



Large Splenic Cyst in a 28-Year-Old Nigerian Female: A Case Report

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Abstract

True splenic cysts are rare, with only a handful of cases available in the English literature. We report a case of a true splenic cyst in a 28-year-old Nigerian female who presented with left upper abdominal pain and fullness. This was confirmed using ultrasound diagnosis and managed with splenectomy, pneumococcal vaccine, and prophylactic oral penicillin treatment. Histological diagnosis revealed a benign splenic cyst. This highlights the need to consider splenic cysts in the differential diagnosis of left upper abdominal pain and the need for further research on the management of patients with such rare disease entities.

Keywords: Splenic Cyst, Splenomegaly, Nigerian

INTRODUCTION

The spleen is part of the reticuloendothelial system and the largest unit of the mononuclear phagocyte system, primarily functioning as a filter for blood and in immunological response to blood-borne antigens. Splenic pathologies range from benign causes such as traumatic rupture, cysts, chronic venous congestions, and inflammatory disorders; to malignant disorders such as haemopoietic neoplasms and metastatic diseases.¹ Splenic cysts can either be neoplastic or non-neoplastic.¹⁻³ Non-neoplastic splenic cysts can either be post-traumatic, inflammatory, congenital and vascular.¹⁻³ Understanding the pathogenesis and clinical presentation is important in diagnosing and optimally managing these cases. This paper reports a case of a splenic cyst in a 28-year-old Nigerian female.

CASE REPORT

A 28-year-old female was admitted to the surgical department with complaints of left upper abdominal quadrant pain and abdominal fullness of 10 months duration. There was no history of fever and no history of trauma to the abdomen. Physical examination revealed a 10 cm mass in the left upper abdomen. The mass was smooth and moderately tender on palpation. Chest X-ray showed slight upward displacement of the left hemidiaphragm. Abdominal ultrasound showed a giant solitary cyst within the spleen. A diagnosis of splenic cyst was made, and the patient underwent explorative

laparotomy during which splenectomy was performed. Post-operative recovery was uneventful. Gross evaluation showed a solitary splenic cyst of 8 cm diameter, filled with thick gelatinous fluid. The photographs of the splenectomy specimen is shown below. Histological evaluation showed a benign cyst lined by bland epithelium, which was continuous with normal splenic structure. The photomicrograph is attached below. The patient received pneumococcal vaccine and was placed on oral penicillin for 6 months.



Figure 1: Photograph showing the splenectomy specimen.



Figure 2: Photograph showing the cut section of the splenectomy specimen.

