Torsion of a wandering spleen

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Summary: We present an unusual case of torsion of a wandering spleen in a 14 year old boy. Wandering spleen is an entity which has rarely been reported in infants and children. Although patients may be asymptomatic, some may present as an acute surgical emergency if trauma or torsion of the vascular pedicle occurs, as in our case. The treatment of this condition is splenectomy.

Introduction

Wandering spleen is defined as the presence of the spleen in other than the left upper quadrant of the abdomen. Most commonly wandering spleen has been described as 'displaced', 'dystopic', 'floating', and 'ectopic' (Dowidar, 1949; Michaels, 1954; Eraklis & Filler, 1972; Frederik *et al.*, 1975; Gordon, 1977). Torsion of a wandering spleen is a rare condition and may simulate splenic enlargement or an abdominal mass (Michaels, 1954; Gordon, 1977; Teramoto *et al.*, 1981).

Of 1413 splenectomies in patients under 16 years of age, only four were performed for management of torsion of the spleen (Eraklis & Filler, 1972). In this report we present an unusual case of torsion of a wandering spleen in a child.

Case report

A 14 year old, previously healthy boy was admitted to hospital with a three day history of left sided abdominal pain. The pain was acute at onset, but subsequently became constant and mild. On examination his temperature was 37.5°C, blood pressure was 110/60 mm Hg and pulse rate 100 beats/min. The abdomen was distended without signs of peritoneal irritation. A mobile mass in the left upper quadrant was palpated. Plain X-ray of the abdomen, intravenous pyelogram and upper gastro-intestinal tract roentgenologic investigation were normal. Ultrasonographic abdominal examination showed enlargement of spleen and signs of subcapsular haemorrhage.

In view of the clinical impression of splenic haematoma the patient was admitted to the surgical department. Laparotomy was performed through a midline epigastric incision and a large, tense, infarcted spleen (weight 800 g) was found. The enlarged spleen was mobile and devoid of any peritoneal or ligamentous attachments. The splenic pedicle was twisted clockwise through approximately 360°. Splenectomy was performed. Histology showed very severe congestion, capsular haemorrhage and a thrombosed splenic vein.

Discussion

The spleen develops in the left upper quadrant of the abdomen from mesenchymal cells of the dorsal mesogastrium and is maintained in its normal position by gastrosplenic, splenocolic, splenophrenic and splenorenal ligaments and the pressure of the surrounding organs (Dowidar, 1949; Michaels, 1954; Gordon, 1977). Disturbances of the supporting elements may allow the splenic pedicle to elongate and predisposes it to torsion. The extent of splenic mobility is limited only by the length of its vascular pedicle. The spleen in this condition has been described as 'wandering' (Dowidar, 1949; Garswell, 1974; Gordon, 1977).

In the asymptomatic patient wandering spleen may simulate splenic enlargement or an abdominal mass (Garswell, 1974; Gordon, 1977). In others intermittent rotation and derotation of the spleen on its vascular pedicle may occur and cause episodes of anorexia, vomiting and abdominal pains as in our case (Dowidar, 1949; Frederik *et al.*, 1975; Teramoto *et al.*, 1981). Complete splenic torsion may present as an emergency, with fever, peritonitis, or pressure symptoms on other organs (Dowidar, 1949; Gordon, 1977).

The diagnosis of wandering spleen may be difficult

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because of the non-specific nature of presenting signs and symptoms. If torsion occurs, accurate diagnosis is essential because the consequences of torsion may be disastrous. These are occlusion of the splenic vessels with haemorrhagic infarction of all or part of the spleen, splenic gangrene, (cyst or abscess) or peri splenic adhesions (Dowidar, 1949; Garswell, 1974; Frederik, Khettry and Filler, 1975). Roentgenographic methods may aid in establishing the diagnosis, but only selective angiography has been successful as

an aid to the positive preoperative diagnosis of wandering spleen (Gordon, 1977).

As in our case, preoperative diagnosis is difficult, if not impossible, on the basis of history and physical findings alone. Diagnosis was made only on laparotomy. Once the diagnosis has been established, the correct treatment is splenectomy. The old operations of splenopexy and detorsion have no place in modern surgical practice (Dowidar, 1949; Frederik *et al.*, 1975; Gordon, 1977).

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