Isolated Splenic Hydatid Cyst- A Case Report

Sumalatha Kasturi¹, Anitha Sunkara², Sreenivas Vemula³, Ravindra Thota⁴

INTRODUCTION

Hydatidosis is endemic in many Mediterranean countries, the Middle East, South America, Australia, New Zealand, Africa and other parts of the world. 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%)[1]. In India maximum incidence of splenic hydatidosis has been reported from Nagpur[9].

Hydatid disease is caused by an infection from Echinococcus granulosus larvae which can lead to the development of cysts. Humans are incidental hosts who contract the disease by ingesting highly infective eggs of adult echinococcus, harbouring in the small intestine of the definitive hosts like dogs and other canine animals.

Splenic hydatid cysts being a rare entity, can occur primarily or in association with hepatic, pulmonary or multi organ hydatidosis[2].

CASE REPORT

A 28 year old female with no significant past medical history presented with one year history of progressively increasing abdominal pain. General examination of patient was normal. Abdominal examination revealed moderate splenomegaly. Haemogram and routine serum chemistry were within normal limits. Ultrasonography disclosed a large multilocular cystic lesion in spleen. CT scan of abdomen confirmed the presence of a large isolated splenic hydatid cyst. No cysts found in the liver, lungs or kidneys. Splenectomy was performed and sent for histopathological examination.

The splenectomy specimen received in our department weighed 220 grams and 13x6x5 cm in size. External surface was nodular (fig-3). Cut section showed a single pearly white, friable multilocular cyst containing many daughter cysts(fig-4).

Smears were made from cyst contents revealed presence of hooklets(fig-5). Microscopically, cyst wall revealed a lamellated eosinophilic acellular wall – ectocyst (fig-6) with a fibrotic hyalinised wall (pericyst).

DISCUSSION

Hydatidosis is caused by Echinococcus granulosus, has diverse presentations and has been reported since ancient times. Berlott (1790) was the first to describe splenic hydatidosis as an autopsy finding[3].

Hydatid disease is a zoonosis caused by ingesting eggs of the parasite Echinococcus granulosus in rural sheep farming regions. After ingestion, the eggs hatch and oncospheres penetrate the intestinal mucosa and enter circulation. The embryos are carried to the liver to be...
Figure 1: Chest X-ray revealed no cysts in lung

Figure 2: CT scan abdomen showed isolated multilocular cyst in spleen

Figure 3: External surface of splenectomy specimen

Figure 4: Cut section showed a multilocular cyst filled with daughter cysts

Figure 5: Hooklets in smear

Figure 6: Ectocyst of Hydatid
arrested in the sinusoidal capillaries (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). Wherever the embryo settles, it forms a hydatid cyst.

Human echinococcosis is caused by the tapeworm of the genus echinococcus. Of the 4 known species of echinococcus, 3 are of medical importance. These are echinococcus granulosus, causing cystic echinococcosis (CE), echinococcus multilocularis causing alveolar echinococcosis (AE) and echinococcus vogeli[7]. E. granulosus is the most common type, whereas E. multilocularis is the least common but more invasive mimicking a malignancy.

The most common site of disease is the liver (66%) followed by the lungs (5-15%). Other sites such as heart, spleen, pancreas and muscles are very rarely affected[6]. Splenic involvement is rare and accounts for 0.9%-8% of all hydatid disease[5-6].

The infection is usually acquired in childhood and mostly remains asymptomatic. The cyst grows slowly at a rate of 0.3-1 cm per year and sometimes it may take 5-20 years to grow into size to cause symptoms of abdominal discomfort.

Parasitic cysts of the spleen are almost exclusively hydatid cysts. In endemic areas 50-80% of splenic cysts are echinococcal[7].

Hydatid cysts can be solitary or multiple. Ultrasound most clearly demonstrates the hydatid sands in purely cystic lesions, as well as floating membranes, daughter cysts and vesicles. CT is the best modality to detect calcification and internal cystic structure behind calcification. Splenic Hydatid Cysts are usually solitary and the imaging characteristics are similar to those of hepatic Hydatid Cyst[8].

The fluid aspirated from a hydatid cyst is usually clear and contains debris, a few inflammatory cells and numerous scolices. In old cysts, the scolices may be difficult to find in FNA preparations. The finding of hooklets is diagnostic of Hydatid disease on cytology[10].

The differential diagnoses for splenic hydatid cysts include other cystic lesions such as epidermoid cysts, pseudocysts, splenic abscesses, hematomas and cystic neoplasms of the spleen.

The PAIR approach (Puncture-Aspirate cyst- Inject hypertonic saline- Reaspirate after 25 min) is often used. There is always a risk of spontaneous or traumatic rupture and anaphylaxis. The standard treatment is total or partial splenectomy. Splenectomy without puncturing the cyst is preferable.

CONCLUSION

We conclude that Splenic Hydatidosis although rare should always be kept in mind while dealing with cystic lesions of spleen, especially in endemic areas. Early intervention can prevent catastrophic complications. Open splenectomy remains the mainstay of treatment.

REFERENCES