

# Splenic Pseudocyst: A Diagnostic Challenge

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## Abstract

Ecchinococcal cysts are a common cause of cystic lesions of the spleen in this part of the world and other types of cysts are less commonly seen. Pseudocysts of the spleen are difficult to differentiate from other types of cysts preoperatively. Here we present a case of splenic pseudocyst masquerading as left subdiaphragmatic collection which was diagnosed on laparotomy.

## INTRODUCTION

Cystic swelling of the spleen is an uncommon disease in routine surgical practice. It can be parasitic, most frequently caused by *Ecchinococcus granulosus*, or non-parasitic. Non-parasitic cysts are classified into true cysts (having epithelial lining) and secondary cysts or pseudocysts (without an epithelial lining). Pseudocysts are thought to result from trauma or hemorrhage. Here we present a case of splenic pseudocyst masquerading as subdiaphragmatic collection.

## CASE REPORT

A 35-year-old lady presented with a history of fever, chest pain on the left side, mild dyspeptic symptoms, dull ache and sensation of heaviness in the left hypochondrium for 7 days. Past history was negative for any trauma, malaria or any hematological disorder. Her physical examination revealed tachycardia and tachypnea with fever (102F). There was dullness on percussion and decreased air entry in the left lower lung field. There was tender splenomegaly. Hematological examination reported: Hb 9.8g/dl, TLC 26400/mm<sup>3</sup>, DLC: P 89%, L 9%, E 0% and M 2%. Serological tests for malaria and *Ecchinococcus* were negative. Chest X-ray revealed left pleural effusion. Ultrasound of the abdomen revealed a large left subdiaphragmatic collection of about 750cc displacing the spleen downwards (fig.1).

## Figure 1

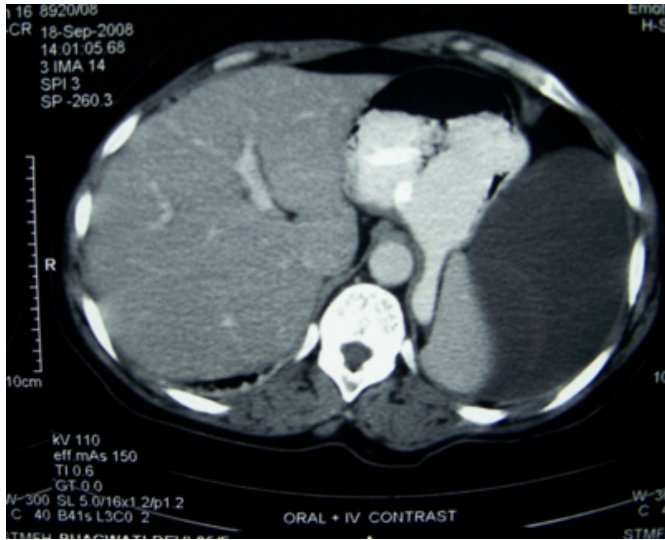
Figure 1: Ultrasound of the abdomen showing a subphrenic collection



Abdominal contrast-enhanced CT scan revealed a well-defined hypodense cystic lesion in the left hypochondrium along the superior surface of the spleen with a thin septum within the cyst causing flattening of spleen and indentation on gastric fundus (fig. 2).

**Figure 2**

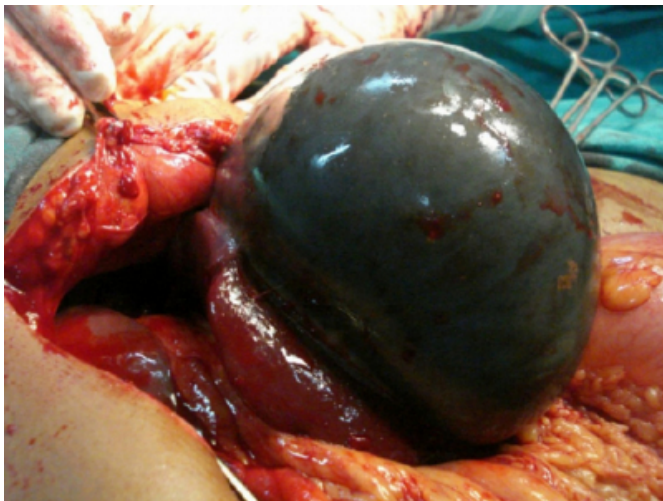
Figure 2: CT scan a showing cystic lesion along the superior surface of the spleen



The patient was put on antibiotics and chest physiotherapy. Exploratory laparotomy was performed with a probable diagnosis of infected hydatid cyst/subphrenic abscess. On laparotomy, there was a huge cyst, more than the size of spleen on its postero-superior surface and the spleen was flattened (fig. 3&4).

