Splenic Hydatid Cyst: A case report
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Abstract:
Hydatid disease is a parasitic infection caused mainly by Echinococcus granulosus and is a common entity in this part of the world. However, Primary hydatid disease of spleen is a rare entity. A case is described of a primary in a 27 yr old female who presented with left upper quadrant swelling and pain. USG disclosed a large hydatid cyst (152 mm, 135 mm, 141 mm with a volume of 1514 cc), with intra cystic rupture seen towards upper pole of spleen. A CT scan confirmed the primary splenic hydatid cyst. An elective splenectomy was performed successfully.

Keywords: Splenic Hydatid cyst

Introduction:
A hydatid cyst is a zoonotic illness and a significant problem in endemic areas. Hydatid cyst, is caused by Echinococcus infestation. Humans are the accidental intermediate hosts. After ingestion, the eggs hatch and oncospheres penetrate the intestinal mucosa and enter the circulation. The embryos are carried to the liver to be arrested in the sinusoidal capillaries (the liver acts as the first filter). Some of the embryos may pass through the hepatic capillaries and enter the pulmonary circulation and filter out in the lungs (lungs act as second filter). Rarely a few embryos may pass through the pulmonary capillaries, and enter the general blood stream and lodge in the various organs. Wherever the embryo settles, it forms a hydatid cyst. The life span of larval worm is considerable and it may continue to develop for many years1. Liver and lungs are the organs most commonly affected by this disease as evident by the life cycle of the parasite. Primary infestation of the spleen by the parasite is a rare phenomenon.

Case report:
A 27 yr old tribal married female from a remote hamlet from south Kashmir, with no significant past medical history presented with 8 weeks history of progressively increasing upper abdominal swelling and pain. General physical examination of patient was normal. Abdominal examination revealed moderate splenomegaly. Hemogram and routine serum chemistry was normal. USG disclosed a large hydatid cyst (152mm, 135mm, 141mm with a volume of 1514 cc) having with intra cystic rupture seen towards upper pole of spleen [Fig 1]. CT scan confirmed the presence of a large isolated splenic hydatid cyst with no cyst in the liver, lungs or kidney [Fig 2]. IgM Elisa for hydatid was strongly positive. Splenectomy was performed by left upper transverse incision. There were omental adhesions over spleen. After careful adhesiolysis splenectomy was performed successfully. Postoperative stay in the hospital was uneventful and the patient was discharged of 8th postoperative day. Patient was in good health at 6, 8 and 12 weeks of follow up.

Figure 1 and 2 showing the USG and the CT Scan of the patient.
Discussion:
Hydatidosis is caused by E. granulosus has diverse presentations and has been reported since ancient times. Berlott (1790) was the first to describe splenic hydatidosis as an autopsy finding.5
It is endemic in sheep rearing areas of Mediterranean, Eastern Europe, Australia, South America and Middle East. Most common organs involved are liver and lungs. Involvement of the spleen is a rarity. The incidence varies widely in sheep rearing countries with maximum reported from Iran (4%)6. In India maximum incidence of splenic hydatidosis has been reported from Nagpur5. In various series on splenic hydatidosis from our state an incidence of 3.5 % and 4.1% has been reported.7,8 Parasitic cysts of the spleen are almost exclusively hydatid cysts. In endemic areas, 50%-80% of splenic cysts are echinococcal9. Splenic hydatid cysts are generally asymptomatic and they are diagnosed incidentally while evaluating such patients for other reasons. When the cyst attains a considerable size the patient becomes symptomatic and mostly presents with painful left upper abdominal mass10,11 as was the presentation with our patient. If the cyst gets infected patient may present with fever and leucocytosis.12 Sometimes the patient may also present with fatal anaphylactic reaction due to the free intra peritoneal rupture of the cyst.10 Due to the constant risk of this dreadful complication, there is an absolute indication of splenic hydatid cysts, especially large ones to be treated surgically13-14. The standard treatment option is total or partial splenectomy9. In our case we preferred open total splenectomy (Figure 3). The literature also favors such treatment modality because of the following reasons:
- In large cysts splenic parenchyma is significantly reduced due to pressure atrophy.
- The thickened fibrous membrane as seen in hepatic hydatid cysts is quite thin and fragile in splenic hydatid cysts, so the risk of intra op rupture is high in such cysts if a conservative approach is adopted during surgery.15.

Figure 3 showing the hydatid cyst of the spleen.

Complications of splenectomy such as hemorrhage, pancreatic or gastric injuries, thromboembolic phenomena and overwhelming post splenectomy infections (OPSI) are reviewed in literature16,17. None of such complications occurred in our patient. Due to the risk of OPSI (approx 10%) some authors advocate conservative approach to be adopted in splenic surgery. However it is suggested that spleen sparing surgery can be done if there is adequate amount of splenic parenchyma remaining and if the cyst is small and located peripherally15. Both these factors were absent in our case. With the advance in laparoscopic surgery, laparoscopic splenectomy is being increasingly performed at advanced laparoscopic centers. Though some authors find it safe and effective alternative to open splenectomy, while as others believe that it is unsafe to approach splenic hydatid laparoscopically due to the risk of anaphylactic shock and intraperitoneal dissemination, which can occur subsequent to uncontrolled puncturing of the cyst10,16,18,19.
Conclusion:
We conclude that Splenic Hydatidosis although rare should always be kept in mind while dealing with cystic lesions of the spleen especially in endemic areas. Open Splenectomy remains the favored surgical procedure for this entity as apprehensions of anaphylactic shock and intraperitoneal dissemination are more with laparoscopic approach.

References:

Conflict of Interest: None

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