

## Case study

# A Giant Epidermoid cyst of the Spleen and Mini Review of Literature

### Abstract

Splenic cysts are rare. They may be congenital, neoplastic, vascular, inflammatory and post traumatic in origin and may contribute to 30-40% of the total splenic lesion. Epidermoid cysts are primary congenital cysts that contains an epithelial lining. Epidermoid cyst are congenital cysts contribute approximately 10% of total splenic cysts. They are encountered more commonly in children and young adults. Congenital splenic cysts are usually asymptomatic and they are discovered incidentally on radiography investigation. Splenic epidermoid cysts are true cysts, as they possess inner epithelial lining of stratified squamous epithelium. Splenic epidermoid cysts also known as splenic epithelial cysts or primary splenic cysts are usually unilocular.

We are reporting a rare case of a 18 years old male patient with history of dull aching pain and palpable mass in left hypochondrium on physical examination. CT abdomen showed a large well defined cystic mass in the spleen. On laparotomy, open total splenectomy was performed.

### Keywords

Splenic epidermoid cyst, epithelial cyst, total splenectomy, true splenic cyst

### Introduction

Splenic cysts are rare, and they are commonly found incidentally. Splenic lesions are classified into type I- primary or true cysts with an epithelial lining of squamous epithelial, parasitic or non-parasitic origin, and type II- secondary or false cysts without an epithelial lining. Pseudocysts are usually posttraumatic, or appear as a result of splenic infarction, organised splenic hematoma or splenic abscess or infections. (1, 2)

Primary splenic epidermoid cysts, (SEC) are rare conditions with incidence rate of 0.07% as reported. They are congenital in origin and are true cysts. The primary cyst also called epithelial cyst or epidermoid cyst constitutes 10% of the benign non parasitic cysts. Most of these cases are either symptomatic or present with upper abdominal discomfort or fullness. (2, 3, 5)

### Mini Review of the literature

As per the existing literature, the first cases of SEC were reported in 1929 by Andral. Epidermoid cysts of the spleen are rare, with only 56 cases having been reported as of 1973 by "Blank and Campbell" in the literature. Robbins and associates have reported four cases, so a total of 63 cases are reported in the literature now. (4, 5, 6)

### Case Report

A 18 years old male patient was admitted to our centre on 02/04/2012, with complaints of progressively enlarged mass and pain in left hypocondrium since last few months. There was no history of abdominal trauma or any haematological disorder. Physical examination showed a mass in the left hypocondrium, where a smooth, firm, non-tender mass was palpable. The liver was not enlarged. The laboratory investigations were within normal limits.

CT scan revealed a hypodense cystic mass in the medial aspect of the spleen measuring 15x12x10 cm in size. Explorative laparotomy was scheduled after pneumococcal vaccine given two weeks prior to surgery. On explorative, we discovered a very large cyst of the spleen occupying the hylus of the spleen. We performed a total splenectomy and sent the piece for histopathological examination.

On gross examination of the specimen, there was a large splenic cyst size 15x12x10 cm, and weighing 1000 grams. The cyst was unilocular and contained 750 ml of a yellowish coloured fluid.

The inner surface of the cyst was yellowish brown, smooth and had a glistening surface. Histopathological examination revealed a primary splenic cyst, suggestive of epidermoid cyst having squamous epithelium with a fibro-collagenous cyst wall. The postoperative clinical course of the patient was uneventful and the patient was discharged on the 8<sup>th</sup> post-operative day. On follow up after one-year the patient remained healthy. (Fig. 1-6)

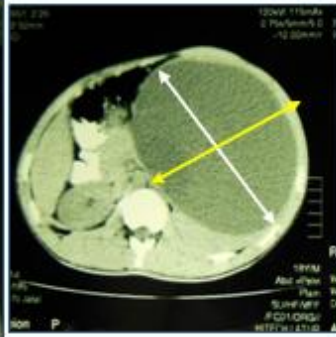
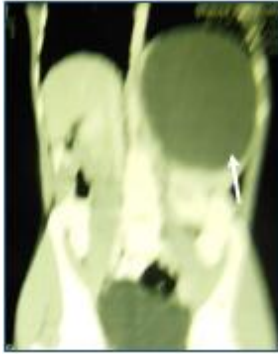