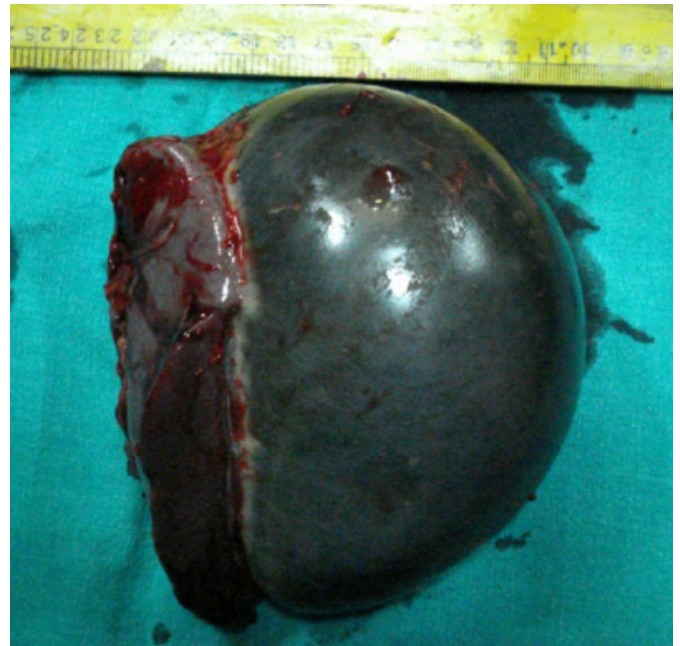
**Figure 3**

Figure 3: Operative photograph showing a huge splenic pseudocyst



**Figure 4**

Figure 4: Specimen after splenectomy



Splenectomy was performed. The cyst contained brownish fluid. The postoperative period was uneventful. Cytological examination of cystic fluid showed lymphocytes, bacteriological culture was negative. Histological examination reported cyst wall composed of dense fibrous tissue without epithelial lining and congestive changes in splenic parenchyma confirming the diagnosis of pseudocyst.

## DISCUSSION

Cystic lesions of the spleen are rarely encountered in everyday surgical practice<sup>12</sup>. Splenic cysts may be parasitic or non-parasitic. According to the presence of surface epithelium the non-parasitic cysts are further classified into true cysts (lined by epithelium) and false cysts (pseudocysts). Pathogenesis of splenic cysts is not well understood; there are many theories which are mainly speculative. Resolution and liquefaction of hematoma of remote or recent trauma is thought to be instrumental in the origin of pseudocysts of the spleen, but these may be infectious or of degenerative origin also<sup>345</sup>.

Hydatid disease is the most common cause of splenic cysts in this country and an infected hydatid cyst is difficult to differentiate from other types of cysts<sup>56</sup>. Non-parasitic cysts of the spleen are often treated as Echinococcal cysts. Most patients with splenic cysts are asymptomatic or have minor non-specific symptoms and non-invasive imaging easily makes the diagnosis where they are incidental findings. Large cysts may cause atypical pain and heaviness in the left

hypochondrium due to capsular distension or they may present as palpable masses. Symptoms secondary to pressure on surrounding organs such as nausea, vomiting, flatulence, diarrhea etc. may gradually appear. Also pressure in the cardio-respiratory system may cause pain or dyspnea and persistent cough. Occasionally, splenic cysts may present with complications such as infection, rupture or hemorrhage<sup>67</sup>. In our case, diagnosis was complicated by the presence of fever, leukocytosis and pleural effusion and radiological findings were not conclusive. The large size of the cyst on the postero-superior surface of the spleen could not be clearly defined on sonography or CT scan. Surgery is primarily recommended for the prevention or treatment of complications of pseudocysts viz. infection, hemorrhage or rupture, which may be life-threatening<sup>345</sup>. Traditionally, splenectomy has been the treatment of choice for splenic pseudocysts for many years but the attitude has become more conservative nowadays because of better understanding of the asplenic state. There are many approaches in conformity with the size of the cyst, the condition of splenic parenchyma and the anatomic proximity of the cyst. Splenectomy, partial splenectomy, aspiration, drainage, marsupialization and laparoscopic procedures have been the surgical options. In our case, the cyst was more than the size of spleen and the parenchyma of the spleen was congested and edematous. Total splenectomy was considered safer to eradicate the symptoms and to prevent the recurrence and potential complications because of the

large size of the cyst and unhealthy splenic parenchyma.

Pseudocysts of significantly large size on the superior surface of the spleen may present as subdiaphragmatic collections and are difficult to diagnose. Therefore, they must be considered in differential diagnosis of splenic enlargement.

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