

Abdominal Mass as an Expression of a Wandering Spleen

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Abstract

Background: Wandering spleen and splenic cyst are rare conditions caused by the absence or abnormal accompanying splenic laxity, due to congenital or acquired causes.

Case Report: A 30-year-old girl, mother recently, presented a mobile abdominal mass in the left upper quadrant associated with mild abdominal pain. The diagnosis of nonparasitic cyst in a wandering spleen was confirmed by computerized tomography and negative serological test. Due to its characteristics and anatomical position, a laparotomy with simple extirpation and splenic preservation was performed. The postoperative course did not present any problems. The pathological anatomical result was pseudocyst.

Conclusions: In the differential diagnosis of an abdominal mass the splenic pseudocysts need to be taken into consideration. Like in children, as well as in adults the treatment of a wandering spleen associated with a cyst should aim at the extirpation of the pseudocyst, the prevention of vascular accidents and at conservation of the spleen.

Keywords: spleen, cyst, pseudocyst, torsion, thrombotic.

INTRODUCTION

The long pedicle of the spleen is a predisposing factor for a wandering or ectopic spleen (1, 2). This condition moves the spleen of its usual position in the left upper quadrant. Possible complications include torsion, gangrene, splenic infarction, ischemia, abscess formations or necrosis of the pancreatic tail. According to the literature the description of a pseudocyst formation is a rare clinical situation that has to be taken into consideration when an abnormal mass is detected. The overall incidence of splenic cysts in the general population is approximately 1% (3). These cysts can become symptomatic as a consequence of enlargement, haemorrhage, rupture, or infection. The treatment options for splenic cysts depend on the type and size of the cyst (4). We describe a case of a wandering spleen with a pseudocyst that was handled entirely using a laparotomic approach.

CASE REPORT

A 30 years-old female patient, puerperal five months before, was admitted to Internal Medicine Department for an abdominal pain and ultrasound finding of a big pseudocyst in the left upper quadrant. On physical examination a large mobile lump was palpated in the left hemiabdomen. The rest of the physical examinations were unremarkable and the laboratory test did not show anything out of the standard of care.

CT scan was performed to complete the study of the case, where the differential diagnosis was between cystic lymphangioma and splenic hematoma in the context of wandering spleen (Figure 1A, 1B).

Because of the possibility that the cyst content was haematic the realization of a puncture was discarded, exploratory laparotomy and simple extirpation of the pseudocyst with splenic preservation was performed (Figure 1C).

