operative diagnosis was torsion of a wandering spleen. The second case was that of a 42 year old woman who presented with severe colicky lower abdominal pain which worsened over three days with a background history of progressively increasing lower abdominal mass which was tender and about 26 week gestational size at presentation. The initial diagnosis was torsion of an ovarian cyst. Abdomino-pelvic Ultrasound scan showed a heterogeneously hypo-echoic mass overlying the uterus and the left ovary with no blood flow. The presence of wandering spleen with torsion of the vascular pedicle was confirmed at laparotomy in both instances. Splenectomy was performed in both cases with good recovery.

Conclusion: Torsion of a wandering spleen poses a diagnostic challenge. A high level of suspicion is required to make a diagnosis and institute appropriate treatment.

Keywords: *Wandering, spleen, torsion.*

Résumé

Introduction: L'errance, la rate est une entité rare qui est rarement considérée dans l'évaluation des patients avec les conditions abdominales aiguës.

L'objectif de cette étude était de signaler deux cas de rate errante présentant la douleur abdominale aiguë.

Méthodes: Les dossiers cliniques des patients, y compris évaluation préopératoire, peropératoire des conclusions et soins postopératoires étaient examinés.

Résultats: Un garçon de 6 ans ayant une douleur lombaire droite qui s'est aggravée sur une période de 36 heures avec les conclusions d'une masse lombaire tendre et droite. L'échographie abdominale a montré une masse d'échogénicité comparable à celle de la rate sans écoulement de sang et un lit splénique vide. Le diagnostic préopératoire était de torsion de la rate errante. Le deuxième cas est celui d'une femme de 42 ans qui s'est présentée avec de graves coliques douleurs abdominales basses qui s'est aggravée pendant trois jours avec une histoire d'accroître progressivement la masse abdominale inférieure qui était tendre et la taille environ 26 semaines de gestation à la présentation. Le diagnostic initial pointait sur une torsion d'un kyste ovarien. L'échographie abdomino-pelvienne a montré une disposition hétérogène hypo hognés proximaux de masse recouvrant l'utérus et l'ovaire gauche sans flux sanguin. La présence de la rate errance avec torsion du pédicule vasculaire a été confirmée à la laparotomie dans les deux cas. La splénectomie a été réalisée dans les deux cas avec une bonne récupération.

Conclusion: la Torsion de la rate errante pose un défi diagnostique. Un taux élevé de suspicion nécessite essentiellement faire un diagnostic et instituer un traitement approprié.

Introduction

Wandering spleen is an excessively mobile spleen characterized by absence or laxity of the supporting ligaments. It is a rare entity accounting for 0.25% of splenectomy [1]. It may be due to a congenital absence or acquired laxity of the splenic ligaments. The congenital variant arises as a result of developmental abnormality of the dorsal mesogastrium with absence of normal splenic suspensory ligaments while the acquired type occurs as a result of multiple pregnancies, and hormonal changes [2]. This makes it many times more common in females than males [3]. The spleen is usually attached only by a long pedicle which facilitates easy

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Case 2

A 42 year old multi-parous woman presented at the emergency department with severe colicky lower abdominal pain which worsened over a period of three days. There was a background history of intermittent mild abdominal colicks for about three months prior to presentation. She also noticed a lower abdominal swelling which had been increasing in size over a six month period.

Examination revealed an ill looking patient with a 26 week gestational size abdomino-pelvic mass extending from the left lumbar region to the hypogastrium and we could not get below it. The mass was firm, smooth and tender. The initial clinical diagnosis was Torsion of an ovarian cyst. Abdomino-pelvic Ultrasound scan however showed a heterogeneously hypo-echoic mass overlying the uterus and the left ovary with no blood flow on Doppler interrogation.

The patient was explored by a combined team of surgeons and gynaecologists on account of worsening abdominal pain. Findings were that of a huge, congested, mobile spleen measuring 16x10cm occupying the left lower quadrant of the abdomen and extending into the pelvis with a long vascular pedicle extending down from its origin at the coeliac trunk, twisted on itself in a clockwise fashion with patchy areas of necrosis. There were multiple adhesions between the spleen, pelvic organs and bowel loops. The spleen was dissected free and a splenectomy was done.

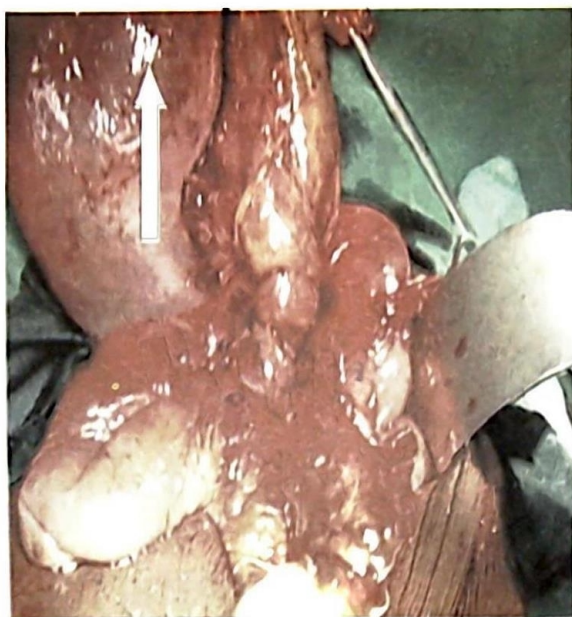


Fig. 2: The spleen with torsion of the vascular pedicle and an area of necrosis (Single arrow).

Post-operative period was uneventful. She had pneumococcal and malaria prophylaxis and was discharged five days after surgery. Histopathology of the removed spleen showed areas of haemorrhagic necrosis.

Discussion

Wandering spleen, also known as displaced or ectopic spleen is an uncommon clinical entity which is rarely considered in the differential diagnosis of patients with acute abdomen. To the best of our knowledge, only 238 cases have been reported in literature [5].

Our findings in this report show the usual distribution peaks first in childhood and then in women of reproductive age group [5]. Abdominal pain and abdominal mass are the commonest modes of presentation. These symptoms being non specific are usually attributed to more common surgical or gynaecological conditions. This fact coupled with the rarity of this condition makes the clinical diagnosis very challenging. Correct clinical diagnosis was not made in both cases. Ultrasound scan with Doppler interrogation and computerized tomography scan are considered useful imaging modalities in making a diagnosis. This may however be challenging in certain instances with a definitive diagnosis having to wait till the time of surgery [7].

Surgery is the preferred mode of treatment as conservative treatment is associated with a complication rate of 65% [3]. Surgical options are splenectomy and splenopexy. Splenectomy is more commonly offered in adults and in cases of splenic infarction. Splenopexy is indicated particularly in children when there is no evidence of infarction because of the risk of overwhelming post-splenectomy syndrome [5]. Splenectomy for a wandering spleen is a relatively easy procedure as the already 'mobilized' spleen with its long pedicle only requires ligation.

Conclusion

The challenge in the management of this rare condition lies not in its treatment as much as in its diagnosis. Pre-operative diagnosis is possible but in the absence of extensive imaging studies, with a high level of suspicion, the diagnosis is bound to be made intra-operatively. Splenectomy is the preferred mode of treatment when the splenic blood supply is compromised.

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