

Primary Splenic Cyst – A rare Presentation

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Abstract

Introduction: Spleen is an organ of immune function. It is usually a rare viscera for cystic lesions. Most of the lesions of the spleen are benign. Cysts of the spleen are classified into True or Primary cysts and False or Secondary cysts. Most of the cysts are incidental finding on radiology, and are asymptomatic otherwise. Sometimes the cysts may present with pressure symptoms because of the large size. When the size is large, there are chances of rupture of the Cyst presenting with surgical emergency

Materials and methods: We are reporting a case of 35 years old lady who presented with chief complaints of pain upper abdomen for last one month. No other complaints apart from persistent, non-radiating pain. Spleen was palpable below the left costal margin. USG whole abdomen was suggestive of a large cystic lesion in the spleen. Hydatid cyst serology was negative. Since the patient was symptomatic and the cyst was large, it was decided to take up the patient for surgery. Splenectomy was done under general anaesthesia. Post-operative period was uneventful. Histopathology reported it to be an epidermoid cyst.

Discussion: Splenic cysts are rare entities. Most of the times these are silent, congenital splenic cysts are also called epidermoid or epithelial cysts. They are not seen very commonly. Most of the times these are asymptomatic, if symptomatic then surgery is considered. These cysts are mostly lined by squamous epithelium lined. The secondary or the pseudocysts are mostly secondary to trauma. These are not lined by an epithelium. There are many options of managing a splenic cyst – Deroofing, partial splenectomy, total splenectomy and aspiration. While deroofing and partial splenectomy are good options for small cysts, larger cysts need total splenectomy open or laparoscopically. Aspiration doesn't give a good long-term result.

Key words: Primary; Splenic Cyst; Presentation; Immune function;

Introduction

Cystic lesions of spleen are rare, occurring less often than in other abdominal viscera [1] Most of these are benign and are found incidentally on radiologic examination. However it may present with symptoms like left upper abdominal painful mass, extrinsic mass effect on other adjacent organs. Less commonly, it may also present with complications like hemorrhage, rupture or superimposed infection with fever and inflammatory laboratory parameters.

It can be effectively treated by splenectomy [2&3] or by percutaneous fine needle aspiration and drainage in selected cases [4].

Splenic cysts are broadly categorized as-

1. **Primary or True cyst** (epithelium lined)
 - a. Parasitic (hydatid cyst) caused by *echinococcus granulosus*, are rare
 - b. Non parasitic and congenital (epidermoid).
2. **Secondary or False cyst** (non-epithelium lined)

Secondary cyst are more common associated with trauma called as pseudocyst composed of localized area of inflammatory and fibroblastic changes [2,3,5,6&8].

Case Report

A 35-year-old female presented with a history of pain left upper abdomen from last one month. No history of fever, vomiting, constipation or loss of appetite. Hemodynamically stable with a Pulse rate of 80/min and blood pressure of 140/90, Pallor ++. Chest- B/L clear. Per abdomen examination revealed a soft abdomen. Spleen was palpable, 3 fingers below the left costal margin.

Investigations

All presurgical investigations were within normal range except Haemoglobin, which was 7.8 g/dl, probably because of poor nutrition. Total WBC count was 7100. USG whole abdomen was suggestive of large cystic lesion in spleen probably an epidermoid cyst. CECT whole abdomen report- Spleen is large in

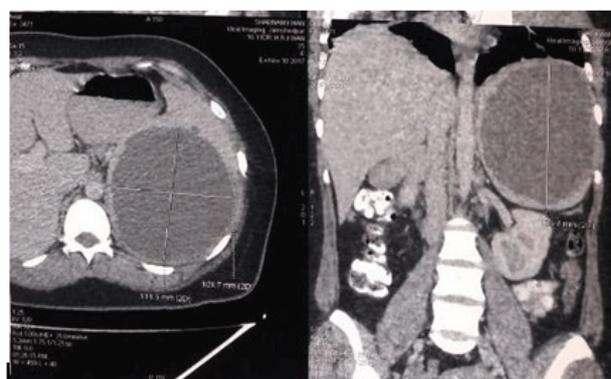


Figure 1: CECT showing measurements and left kidney compression

size. Intrasplenic large thick walled, non enhancing, lesion noted 135 x 111 x 101.7 mm. Volume- 787 cc, lying at high splenic parenchyma (Figure 1). Hydatid serology i.e echinococcus IgG was negative (1.55).

Surgery

Patient was admitted on 14 December 2017 and 2 units of packed cell were transfused. Preoperatively, pneumococcal vaccination was given. After transfusion Hemoglobin was 10.2. Splenectomy was performed under general anesthesia. Care was taken to remove the spleen with cyst as a whole, without any rupture (Figure 2). Haemostasis was secured, drain placed, Postoperative period was uneventful, patient was discharged on post-operative day 3. Histopathology report was positive for Pan-cytokeratin and CK5/6 suggesting surface squamous epithelial lining of the cyst, so a diagnosis of splenic epithelial cyst was given.



Figure 2: Spleen with cyst

Discussion

Cystic changes of the spleen are very rare. Based on the presence or absence of cellular lining of the cystic wall, splenic cysts are classified as primary (true) or secondary (pseudo) cysts [9&10]. Most true splenic cysts are epithelial in origin and have embryonic inclusion of epithelial cells from adjacent structures [11].

Congenital splenic cysts are also called epidermoid or epithelial cysts. They are uncommon, comprising only about 10% of benign non-parasitic cysts. Splenic epithelial cysts occur predominantly in children and young women [12]. The initial symptoms and signs referable to large cysts may include vague abdominal pain and a palpable mass in the left upper quadrant with or without symptoms due to compression of adjacent organs [5]. Histologically, epidermoid cysts have a squamous epithelial lining with intracellular bridges. The cellular lining of congenital cysts is thought to arise from infolding of peritoneal mesothelium following splenic capsule rupture or from mesothelial cells trapped in splenic sulci. The mesothelium undergoes metaplasia to squamous epithelium secondary to chronic irritation. Another postulation is that congenital cysts arise from normal lymph

spaces in the spleen [13].

Post-traumatic cysts are actually false cysts that typically have a smooth, fibrous non cellular lining that can lead to hemorrhage and may calcify. About half of the patients found to have this most common type of splenic cyst recall a significant abdominal trauma. Ultrasonography is able to show that the cysts are either anechoic or hypo-echoic and that they have a smooth thin wall whereas solid tumors are either isoechoic or hypo echoic [14]. Due to the increased risk of complications, splenic cysts with a diameter larger than 4-5cm should be managed surgically because conservative options, such as percutaneous aspiration or sclerosis, do not result in long-term control [15].

These days the optimal treatment options are partial splenectomy, total cystectomy, marsupialization or cyst decapsulation (unroofing), accessed either by open laparotomy or laparoscopy [16]. Partial splenectomy preserves more than 25% of splenic parenchyma, which is the minimal splenic tissue to preserve immunologic protection without increasing the risk of recurrence [17]. However, any type of conservative procedure is difficult to perform, if the cyst is very large, it is located in the splenic hilum or is covered completely by the splenic parenchyma (intrasplenic cyst), or if there are multiple cysts (polycystic cases): in these cases, a complete splenectomy should be performed either using the open or the laparoscopic approach.

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