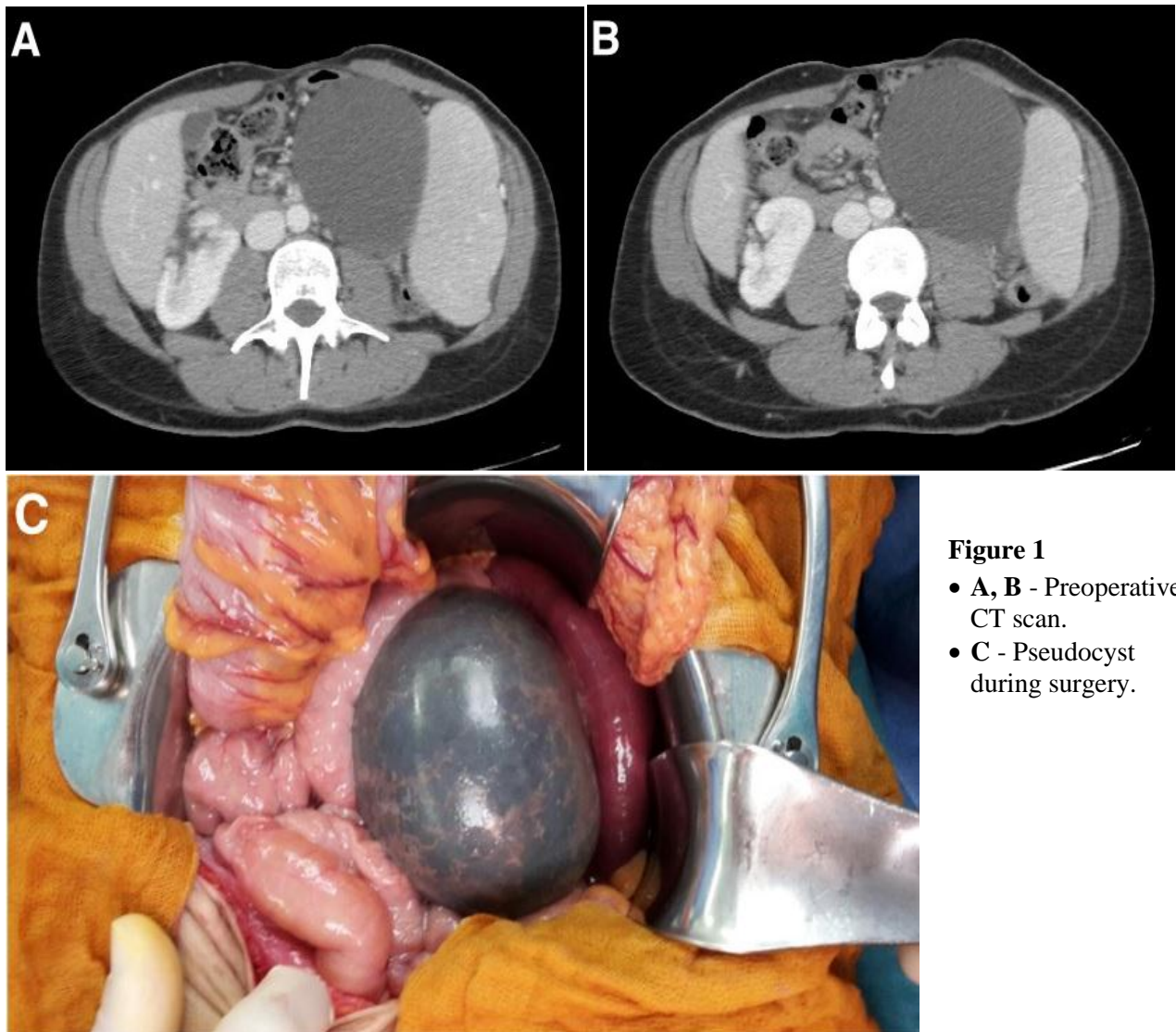


Figure 1

- A, B - Preoperative CT scan.
- C - Pseudocyst during surgery.

To stabilize the spleen and prevent future torsion, it was decided to place the spleen in its anatomical position and maintain it by transposing the splenic flexure of the colon. The postoperative period was uneventful. The reintroduction of oral tolerance was at 24h and the patient was discharged 4 days after the surgery. The pathological anatomical result was a surgical piece with fibrous tissue, without preserved epithelium, with necrotic content, and the definitive diagnosis was pseudocyst.

The subsequent microbiological study did not reveal signs of super infection. Written informed consent was obtained from the patient for the publication of this case report and any accompanying images.

DISCUSSION

Spleen migration from its anatomical position is caused by the absence or abnormal accompanying splenic laxity, due to congenital or acquired causes. In adults, abdominal laxity and hormonal effects of pregnancy are thought to be possibly causative (5, 6). Our patient was in postpartum period, having given birth less than six months before. Pseudocysts of the spleen are caused by either trauma or infarction (7). The patient complained of intermittent abdominal discomfort, confusing symptoms with pregnancy or postpartum symptoms. She denied any history of old trauma. It is highly possible that an enlarged ectopic spleen could be vulnerable to injury due to trivial unnoticed trauma. Also intermittent episodes of torsion

could cause embolic/thrombotic episodes and subsequent formation of pseudocysts (8).

The prevalence of wandering spleen has been reported to be less than 0.5% (9). The clinical presentation is widely variable (10). The abnormally long vascular pedicle predisposes the wandering spleen to a number of complications with torque being the most serious. Acute torsion presents as acute abdomen and causes vascular congestion, infarction, and even gangrene depending on time and the degree of the twist. The most common non-acute presentation is vague abdominal pain, which is usually intermittent and occasionally positional (11). Other complications of the wandering spleen that have been described are acute pancreatic necrosis due to the incorporation of the pancreatic tail in the vascular pedicle of the spleen, splenic abscess formation, gastric distension and bleeding varices. Moreover the formation of cysts has been described. Splenic cysts are quite rare, and can be classified into parasitic and non-parasitic. Of the non-parasitic cysts, true cysts having an epithelial lining constitute about 20%, while the rest comprise of pseudocyst.

The wall of a pseudocyst is composed of dense fibrous tissue with no epithelial lining and occasionally contains hemosiderin (8, 12, 13). In our case the preoperative suspicion that the cyst was full of blood content, made us to reject the diagnosis by puncture of the mass. The successive histological and microbiological study did not show focal aggregates of

inflammatory cells and no organism was identified by culture or staining. Finally the pathological anatomy result was pseudocyst.

The current trend in the management of wandering spleen is laparoscopic approach with splenic conservation. Observation could be made in patients with an asymptomatic wandering spleen (14). However, watchful management has been found to lead to torsion and splenic infarction in more than half of the patients (15). Although splenectomy remains an option (16), this should generally be reserved for the infarcted, nonviable spleen (4,14). In our patient the size and location of the pseudocyst made us to decide for an approach for open surgery and, as described in the literature, we decided to preserve the spleen because of its macroscopically normal aspect and especially for the possible consequences of a splenectomy in a young patient. To avoid possible acute complications of wandering spleen, various splenopexy techniques have been described (17, 18) like the direct suturing, the wrapping of the spleen with resorbable mesh (19), the pedicle stabilizing sutures with microfibrillar collagen haemostatic (20) and colonic flexure transposition (11,21). In the described clinical case, it was decided to carry out a colonic flexure transposition, because it seemed to be the more anatomical and less invasive. It should be considered that this type of techniques are not free of complications, but in the absence of infarction, it has replaced splenectomy, particularly in children, in whom preservation of

splenic tissue is of vital importance (8). One year after the surgery, the patient is in excellent physical condition and without any new episode of abdominal pain or postoperative complication.

CONCLUSIONS

In conclusion, the splenic pseudocysts need to be taken into consideration in the differential diagnosis of an abdominal mass. The vulnerability of a wandering spleen predisposes to several complications; the pseudocyst formation is a very rare one. The laparoscopic extirpation of the pseudocyst with splenic preservation is the indicated technique although in certain situations laparotomy remains useful.

Acknowledgements: Not available

Conflict of interest disclosure: Not available

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