SPLENIC HYDATIDOSIS

(A Report of Three Cases)

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Introduction

Hydatic cystic disease in humans has a worldwide distribution and has been recognised since ancient times. It is caused by *Echinococcus granulosus* and rarely by *Echinococcus alveolaris*. In India the disease is most frequently reported from the states of Tamilnadu, Andhra Pradesh and Gujarat [1].

In humans approximately 65-75% of cysts occur in the liver, 25% in the lungs and 5-10% distribute through the peripheral arterial system to various other sites [1]. Solitary infestation of the spleen is rare and takes place by the arterial route after the parasite has passed the hepatic and pulmonary filters [2]. The retrograde venous route which avoids the liver and the lung may also be a pathway for isolated splenic infestation with the parasite.

The time honoured treatment for splenic hydatidosis is splenectomy. However some workers have reported good results with conservative surgery and splenic preservation.

Case - 1

67-years-old lady presented with left upper quadrant abdominal pain of ten years duration. Clinical examination revealed an eight cm tender splenomegaly. Other general and systemic examination were unremarkable. Plain radiograph of the abdomen revealed a large spherical calcified mass in the splenic region. Ultrasonography revealed a 12 X 8 cm mass arising from the upper half of the spleen with a small hump like projection on its superiolateral aspect with mixed echogenicity. All other hematological and biochemical investigations and radiograph of the chest were normal.

On clinical suspicion of splenic hydatid cyst the patient was put on tablet albendazole in a dose of 10 mg/kg/day and after four weeks she was taken up for elective splenectomy. At surgery the cyst was found to be arising from the upper pole of the spleen and adherant to the left lobe of the liver, greater curvature of the stomach and the diaphragm. Splenectomy was performed and the patient had an uneventful post-operative recovery. No other hyda-

tids were found in the liver or in the peritoneal cavity. Histopathological examination of the cyst wall was confirmatory for hydatid splenic cyst. Post-operatively tablet albendazole was given for another four weeks. The patient is on follow up for last 36 months and is asymptomatic.

Case - 2

25-year-old sailor presented with low grade intermittent fever and dragging sensation in left hypochondrium of six months duration. Examination of the abdomen revealed a four cm splenomegaly. Other general and systemic examinations were unremarkable.

Ultrasonography of the abdomen was suggestive of hydatid cyst of the spleen with no evidence of disease in the liver. Patient was given preoperative albendazole in a dose of 10 mg/kg/day for four weeks and then taken up for splenectomy. Post-operative period was uneventful and he was given albendazole for another four weeks after surgery. Histopathological examination of the spleen was confirmatory for hydatid splenic cyst. The patient is on follow up for the last 24 months and is asymptomatic.

Case - 3

40-years-old patient presented with sudden onset of severe pain on the left side of the chest and left upper abdomen. He was initially suspected to be having anginal pain. However examination of the abdomen revealed a tender six cm splenomegaly. Other general and systemic examinations were unremarkable. Ultrasonography of the abdomen showed a 10 x 8 cm thin walled cystic lesion in the lower pole of the spleen with echogenic material. Other hematological and biochemical investigations were within normal limits. Patient was given tablet albendazole in a dose of 10 mg/kg/day for four weeks pre-operatively and for four weeks after surgery. Post-operative period after splenectomy was uneventful. Histopathological examination of the spleen confirmed hydatid cyst of the spleen. The patient is on follow up for the last six months and is asymptomatic.

Discussion

Cystic lesions of the spleen comprise of parasitic and non parasitic cysts. Parasitic cysts are almost exclusively due to echinococcal disease and account for 60-70% of splenic cysts in countries where hydatid disease is endemic [4].

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Hydatid cysts are typically composed of a three layered cyst wall surrounding a fluid cavity. The cyst fluid is actively secreted by the parasite and fluid pressure within a living hydatid cyst can reach 70 cm of water. Explosive rupture of the cyst can occur if it is subjected to trauma and may present as an acute abdomen [5] or with features of anaphylactic shock [6]. Herein lies the importance of early definitive management of splenic hydatid cysts. All three of our patients were offered early definitive treatment in the form of splenectomy with perioperative adjuvant albendazole therapy. There was no mortality or significant morbidity. The patients were asymptomatic and recurrence free on follow up.

Splenic hydatidosis is generally associated with symptoms. The patients usually present with dull pain in the left upper abdominal quadrant. Fever may occur if the cyst gets infected. Two of our patients presented with pain while one had fever as the initial symptom. Splenomegaly was present in all three cases.

The diagnosis can be confirmed by serological and radiological investigations. Indirect hemagglutination test has been found to be more sensitive (95.2%) than traditional Casoni's test [7]. However ultrasonography and CT scan are excellent imaging modalities with diagnostic accuracy of 90% and 100% respectively [8] and have by and large replaced serologic tests for the diagnosis of hydatid disease. All our patients were diagnosed on ultrasonography and the diagnosis confirmed post-operatively on histopathological examination.

Splenectomy remains the treatment of choice for the majority of the patients but considerable controversy exists as to the extent of the operation to be performed. Traditionally splenectomy has been the procedure of choice, however conservative surgery of the spleen has now become popular and certain authors have reported good results with deroofting of the cyst with removal of contents and drainage of remnant cavity [9]. This procedure has been found to be useful in patients with infected cysts with multiple adhesions to the surrounding structures. The other organ preserving operation described is total cystectomy [10], especially if the cyst involves only a portion of the spleen. In all three of our cases splenectomy was performed because the cyst occupied most of the spleen.

Chemotherapy with benzimidazole carbamates is useful adjunct to surgical treatment. Pre-operatively a four week course of albendazole is recommended for elimination of live protoscoleces within the cyst [11].

Continuation of the drug in the post-operative period confers additional protection against accidental spillage of cyst contents during surgery. In our cases we have used albendazole both pre and post-operatively with good results. Percutaneous aspiration of hydatid cysts has been contraindicated because of the perceived risk of intraperitoneal cyst rupture. Of late reports of successful management of hydatid cyst of spleen with per cutaneous drainage are available on a limited number of cases [12]. This modality of treatment may prove beneficial in patients with uncomplicated unilocular cysts, poor surgical candidates and patients with multiple previous surgeries.

In conclusion it can be said that the presence of cystic lesion in the spleen with few associated symptoms must arouse suspicion of hydatid disease. Early definitive treatment in the form of surgery with adjuvant Albendazole therapy is recommended for the management of these patients.

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