Fig-1 CT Abdomen showing a 15x12x10 cm hypodense cystic lesion in the spleen

Fig-2 Intra operative photographs showing a large splenic cyst in the hylus

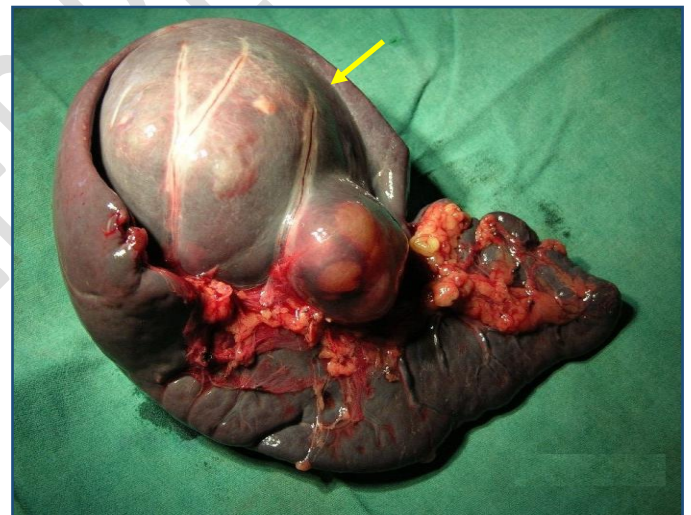
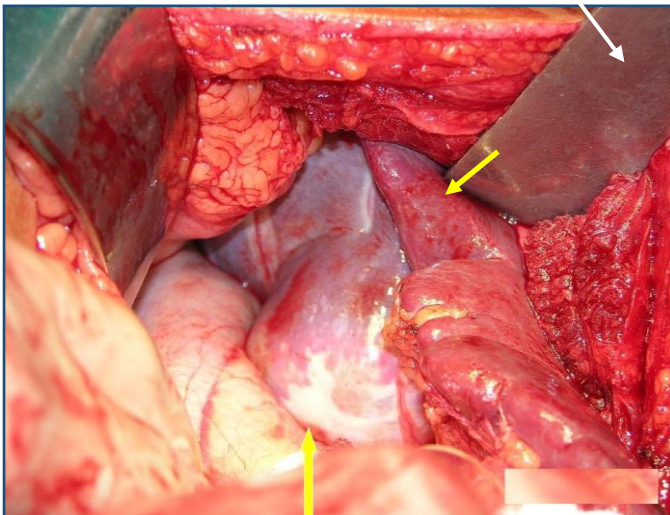


Fig-3 Intra operative photographs showing a large splenic cyst in the hylus

Fig-4 On gross specimen of spleen with A large splenic cyst

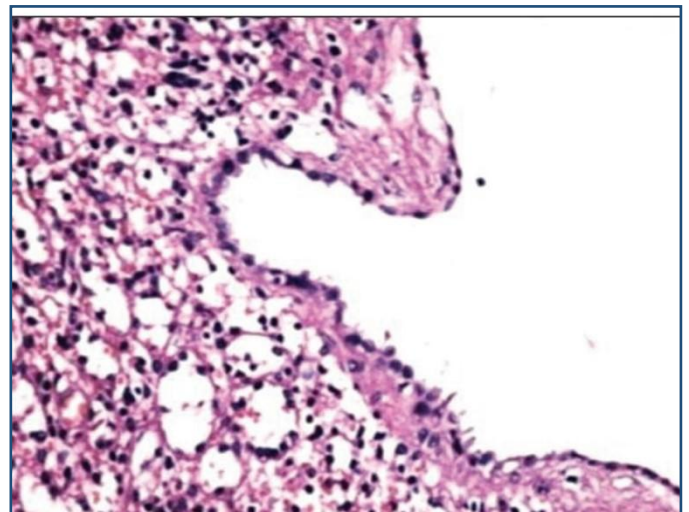
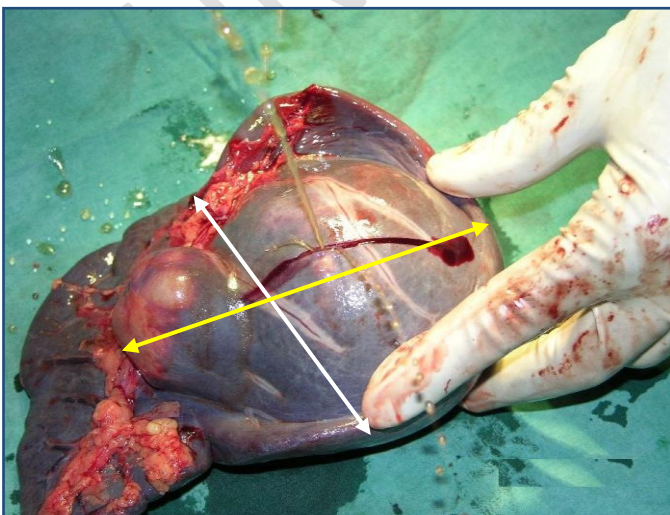


Fig-5 A large epidermoid cyst of the spleen of size 15x12x10 cm

Fig-6 Primary splenic cyst with cuboidal to flattened epithelial lining, 100 x magnifications, hematoxilin- eosin coloration

## Discussion

Primary splenic epidermoid cyst is a rare condition with an incidence rate of 0.07% as reported. Primary splenic cysts are seen mostly in children, adolescent and young adults. Splenic cysts have been classified on the basis of the presence or absence of an epithelial lining, aetiology and pathogenesis. Martin classified splenic cyst as type I – cysts, which are true cyst. Type II- cyst, which miss epithelial lining, and are false or pseudo-cysts. Pseudocyst are usually post-traumatic, organised hematoma beneath the splenic capsule, splenic abscesses or splenic infarctions. A new classification based on the true pathogenesis of cysts describes non-parasitic splenic cysts as congenital, neoplastic, traumatic and degenerative. Parasitic cysts are caused by *Echinococcus granulosus*. The pathogenesis of primary splenic cysts is not clear but many hypotheses were proposed, like: mesothelial invasion theory, lymph space theory and endodermal theory are accepted for the development of primary splenic cysts. (1, 3, 4, 5)

Ultrasonography is a good non-invasive tool for confirming the cystic mass. On ultrasonography cyst appears as a non-echogenic mass with thin or thick wall along with calcification. CT scan revealed a hypodense cystic mass in the spleen, calcification and internal debris can be visualized.

Indication for total splenectomy includes multiple cysts, large splenic cyst larger than 5 cm, the location of cyst in the hylus of the spleen. Laparoscopic total splenectomy can be performed if splenic cysts are small in size. (4, 5)

## Conclusion

Epidermoid cysts of the spleen are extremely rare entities. Total open splenectomy or laparoscopic methods are the gold standard procedures of choice in the splenic tumours or cysts depending on their size.

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