



## Splenic Epidermoid Cyst during Pregnancy; Case Report and Review of the Literature

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### ► ABSTRACT

Cystic disease of the spleen is not frequently encountered in surgical practice. It is broadly classified as parasitic and non-parasitic, the latter being a rare entity. In this case report, an epidermoid cyst of spleen led to acute abdomen in young age pregnant woman is presented.

A 26-year-old woman with 15 weeks gestational age second pregnancy referred to emergency ward with left upper quadrant pain and tenderness that ultra sonography revealed large cyst (100x110mm) with internal echo in spleen in favor of hydatid cyst or abscess. The patient was managed medically for one week but developed her abdominal pain, epigastric fullness, anorexia and fever. New sonography was done for her and large cyst was detected in spleen (120x110mm). She had severe pain accompanied with anorexia and vomiting. Fetus was normal in sonography. Exploratory laprotomy with splenectomy was performed. Splenomegaly (200x130x90mm) with a cyst without any adhesion and inflammation was detected. Histopathology examination showed epidermoid cyst of spleen. (140x10x90mm). Though splenic epidermoid cyst is an uncommon entity, it should be considered in the differential diagnosis of an abdominal mass in a young individual. An attempt should be made to preserve the spleen provided there is adequate parenchyma otherwise splenectomy is the rule.

**Keywords:** Splenic epidermoid cyst; Pregnancy.

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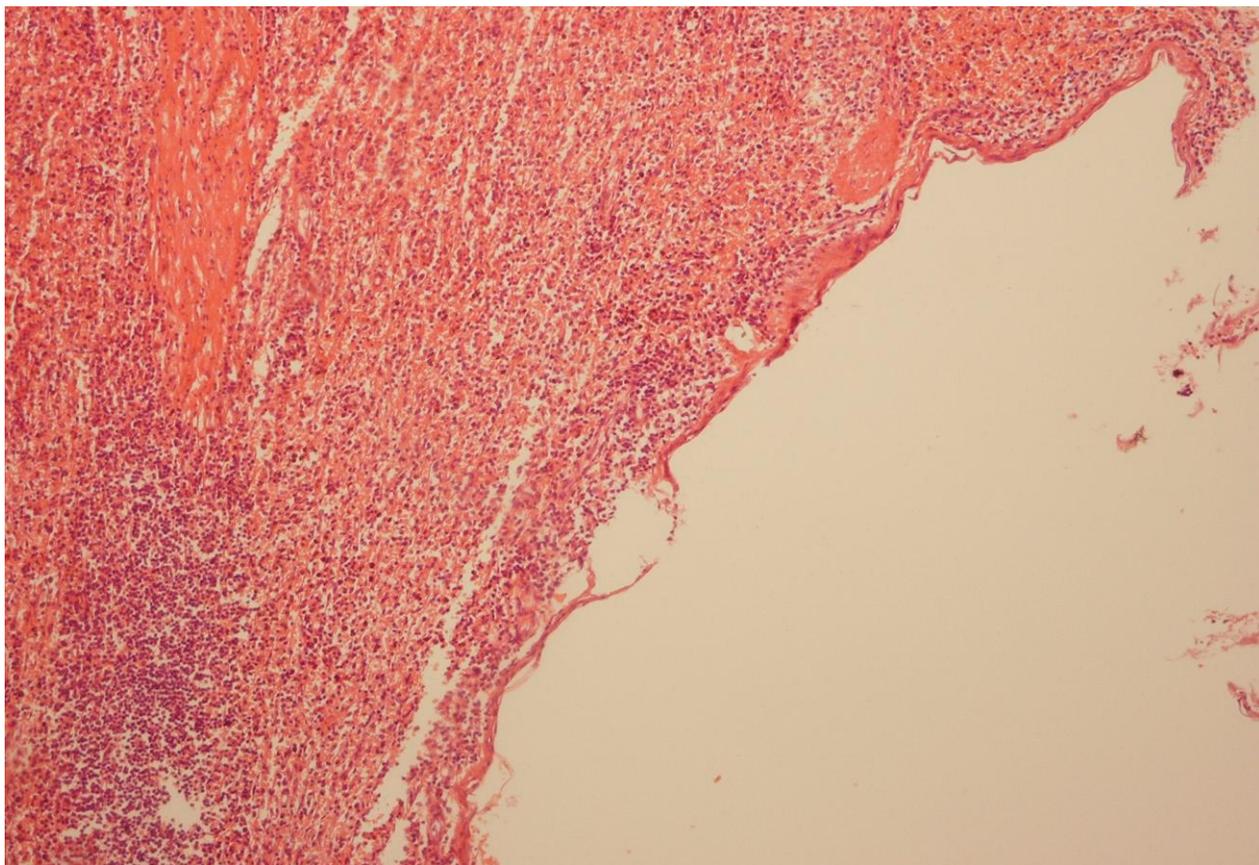
### Introduction

Cystic disease of the spleen is not frequently encountered in surgical practice. It is broadly classified as parasitic and non-parasitic, the latter being a rare entity. Non-parasitic cysts are further classified into pseudo cysts which lack a true epithelial lining wall, and true cysts which are lined by an epithelium. Pseudo cysts are the commonest non parasitic cysts and result from resolution of hematoma following trauma. Epidermoid cyst is a rarity among non-parasitic cysts [1]. In this case report, an epidermoid

cyst of spleen led to acute abdomen in young age pregnant woman is presented.

### Case report

A 26-year-old woman with 15 weeks gestational age second pregnancy referred to emergency ward with left upper quadrant pain and tenderness that ultra sonography revealed large cyst (100x110mm) with internal echo in spleen in favor of hydatid cyst or abscess. She had low grade fever (T: 38.1°C; pulse rate: 120/min), left upper quadrant tenderness without



**Fig. 1.** Splenic cyst with epidermal epithelial lining being detected in a pregnant woman suffering from abdominal pain and tenderness (H&E  $\times 100$ ).

rebound, uterus was palpated above symphysis pubis. The patient was managed medically for one week but developed her abdominal pain, epigastric fullness, anorexia and fever. New sonography was done for her and large cyst was detected in spleen (120x110mm). She had severe pain accompanied with anorexia and vomiting. Fetus was normal in sonography. All investigations were normal except for WBC: 19000 and Hb: 9.3. The patient had not had any problem in her past medical history. Exploratory laprotomy with splenectomy was performed. Splenomegaly (200x130x90mm) with a cyst without any adhesion and inflammation was detected. After splenectomy (7 days) she did not have any problems and her pain, anorexia, fever and fullness were resolved. Histopathology examination showed epidermoid cyst of spleen. (140x10x90mm) (Figure 1).

### Discussion

The true origin of epidermoid cysts is not completely clear. They may originate from infolding or entrapment of peritoneal mesothelial cells in the splenic 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].

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].

Splenectomy is the treatment of choice for large asymptomatic cysts. Splenectomy can be performed open or laparoscopically. 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 cysts 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].

In conclusion, though a splenic epidermoid cyst is an uncommon entity, it should be considered in the differential diagnosis of an abdominal mass in a young individual. An attempt should be made to preserve the spleen provided there is adequate parenchyma; otherwise, splenectomy is the rule.

**Conflict of Interest:** None declared.

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