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WANDERING SPLEEN PRESENTING AS A RIGHT HYPOCHONDRIAL MASS AND INTESTINAL OBSTRUCTION
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WANDERING SPLEEN PRESENTING AS A RIGHT HYPOCHONDRIAL MASS AND INTESTINAL OBSTRUCTION

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ABSTRACT

This is a case report of a 23 year old multiparous woman who presented with intestinal obstruction and a right hypochondrial mass. Laparatomy revealed an infarcted 1.4Kg spleen in the right lumbar region compressing the ascending colon. There was also ileal volvulus around the splenic pedicle. This is probably the first documented case of wandering spleen in the right hypochondrium, presenting as right large bowel obstruction, to be reported in our region. Wandering spleen is a rare condition, often asymptomatic, but may present as an acute abdomen. Pre-operative diagnosis is difficult and rarely made. Laboratory tests are seldom useful, but imaging studies do assist. Up to 1971 only 350 cases had been reported in the western literature. Review of English literature from 1900 to 1991 reported only 51 cases in children. In our region 11 cases were reported in Uganda between 1968 and 1971. No other literature is available from our region. Clinical presentation, aetiology, investigation, and management of wandering spleen is discussed.

INTRODUCTION

We present an unusual case of a wandering spleen in the right paracolic gutter causing intestinal obstruction in a 23 year old multiparous female. Diagnosis was made intraoperatively. A search of the literature revealed no reference to wandering spleen in the right paracolic gutter. In Kenya no cases of wandering spleen have been documented. We wish to high light an unusual cause of intestinal obstruction. Its aetiology, presentation and management are discussed.

CASE REPORT

A 23 year old housewife presented with a 10 day history of abdominal pain, faeculent vomiting, abdominal distension and constipation. The pain was in the paraumbilical region and colicky in nature. Prior to this she had complaints of intermittent dull abdominal pain for one year. She was 12 weeks pregnant at the time of admission. There was no other relevant history. Examination revealed a tender right lumbar mass and gaseous distension of the abdomen.

Plain abdominal X-ray revealed a soft tissue mass in the right lumbar region and gaseous distension of the small bowel. Full blood count, urea and electrolytes, liver function tests, and prothrombin time index were essentially normal. Her condition changed for the worse and emergency laparatomy was performed before ultrasonography could be done. At laparatomy a massive infarcted spleen (18x7cm), weighing 1.4 kg (Figure 1) was found in the right paracolic gutter compressing the caecum and ascending colon (Figure 2). There was a 360 degree torsion of the splenic pedicle and multiple small bowel adhesions (Figure 3). The other abdominal organs were normal.

Figure 1

Massive intacted spleen

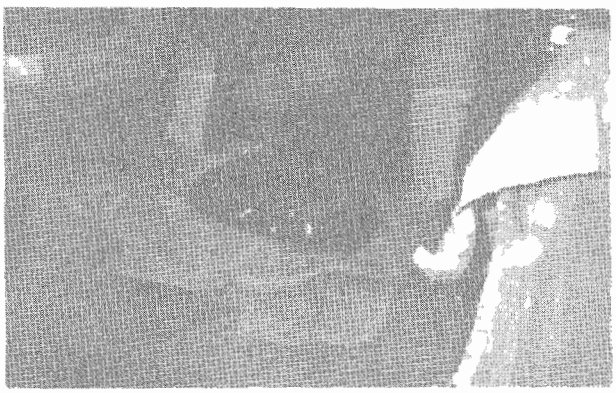


Figure 2

Spleen compressing caecum and ascending colon

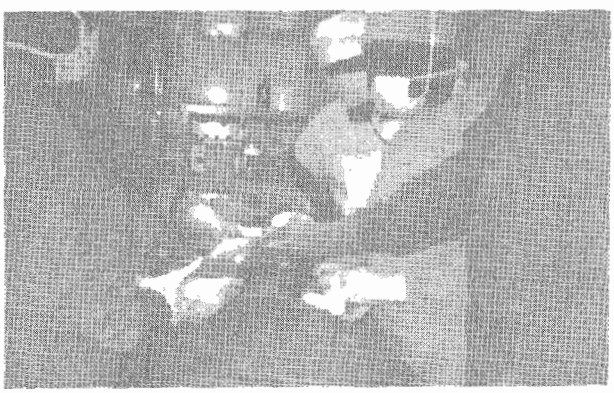
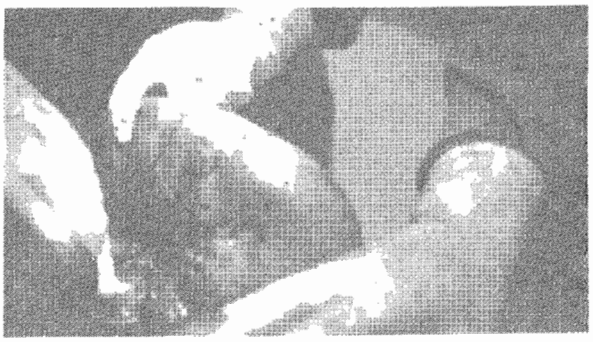


