



CASE REPORT ON SPLENIC CYST- A SURGICAL ARCANE!

General Surgery

Dr. S.P. Gayathre M.S, Institute of General Surgery, Madras Medical College, Chennai

Dr. P. Kalaiselvi M.S, Institute of General Surgery, Madras Medical College, Chennai

Dr. K. Silambuselvi Institute of General Surgery, Madras Medical College, Chennai

ABSTRACT

Splenic cyst is a rare clinical presentation with an incidence of 0.07% in general population and are mostly asymptomatic. According to the presence or absence of cellular epithelial lining, these cysts are classified into primary and secondary cysts. A splenic cyst (ICD-10 code D73.4) is considered rare because it does not always manifest itself, and it is not so easy to find it in the spleen covered with the peritoneum. Often a cyst of this localization is detected during an examination of the abdominal cavity for a completely different reason.[1] We Report a case of Symptomatic Splenic cyst which was successfully intervened surgically.

KEYWORDS

Splenic cyst, Pseudocyst, conservative management, Splenectomy

INTRODUCTION

Splenic cyst can be Primary (true) and secondary (pseudocyst) based on the presence or absence of cellular epithelial lining. True cysts contain cellular epithelial lining and subdivided into parasitic and non-parasitic cysts. Statistically, nonparasitic cysts account for less than one third of all splenic cysts, and the majority (almost two thirds) are pseudocysts secondary to trauma. Only 10% of all nonparasitic spleen cysts are primary (congenital) cysts, which are most common in children and adolescents and *rarely manifest clinically*. [2]. Larger cysts, intra cystic hemorrhage or rupture presents with symptoms. Treatment consists of conservative, complete or partial splenectomy. Decisions about the exact surgical procedure (i.e., open vs. laparoscopic surgery and sparing of the splenic parenchyma vs complete splenectomy) are based on the size of the cyst, its relation to the splenic hilar vessels & parenchyma and the amount of healthy splenic tissue remaining. [3]

Case Report

A 57 years old male presented to our OPD with chief complaints of Upper abdomen pain, dull aching more in the left hypochondrium and epigastric region for past 1 month, pain in the suprapubic region for the past 8 days and dysuria for the past 5 days. He had over the counter medications for pain in the epigastric region. He is a known diabetic for 10 years and was on irregular medications. He had history of ray amputation of right 3rd – 5th toe with wound debridement for right foot diabetic foot ulcer before 20 days. He is a known alcoholic and smoker for the past 30 years.

Clinically, per abdomen examination revealed tenderness in the left hypochondrium and suprapubic region and there was mild splenomegaly. Routine investigations done showed leucocytosis and normocytic normochromic anaemia, CEA done was within normal limits. Serology to rule out parasitic pathology was done was found to be negative. USG abdomen and pelvis revealed a loculated collection in the left subdiaphragmatic area. We proceeded with CECT abdomen and pelvis which demonstrated a collection of size 7.1*4.2*3.4cm with peripheral rim of calcification in the subcapsular region of the spleen abutting diaphragm superiorly - *Splenic subcapsular collection*. Diagnosis of ? *splenic abscess* was made.

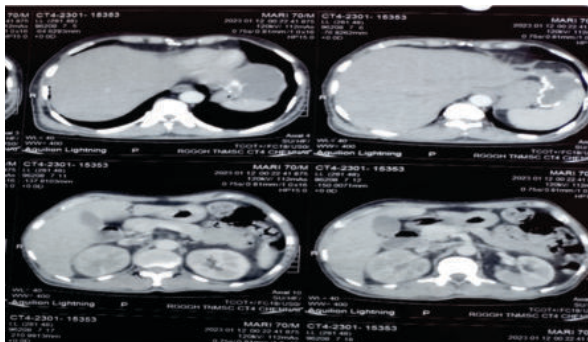


Figure 1 CECT Abdomen and pelvis showing splenic subcapsular collection of size 7.1*4.2*3.4 cm.

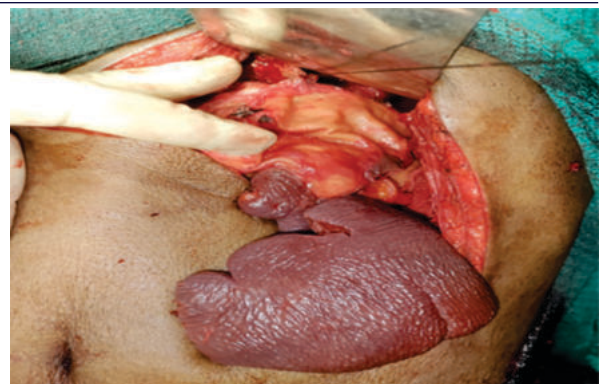


Figure 2 Intraoperative picture showing splenic cyst in the upper pole with dense adhesions along the gastrosplenic ligament

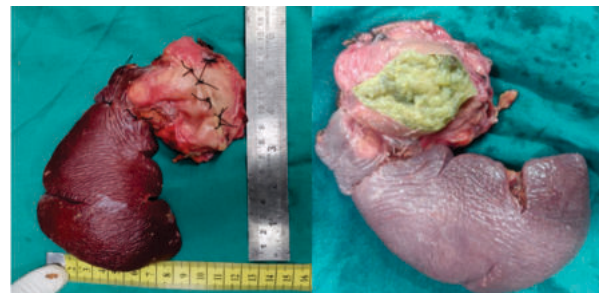


Figure 3 Splenic cyst in the upper pole of size 8.5*6cms with yellow gelatinous material. Spleen was enlarged- 14 cm. Adherence was seen more along the gastrosplenic ligament.

