

# Splenic cyst: a rare case of massive splenomegaly with thrombocytopenia

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### Introduction

Splenic cysts causing massive splenomegaly is a relatively rare clinical entity; only 800 cases have been reported in the English literature worldwide (1). A large autopsy report reveals an incident rate of 0.07%. Splenic cysts can be either primary or secondary. Most of the splenic cysts are asymptomatic. We present a case of splenic cyst presented with symptomatic massive splenomegaly.

### Case presentation

Our patient is a 21 years old male, presented with abdominal fullness, dyspeptic symptoms and left hypochondrial mass for one year. There was no history of trauma. His appetite was normal. He did not have any significant family illnesses. There was no attributable past medical or surgical history. Examination revealed massive splenomegaly and normal liver. Ultrasound scan showed a large cystic lesion in the left hypochondrium. A contrast-enhanced CT abdomen was done and found to have a large simple splenic cyst (20×16×16cm) with loco regional mass effect. His liver biochemistry was normal. Full blood count revealed mild thrombocytopenia (112×10<sup>9</sup>).

He was initially treated by an ultrasound scan guided aspiration and pigtail tube insertion. The aspirated fluid was clear, straw colour and its biochemical and microbiological analysis were normal. Pigtail tube functioned well with good drainage and the patient showed clinical improvement. But unfortunately, drainage volume was continuously high about 500ml / day for a week. Despite this daily high-volume drainage, A repeat ultrasound scan examination revealed a significant amount of fluid remaining in the splenic cyst. After discussing with radiologist and patient, a decision was made for open splenectomy. He underwent an elective open splenectomy after completing the relevant immunization. Intraoperative findings were massive spleen and its dilated

vessels (Figure.1). He had an uneventful post-operative recovery. Histology confirmed a simple benign cyst with no evidence of parasitic infestations.



**Figure 1.** Massive spleen and its dilated vessels

### Discussion

Splenomegaly has several aetiologies varying from congenital to neoplasms. Massive splenomegaly is defined as spleen having a craniocaudal length greater than 18-20cm or weighing more than 600g (2). A splenic cyst is a rare cause of splenomegaly. Splenic cysts are either type 1 (primary) or type 2 (secondary) (3). Primary cysts can be either parasitic or non-parasitic (epithelial) and parasitic cysts are commoner than non-parasitic cysts (6).

Congenital or epithelial cysts account for 25% of splenic cysts. They are mainly seen in young adults and children. Their pathogenesis is unknown although various theories have been postulated (2). These include involution of pluripotent cells in the splenic parenchyma, leading to squamous metaplasia, entrapment of peritoneal endothelial cells or coelomic mesothelium, and ingrowth of the surface mesothelium or dilatation of normal lymphatics (2). As most cysts are asymptomatic they are found incidentally on imaging for other abdominal pathologies. Symptoms

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correlate with size, larger the cyst more symptomatic it is. Nonspecific symptoms include dyspeptic symptoms and left upper quadrant abdominal pain. Rarely it may present with thrombocytopenia (4).

USS the abdomen is the first line of imaging followed by CT abdomen. CT abdomen is more sensitive than USS in diagnosing septae (more common in type 1 cysts) and calcifications (more common in type 2 cysts). CT scan doesn't differentiate between primary and secondary cysts. Diagnostic certitude is made only by histology.

Small asymptomatic non-parasitic cysts less than 4cm can be managed conservatively. Large, more than 4 cm and symptomatic cysts, especially parasitic cysts should be treated with surgery as they are more prone to haemorrhage, rupture, local regional pressure effects and infection although these complications are rare (1,5). Open total or partial splenectomy is safe and appropriate in many cases with a low level of recurrence (1) Minimally invasive treatments like aspiration and de-roofing carry a high degree of recurrence rate, although these methods are splenic preserving. Hence partial splenectomy is adequate in many cases especially in children as it preserves the spleen with an acceptable level of recurrence. The laparoscopic approach is gaining popularity with similar outcomes compared with an open approach.

All authors disclose no conflict of interest. The study was conducted in accordance with the ethical standards of the relevant institutional or national ethics committee and the Helsinki Declaration of 1975, as revised in 2000.

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#### Learning Points:

- Although complications are rare, the diagnostic confirmation of splenic cyst is made by histological assessment.
- An open or laparoscopic approach is applicable in most cases but splenic preservation approach is advisable.