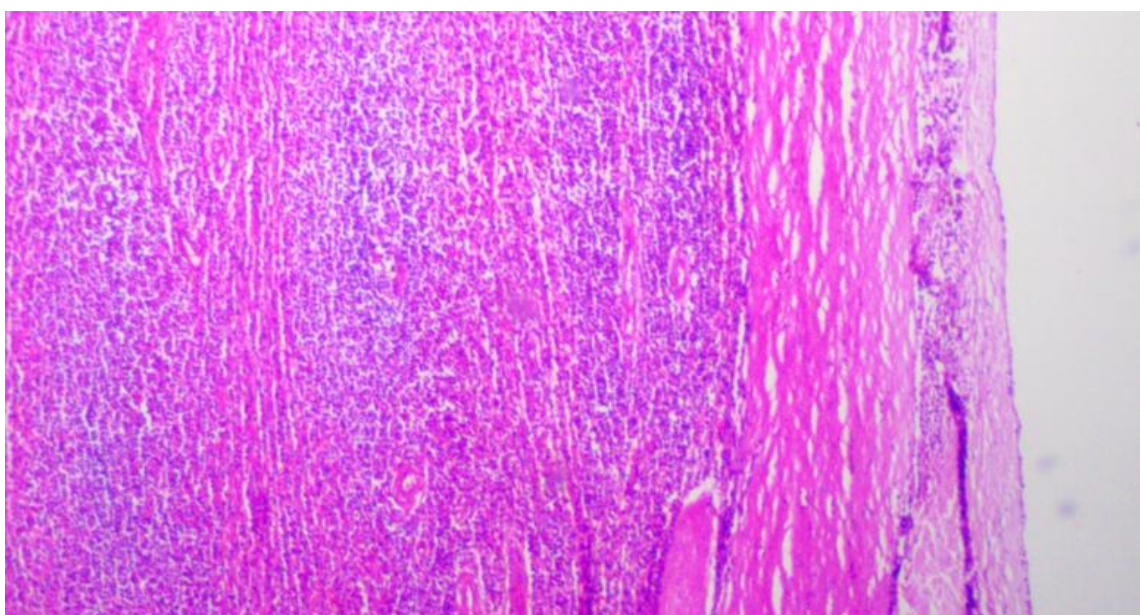


Figure 3: Photomicrograph of the splenic cyst wall.

DISCUSSION

Understanding the aetiology of splenic cysts is important in developing effective management and improving patient outcomes. Non-neoplastic cysts can arise in the background of multiple aetiologies, including congenital factors such as remnants of embryonic epithelial tissue, inflammatory (usually from parasites), congenital (example epidermoid cysts), vascular (post-infarction) and pseudocysts (usually post-traumatic).¹⁻⁵ Early ways of categorizing this disorder depended on whether there was a lining of epithelial cells or not, which suggested it was either something people were born with or caused by an injury respectively.^{6,7} This method of classifying splenic cyst has caused misunderstanding and incorrect reports because just looking at the lining isn't a good way to judge.^{6,7} The signs and symptoms of splenic cysts vary depending on the aetiology, size, and location of the cyst.^{2,8,9} Over time, cysts grow in size due to accumulation of fluid, cellular debris, or other factors, resulting in progressive enlargement. Pain arises as a result of compression of surrounding tissues. Compression of the

gastrointestinal tract and respiratory system results in related symptoms such as vomiting, diarrhoea, or changes in bowel habits, and shortness of breathe and cough, respectively.¹⁰ Differential diagnosis of splenic cysts includes congenital or acquired true cysts, typically lined by epithelium; pseudocysts, which typically lack epithelial lining and arise in the background of trauma, infarction, or infection; parasitic cysts, typically due to echinococcus; benign neoplastic cysts, such as those seen in lymphangioma or haemangioma; and infectious cysts arising as a result of bacterial, parasitic, or fungal infection.^{3,11,12} A thorough diagnostic approach, including history taking, physical examination, imaging, serology, and histopathological evaluation, is important in ensuring accurate diagnosis. Abdominal ultrasound is helpful in determining the size, location, and characteristics of the cyst. Computed Tomography (CT) scan further establishes the relationship of the cyst with other organs, in addition to size and location. Magnetic Resonance Imaging (MRI) differentiates the types of cysts based on signal intensity and enhancement pattern.^{10,11} Serology helps exclude echinococcal

infections or other causes. Fine-needle aspiration may help exclude infectious or neoplastic cysts and provide fluid for further analysis, such as identification of mucin and epithelial cells. Histopathological evaluation remains the gold standard, although such diagnosis may follow removal of the mass, as seen in this case.^{2,12} Management of true splenic cysts depends on the size and presence of complications such as rupture and ranges from watchful waiting, cyst aspiration, marsupialization and splenectomy (complete or partial).¹² Total splenectomy has been the mainstay of treatment for large non-parasitic splenic cysts.^{7,13} Follow-up is important after splenectomy, particularly due to the risk of infections, especially with encapsulated organisms. In the index case, pneumococcal vaccine and prophylactic penicillin antibiotics for 6 months were administered.¹² This is because they are at risk for the development of infections caused by encapsulated bacteria such as *Haemophilus*, *Pneumococcus* and *Meningococcus organisms*.¹⁴ The risk of thromboembolism phenomena such as deep vein thrombophlebitis, pulmonary embolism and portal vein thrombosis are also increased in these patients because of elevated platelet count, necessitating the use of prophylactic anticoagulants.¹⁴⁻¹⁶ The recommended one is low molecular weight heparin.¹⁴

CONCLUSION

Splenic cysts is a cause of splenomegaly and prompt diagnosis is required to identify the cause of the cyst and guide management and improve patient outcome.

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