

Case Report: Huge Splenic Epidermoid Cyst

A SARVAIYA, S RANIGA, P VOHRA, A SHARMA, BHRTYAN

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Introduction

Splenic cysts are rare. They may be parasitic, most frequently caused by *Echinococcus granulosus*, or nonparasitic [1]. Nonparasitic cysts are divided into true cysts, which exhibit an epithelial lining and secondary, so-called false cysts or pseudocysts which do not show an epithelial lining and are thought to result from trauma or hemorrhage. Pseudocysts are more frequent than epithelium-lined cysts [1].

We report a case of large splenic epidermoid cyst- a rare type of true non-parasitic splenic cyst.

Case Report

A 26-year-old male presented with history of intermittent, dull, wandering pain in the left costal margin for last 2 years. There was no history of trauma. Physical examination revealed a smooth, firm, nontender mass in the left hypochondriac region.

Ultrasonography revealed splenomegaly with a large intrasplenic anechoic lesion with after enhancement suggestive cystic lesion within the spleen. The wall of the lesion was imperceptible.

CT scan was performed after oral and intravenous contrast administration. Axial non-contrast scans show a large well defined 14x13cm sized water attenuation lesion within spleen. The lesion doesn't show any enhancement on contrast study [FIG. 1a AND 1b]. The lesion was displacing the stomach anteromedially and kidney inferiorly.

Exploratory laparotomy with splenectomy was performed and a large splenic cyst was identified. About 1500 ml of turbid-yellow fluid was drained from the cyst. Microscopically, the sections showed a picture of epidermoid cyst composed of a loosely fibrous wall and an interior lining of single layer of flattened or low-cuboidal epithelium, without skin appendage. The post-operation

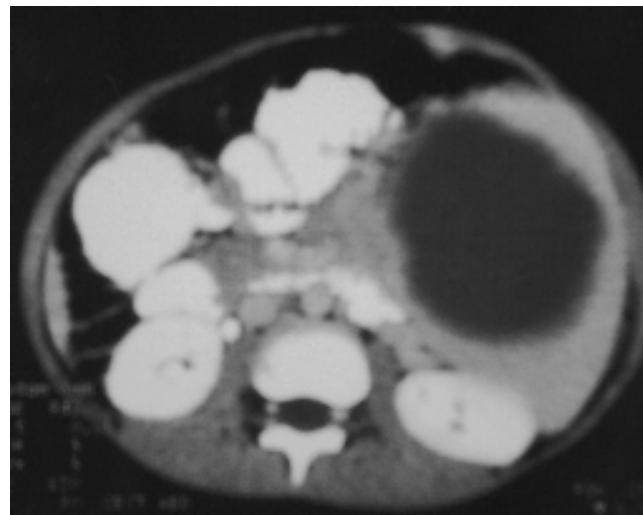
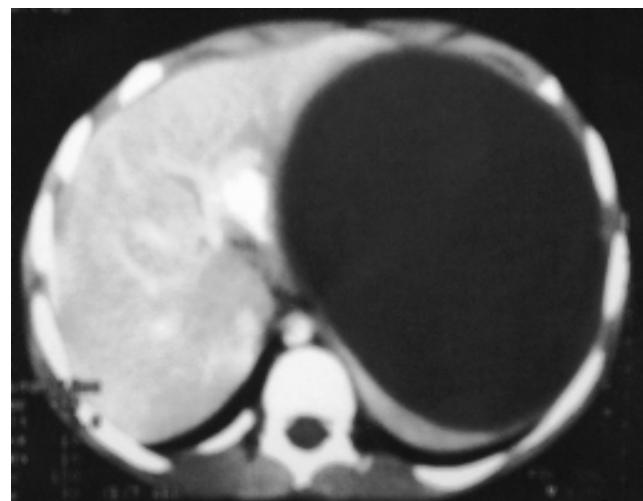


FIG 1a and 1b shows a large non enhancing water attenuation lesion in the spleen.

course was uneventful.

