Epithelial Cyst of the Spleen-A Rare Presentation

Somnath Sharma · Kalpana Sharma · Ayushi Jain

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Abstract Splenic cysts are rare and epithelial cysts are still rarer. Symptoms emerge because of enlargement, infection, hemorrhage, or ruptures. Traditionally, splenectomy was the treatment of choice. However, with the recognition of the important immunological function of the spleen, preservation procedures such as partial splenectomy or total splenectomy with splenorrhaphy have been increasingly used during the past decade. We report a case of a 23-year-old woman presented with left hypochondrial pain and feeling of lump.

Keywords Epithelial cyst · Splenectomy

Introduction

Cystic lesions of the spleen are rare and classified as either true or false (pseudocyst) based on the presence of an epithelial lining. These are usually asymptomatic and diagnosed during abdominal imaging tests. True incidence of splenic cysts is unknown and as yet there is no definitive management. Due to the spleen's important immunological function against encapsulated bacteria, splenic-preserving surgery (open and minimally invasive) is preferred.

Case Report

A 23-year-old woman presented to us with left hypochondrial (HQ) pain and feeling of lump for 4 months. On examination, we found a cystic swelling arising from left HQ pain, which was moving with respiration. Remaining physical and hematological examinations were unremarkable. The patient denied any history of abdominal trauma or parasitic disease.

Computed tomography with oral and IV contrast revealed a large cystic lesion of approximately 6 cm × cm 7 × 6 cm along the tail of pancreas, seen abutting the spleen with a possibility of splenic hilar cyst or pancreatic cyst. There was no septation and its contents appeared to be homogenous.

Because of the confusion in origin, exploratory laparotomy was planned. On exploration, we found a large splenic cyst measuring 8 cm × 8 cm arising from the lower pole of the spleen with clear fluid. Total cyst removal with splenorrhaphy was done.

Cyst attached to lower pole of spleen

Cyst containing clear fluid

S. Sharma (✉) · K. Sharma · A. Jain
Department of Surgery and Pathology, S.M.S. Medical College,
16, Mahar House, Gangapole Road, Jorawar Singh Gate,
Jaipur, India
e-mail: soms.sms@gmail.com

Postoperative period was uneventful and the patient was discharged on postoperative day 3. On histopathological examination, we found that the cyst had a thin wall with a few thick areas. Internal surface was smooth. Sections showed a cyst lined with flattened epithelium, suggestive of a simple benign epithelial cyst with no evidence of parasites.

H & E x 400 flattened epithelium
with underlying splenic tissue

H & E x 100 cyst wall with
underlying splenic tissue

Immunohistochemically, epithelial cells were positive for epithelial membrane antigen (EMA) and negative for carcino embryonic antigen (CEA).

Epithelial lining positive with EMA

Epithelial lining negative with CEA

Discussion

Cystic swelling of the spleen is an uncommon disease in surgical practice. It can be either parasitic due to hydatid disease or nonparasitic which may be primary or secondary. The primary cyst, also called “epithelial cyst” in British literature [1–3] and “epidermoid cyst” in American literature [4–6], constitutes 10 % of benign nonparasitic variety. The hydatid cyst forms 58 % of all secondary cysts.

Epidermoid cysts occur during the second to fourth decades of life as unilocular and solitary masses with disperse calcification in 10 % cases [7, 8].

Splenic cysts are usually asymptomatic. When greater than 8 cm, a palpable abdominal mass is associated with vague abdominal pain and left upper quadrant discomfort in their usual presentation. Besides, life-threatening complications such as rupture intracystic hemorrhage, abscess formation, and portal hypertension may be first presenting symptoms in some cases [9].

Two theories have been proposed to explain etiology of splenic epidermoid cysts. The first suggests that a cyst results

from invagination of the capsular surface mesothelium [10, 11], and other states that it is an embryonic inclusion of epithelial cells from adjacent structure with subsequent squamous metaplasia [10, 12]. Presence of tumor marker EMA and CEA on the epithelial lining of epidermoid cysts has recently been reported [13, 14]. On our specimen, positivity for anti-EMA and negativity for anti-CEA was revealed.

Surgical treatment for splenic cysts is indicated when symptomatic or large than 5 cm, as spontaneous resolution is less likely [12, 15, 16]. Treatment goals include elimination of cysts and prevention of recurrence. Until recently, splenectomy was considered as treatment of choice for large splenic cysts. Recognition of postsplenectomy sepsis as a significant complication leads to splenic preservation when feasible. Preservation of at least 25 % splenic mass offers protection against pneumococcal bacteremia. Recently, multiple minimal invasive techniques preserving the spleen, such as partial splenectomy with omental packing and total cystectomy with splenorrhaphy, have been reported [9, 17].

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