



E-mail :info@kistmcth.edu.np | www.kistmcth.edu.np

Journal of KIST Medical College

Splenic Cyst: A Rare Entity

Aditya Prakash Yadav¹, Binod Kumar Rai¹, Gautam Gupta¹, Brijesh Shrestha²

¹Department of Surgery, National Medical College and Teaching Hospital Birgunj, Nepal.

² Department of Pathology, National Medical College and Teaching Hospital , Birgunj, Nepal

ABSTRACT

Splenic cysts are rare and generally classified as primary or secondary. A 13-year old male patient with swelling in left upper abdomen. A large exophytic splenic cyst was diagnosed after thorough examination and investigation. Pre operative immunization was given and a total splenectomy was carried out.

Keywords: Splenic cyst; Exophytic; Splenectomy

Citation: Yadav AP, Rai BK, Gupta G, Shrestha B. Splenic .Cyst: A Rare Entity. JKISTMC 2021.3(1)5:36-38

INTRODUCTION

Splenic cysts are rare and generally occur in the second and third decades of life, although it has been found in all age groups including infants . They are generally classified as primary or secondary . Most of them are asymptomatic but may present with abdominal mass which is seen in 30% to 45% of cases. When the cyst is larger than 6 to 8 cm they have nonspecific abdominal symptoms like pain, nausea, or a palpable mass usually in the left upper quadrant.

Signs may arise from the compression on adjacent structures by an enlarged cyst . Sudden onset of abdominal pain and peritoneal signs caused by rupture may occur in previously asymptomatic patients, as the risk of rupture is 25% in cysts larger than 5 cm.¹ It can be associated with many abnormal conditions including : post -traumatic pseudocysts , cyst , splenosis , hydatid , congenital epidermoid , mesothelial cyst , haemangioma , lymphangioma , polycystic kidney disease, and cystic metastasis to the spleen

Correspondence

Aditya Prakash Yadav,
Department of Surgery,
National Medical College and Teaching Hospital, Birgunj, Nepal.
Email: dradityayadav1@gmail.com

Article info

Received: 26 Nov2020
Accepted: 10 Dec2020
Published: 31Jan 2021

Copyright

JKISTMC applies the Creative Commons Attribution- Non Commercial 4.0 International License (CC BY) to all works we publish. Under the CC BY license, authors retain ownership of the copyright for their article, but authors allow anyone to download, reuse, reprint, distribute, and/or copy articles in JKISTMC, so long as the original authors and source are cited.



CASE REPORT

A 13-year old male patient presented to the Department of Surgery of National Medical College and Teaching Hospital with history of swelling over left upper quadrant since 5 months. The swelling was first noted by the mother which was the size of tennis ball. It gradually increased over time and was painless. The patient didn't have other abdominal symptoms or respiratory distress.

On examination a large swelling which moved with respiration, was noticed in the left upper quadrant. The swelling was firm and non-tender. Ultrasonography of the abdomen revealed a well-defined round to oval-shaped, thin-walled hypoechoic lesion with moderate to low level internal echo measuring 14.5 x 11.3 x 12.5 cm (vol 1080.44 cm³) in left hypochondrium, compressing the stomach medially, spleen posteriorly laterally and tail of pancreas inferiorly. CECT abdomen showed well-defined exophytic thin-walled homogeneous hypodense lesion (HU 23) measuring 14.4 x 11.3 x 15.4 cm (vol 125 cm³) surrounded by the splenic parenchyma showing claw sign likely representing splenic origin. Lesion showed mass effect as evidenced by the displacement of left kidney postero-inferiorly on ipsilateral side, stomach across the midline to contralateral side in subhepatic region body and tail of pancreas postero-inferiorly and bowel loops inferiorly. There is no evidence of calcifications, internal septations or solid component within the lesion. On post-contrast study; aforementioned lesion does not show any enhancement (Figure 1).

Open splenectomy was planned. Pre-operative vaccination was completed two weeks before the planned splenectomy. At surgery, a huge cyst involving whole of the spleen, and occupying almost all of the left upper abdominal cavity was seen. The cyst was loosely adherent to the left hemidiaphragm and left lobe of the liver. The cyst was pushing the stomach medially across the midline in the subhepatic region and bowel loops inferiorly. A total splenectomy was carried out. The cyst weighed 1.5 kg and measured 18 x 15 x 10 cm (Figure 2). The post-operative period was uneventful. The child was orally fed on 2nd post-operative day (POD) and the drain was removed on 3rd POD. The child was discharged on the 5th POD. The patient was doing well on his follow-up visit.

Histopathology report showed a large uni-locular cyst of 21 x 16 x 15 cm with pus-like viscous fluid with thick trabeculated fibrous bands. Microscopy revealed cyst wall lined by flattened cuboidal mesothelium-like epithelium. There was no evidence of malignancy so a final diagnosis of primary splenic epithelial cyst was established (Figure 3).

DISCUSSION

Splenic cyst is a rare condition with incidence of 0.07%.