Patient was started on Intravenous antibiotics. After Blood transfusion and with adequate glycemic control, patient was taken up for open splenectomy and postoperatively pneumococcal and meningococcal vaccinations were given. Patient's general condition improved and was discharged on 10th postoperative day after suture removal. Histopathological examination had a thick walled cyst without lining epithelium, containing eosinophilic proteinaceous material – pseudocyst. Cyst wall is fibro collagenous with scattered lymphoid aggregates, blood vessels, focal calcification and Pathological diagnosis of *Pseudocyst of spleen* was made.

DISCUSSION

Splenic cysts are rare lesions. They are mainly divided into primary or genuine cysts and secondary or false cysts according to their etiology and pathophysiology. Primary cysts have a cellular lining that can be caused by either congenital events or parasitic infestations (Echinococcus). Secondary cysts have no cellular lining and may be of hemorrhagic, serous, inflammatory, or degenerative origin. It is important for surgeons to assess each individual case and decide on the

most suitable treatment, taking into account the features of the cyst, the time of onset, and the age of the patient, to avoid possible complications.[4]

True splenic cysts are rare. **The most common cause of a splenic cyst is trauma**, followed by hydatid disease. Other cystic lesions, such as lymphangiomas and hamartomas, are rare. Epidermoid cysts (also known as mesothelial or true cysts) are congenital and constitute approximately 10% to 20% of nonparasitic splenic cysts. It has been suggested that lesions that have previously been classified as post-traumatic pseudocysts may represent epidermoid cysts with a denuded epithelial lining. A trabeculated appearance of the inner cyst wall at gross inspection is characteristic.[5]

In our case scenario preoperative suspicion of splenic abscess was made, intraoperatively and specimen had gelatinous material and pathological diagnosis of **pseudocyst of spleen** was made. Pus culture showed no growth. Splenic pseudocysts, also known as false or secondary cysts, are devoid of epithelial lining and often post-traumatic in origin. Clinical evaluation of the patient with pseudocyst often reveals history of trauma to the left upper quadrant unlike our case scenario. It is believed that the pseudocysts are the most common non-parasitic splenic cysts [7]. Following splenic trauma, a subcapsular or intraparenchymal haematoma may form which with subsequent organization, liquefaction, resorption and encapsulation may transform into a pseudocyst.

Studies shows that most splenic abscess are asymptomatic [6]. *Larger cysts, intra cystic hemorrhage, Intrapertitoneal ruptured, secondarily infected cyst* presents with pain the left hypochondrium. Other causes includes Intrasplenic pancreatic pseudocysts, Subcapsular or intraparenchymal splenic hematomas, acute or chronic pancreatitis, Spontaneous subcapsular hematomas associated with infectious mononucleosis, cytomegalovirus infection, cocaine use, colonoscopy. In our case scenario cause could be, ignored episode of trauma (common cause) or an alcoholic pancreatic pseudocyst which might have migrated into splenic parenchyma presenting as pseudocyst of spleen. *The cyst was larger in size more than 5cm* and patient presented to us with abdomen pain. Investigations like CEA done were within normal limits which ruled out primary splenic cyst. ***Raised CEA and CA 19-9 levels has been associated with true splenic cyst.*** Case series and reports has proved its relationship with splenic cyst pre and postoperatively. We should not exclude a higher degenerative potential of cystic epithelium that produces de-differentiation proteins. The lowering of the serum levels of the two markers after the cyst removal is witness of the direct relationship between the increment of the serum tumor markers and the presence of the epidermoid cyst [8].

Management in splenic cyst warrants splenectomy in most cases. The rarity of nonparasitic splenic cysts has limited the definition of clear criteria for their treatment. However, a recent review by Hansen and Moller was the first that adequately organized and suggested the appropriate options for the treatment of this clinical entity.[9]

Although there is no evidence-based cut-off limit for the selection of treatment, it is well known that asymptomatic nonparasitic splenic cysts <5cm in diameter must be managed conservatively. Cysts >5cm must be treated surgically because of the increased risk of complications, such as rupture and infection followed by hemoperitoneum, chemical peritonitis, or abscess formation. Especially in the case of posttraumatic splenic cysts, according to Balzan et al, cysts should be managed surgically when complications develop or when their diameter is >4cm. At that size, complications are more likely to occur.[10][14]

Different types of operative management of nonparasitic splenic cysts are available, including percutaneous drainage, Open or laparoscopic [14] complete splenectomy, partial splenectomy, marsupialization of the cyst[15], and partial cystectomy (fenestration, unroofing, deroofting)[11]. Our patient was managed by surgical intervention since the size of the cyst was more than 5cm and since the patient was symptomatic. Splenectomy is the appropriate management for larger, symptomatic non-parasitic cyst[12][13].

CONCLUSION

Cysts and tumors of the spleen are rare and are often discovered fortuitously. They are most often asymptomatic but may present with abdominal pain in the left upper quadrant. Splenic cysts are far more

common than solid lesions; true cysts must be differentiated from pseudocysts of the pancreas and from cystic degeneration following splenic contusion or infarction. *Open splenectomy* whether total or partial is effective and safe in our limited experience. Surgical management is the mainstay of treatment for symptomatic and parasitic splenic cysts instead of a follow-up with medical treatment. Surgeon should be aware of the rare presentations of splenic cyst which can aid in early identification and intervention thus reducing the morbidity and mortality. This case has been presented because of its rarity.

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