Figure 3

Tension of the splenic pedicle



DISCUSSION

Incidence: Wandering spleen (splenoptosis) is a rare and often difficult condition to diagnose. It usually occurs between the ages of 20 and 40 years(1). Majority of the cases (70-80%) are seen in women, most of whom are in the reproductive age (2). Below the age of 10 years the male to female ratio is 1:1 but changes above this age to 1:7 with a female preponderance. The diagnosis is reportedly rare in children(l) but various authors from the region and elsewhere find the condition commoner in children(2-5). In the East African region literature review reports of 11 cases in Uganda. The majority of the cases were in children (8 out of 11)(2). No other literature was available on this diagnosis in the region. Our case report is probably the first reported in Kenya and perhaps the only reported case of wandering spleen found in the right paracolic gutter.

Aetiology: Wandering spleen may be either congenital or acquired. The acquired form occurs in multiporous women possibly as a result of hormonal changes in pregnancy, that cause laxity of the abdominal wall and the ligaments attached to the spleen(1,2,5,6) Splenomegally has been known to elongate the splenic pedicle by traction, increasing the preponderance to torsion and splenoptosis(7-9). Some case reports have included a history of malaria, trauma and being haematologic disease as associated aetiological factors(8,9). Congenital wandering spleen is attributed to maldevelopment of the dorso-mesogastrium of the spleen resulting in failure of the anchoring ligaments to form and laxity of normal splenic attachment to the diaphragm, retroperitoneum and colon(8,9,11). Mobility of the spleen in this case now depends on the length of the vascular pedicle(1). Torsion may then cause venous congestion and splenomegaly which in turn may elongate the vascular pedicle and lead to spelnoptosis(8,9).

Diagnosis: Diagnosis of wandering spleen is often difficult due to rarity and non-specific symptoms(1,7). The diagnosis is rarely made pre-operatively(2). The most common presentation is an abdominal mass with abdominal pain (60%). In the Ugandan study 60% of the patients presented with a long standing abdominal mass, with the remaining 40% presenting with acute splenic torsion(2). The condition may also present as acute pancreatitis, gastric compression or intestinal obstruction(12-15). Diagnosis can be enhanced using the following criteria to improve accuracy.

(i) Palpation of a mass with a notched edge
(ii) Painless/painful mobile mass, often in the upper quadrant
(iii) Dull percussion note
(iv) History of chronic intestinal pain(15,16).

Laboratory results are usually non-specific and not of much value(7,8). Differential diagnosis include acute appendicitis, torsion of ovarian cyst, intestinal obstruction, diverticulitis, colonic cancer, cholecystitis, ectopic pregnancy and urinary retention (11,17,18).

Imaging: Radiological imaging often tends to confirm the diagnosis. Plain abdominal X-ray may reveal an abdominal mass with dilated loops of bowel. This is non-specific(1). Ultrasonography is the least and most effective imaging modality(3,4,18). Doppler ultrasonography is useful in determining the splenic blood flow and viability. This may be crucial in deciding on conservation as opposed to splenectomy(4,18,19). CT scan shows whorled appearance of the splenic pedicle, that some authors take as pathognomonic of a wandering spleen. CT scan can also delineate the region where torsion has occurred(19-21). Radionucleotide studies, using 99mTc and arteriography may confirm the diagnosis and further establish splenic viability(22-25).

Treatment: Definitive management of wandering spleen is operative. Non-operative treatment is associated with a high complication rate of up to 65% (1). Splenectomy has been the treatment of choice but with better diagnostic facilities spleen conservation by splenopexy is gaining popularity(26). Splenopexy is the procedure of choice in children. This procedure is only done when there is evidence of a viable spleen with no infarction(5,20,27-35). Laparascopic splenectomy has also been attempted in the management of this condition(4,30,36). Various techniques of splenopexy include anchoring the spleen to the diaphragm or anterior abdominal with sutures, omentum or a mesh(32-34,36,37) and creating of retroperitoneal splenic pouches(34,35). Complications of splenopexy include break down of suture fixation and recurrence of torsion. The results of splenopexy are good and reduce the risk of post-splenopexy sepsis which stands at 1.9% and 4% in adults and children respectively(7,37). Mortality from post splenectomy sepsis has been reported to be as high as 60%(37-39).

CONCLUSION

Wandering spleen is a rare and often difficult condition to diagnose. It presents with an abdominal mass that may or may not be painful. Occasionally it may present as an acute abdomen. Diagnosis of

wandering spleen is seldom made pre-operatively. A high index of suspicion, through clinical examination combined with Doppler ultrasonography and CT scan enhance the chances of pre-operative diagnosis. Tc 99cm, scan may be useful in determining viability of the spleen. Splenectomy is the recommended treatment in infarcted non-viable spleen but is associated with a significant risk of post-splenectomy species and high mortality. Spenopexy is the treatment of choice in both children and adults with a viable non-infarcted spleen. The procedure has few complications and good post-operative results.

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