Exact etiology is not known but there are different theories and one of which is that they are formed from the mesothelium layer of spleen surface during its growth. Cysts are classified as primary and secondary. Primary cysts have epithelial lining and can be parasitic and non-parasitic. Primary parasitic splenic cysts result from retention of *Echinococcus granulosus* usually result in uniloculated cyst - composed of inner germinal layer (endocyst) and outer laminated layer (ectocyst) surrounded by fibrous capsule. These are filled with fluid with pressure and contain daughter cysts and infective scolices. USG, CT and MRI study demonstrate cysts that are separated and contain daughter cyst.⁷

Non-parasitic primary cysts include simple cysts, epidermoid cysts and dermoid cysts and they are lined by mesothelial, transitional or epidermoidal epithelium. These cysts are usually round and unilocular and very large filled with yellow or brown turbid fluid. Epidermal cyst of spleen usually occurs in children and 75% of cases occur in adults.⁷ A large-sized splenic cyst can be detected on physical examination. USG and CT is useful to estimate the size and relation between adjacent sites.⁶ Secondary cysts usually result from traumatic intraparenchymal hematoma. These are unilocular and cystic wall is dense and smooth. According to different literature, cysts of size <5 cm are simple, asymptomatic and radiological approach is safe. Whoever has large cyst >5 cm and are symptomatic, surgical intervention has been recommended. Total splenectomy is conventional approach to splenic cyst. Overwhelming postsplenectomy syndrome (OPSS) is a serious complication after total splenectomy. But today spleen-conserving surgery is done to avoid serious postoperative infection. Various surgical procedures are described in literature either with laparotomy or laparoscopy.

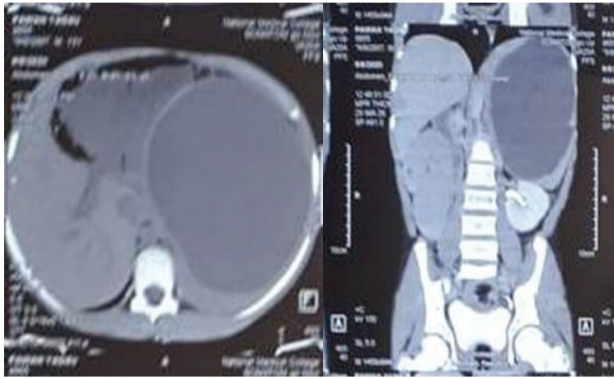


Figure 1. Abdominal CT scan shows a large splenic cyst. Axial view and Coronal view

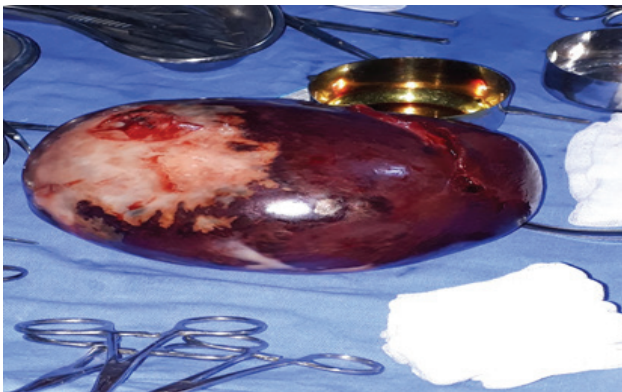


Figure 2 Surgical Specimen of Splenic cyst.

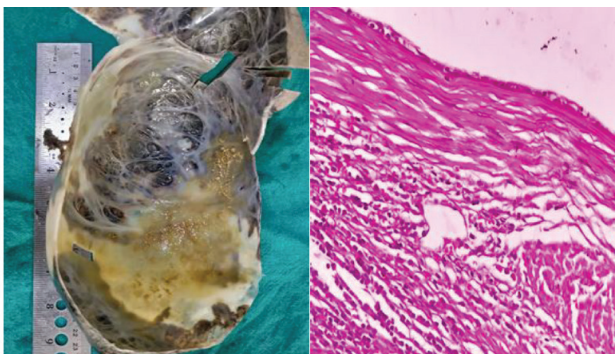


Figure 3 .Gross Specimen of splenic cyst and Microscopic examination shows stratified squamous epithelial cells lining the cyst

REFERENCES

1. David T.Pointer Jr., Douglas P. Slakey, in Shackelford's Surgery of the Alimentary Tract, 2 Volume Set (Eighth Edition), 2019
2. Vo QD, Monnard E, Hoogewoud HM. Epidermoid cyst of the spleen . Case Reports . 2013 May 9; 2013:bcr2013009707.
3. Hansen MB, Moller AC. Splenic cysts. Surg Laparosc Endosc Percutan Tech 2004;14:316-22.[PMID: 15599294]
4. Warshauer DM, Hall HL. Solitary splenic lesions. Semin Ultrasound CT MR 2006;27:370-88.
5. Thipphavong S, Duigenan S, Schindera ST, Gee MS, Philips S. Nonneoplastic, benign, and malignant splenic diseases: cross-sectional imaging findings and rare disease entities. Am J Roentgenol 2014;203:315-22.
6. Kang SI, Jeon SY. Primary non-parasitic splenic cyst: a case report. Korean Journal of Hepato-Biliary-Pancreatic Surgery. 2013 Aug 1;17(3):139-41
7. Liane S. Feldman; Amani Munshi; Mohammed Al-Mahroos; Gerald M. Fried (2013) the spleen, 13 edn., Maingot's Abdominal Operations:
8. Trabelsi F, Landolsi M, Melek RB, Daib A, Abdallah RB, Hellel Y, Gharbi Y, Kaabar N. A Giant Epidermoid Splenic Cyst in a Teenage: A Case Report . Journal of Health and Medical Sciences. 2019;2(2):183-7