Discussion

True cysts of the spleen are uncommon. Splenic cysts can be divided into two categories: primary or true and secondary or false cysts. Differential diagnoses of splenic

From the S.S.G. Hospital, Medical College Baroda Vadodara Gujarat - 390001

Request for Reprints: Dr. Sameer Raniga 81, Shantinagar, Tarsali Road, Vadodara-390009

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cystic lesion include intrasplenic abscesses, true cystic neoplasms, hydatid cysts, and cystic metastases. True cystic tumors include hemangiomas, lymphangiomas, epidermoid and dermoid cysts [2]. Of these, hemangiomas are the most common and dermoid cysts, the least [2]. True cysts make up approximately 20% of splenic cysts [3]. The epidermoid cyst is the rarest, representing 10% of the benign, nonparasitic cysts [2]. Robbins reported a series of 42,327 autopsies over a 25-year period, which revealed only 32 patients with diagnosis of splenic cyst [4, 5]. Subsequent isolated case reports have appeared in the literature [5]. Splenic epidermoid cysts are "true" cysts as they possess an inner epithelial lining, in contrast to "false" cysts which have no cellular lining, and are usually related to prior trauma. The pseudocyst is thought to result from trauma, hemorrhage or infarction. The relationship of trauma in the pathogenesis of splenic cysts is still unclear [5].

The true origin of epidermoid cysts is not very clear. They may originate from infolding or entrapment of peritoneal mesothelial cells in the splenic parenchyma during embryogenesis. Another explanation can be that they originate from normal lymphatic spaces [6].

They usually are discovered incidentally in childhood or adolescence. Occasionally, they present as a palpable left upper quadrant mass which may cause epigastric fullness or dull pain. Patients with acute abdomen due to cyst rupture and/or infection have been described.

In 80% of cases, lesions are solitary and unilocular. Occasionally internal septations are seen. The wall of those primary cysts may show curvilinear or plaque-like calcifications, although these peripheral calcifications occur more frequently in post-traumatic - false cysts [6, 7].

On Ultrasonography, epidermoid cysts manifest as well-defined, thin-walled anechoic lesions. Wall calcification has been reported in 10% of cases [8]. Septations and cyst wall trabeculation may also be present. Intracystic fluid may have increased echogenicity due to cholesterol crystals, inflammatory debris, or hemorrhage [9].

At CT, epidermoid cysts manifest as rounded, well-demarcated nonenhancing water attenuation lesions. Trabeculations and calcifications may be more clearly depicted at CT [10, 11].

T1-and T2-weighted MRI images show well defined, rounded masses with signal intensity equal to that of water in non-complicated cysts. The signal intensity of those cysts, however, may be altered by high protein content or superimposed hemorrhage. Both of these result in hyperintense signal on T1-weighted images.

According to the stage of hemorrhage and the different blood degradation product content, signal intensity on T1-and T2-weighted images may vary [10, 11].

Splenectomy is the treatment of choice for large

asymptomatic cysts. Other possible procedures include aspiration alone, incision and drainage. However, splenectomy remains a relatively safe procedure, associated with few complications and avoiding any future problems. [4]

Potential complications of huge splenic cyst include rupture with peritonitis, rupture with massive hemorrhage, infection, abscess formation and transdiaphragmatic perforation with pleural effusion or empyema. [2]

Although true and false cysts are usually indistinguishable on imaging studies, false cysts tend to have a thicker fibrous wall, more often eggshell - like wall calcifications and internal debris [5, 6].

CONCLUSION

Radiological examinations, particularly US and CT, can diagnose splenic cysts unquestionably, correctly defining the relationships with adjacent organs. Splenomegaly or a splenic mass of a predominantly cystic nature with no clinical evidence of echinococcus suggests the diagnosis of splenic cyst. Reliable radiological distinction between true or false splenic cyst does not seem possible. CT and US helps in detecting septa or calcifications, which are definitely useful findings to distinguish true from false cysts, since internal septa are more frequent in true cysts while parietal calcifications are typical of pseudocysts. The final diagnosis, however, is made at histology. However, surgery is primarily recommended in both true and false large cysts for the prevention of complications as infection, hemorrhage, and rupture.

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