ISOLATED PERICARDIAL HYDATID CYST

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ABSTRACT

Objective — *To find out the frequency and management of pericardial hydatid disease.*

Study design — *Case series*

Place & Duration of study — *SK Institute of Medical Sciences, Srinagar Kashmir from March 1990 to March 2008.*

Patients and Methods — *This is a retrospective study where the records of all the thoracic hydatid cysts including pericardial cysts managed during the study period were retrieved and studied for their frequency, presentation and management.*

Results — *Isolated pericardial cysts formed 1.4% (total 11) of cardiothoracic hydatid cysts but formed a major portion of pericardial cystic lesions of all origins (n 27). All patients were operated and put on albendazole postoperatively. There were neither mortalities nor recurrences in this series.*

Conclusions — *The isolated pericardial hydatids cysts are rare lesions but in endemic areas, they form an important differential diagnosis of pericardial cystic lesions. Treatment is meticulous surgical excision.*

Key words — *Echinococcosis, Pericardial hydatid cyst, Enucleation, Recurrence.*

INTRODUCTION:

Hydatid disease is a worldwide zoonosis caused by the larval stage of the Echinococcus is a tape worm which belongs to the family Taeniidae. Four species of Echinococcus produce infection in humans. E granulosus and E multilocularis are the most common, causing cystic echinococcosis and alveolar echinococcosis respectively, while E vogeli and E oligarthrus very rarely cause polycystic echinococcosis.[1, 2] This disease is endemic in cattle and sheep rearing regions of the world, the Indian side of the Kashmir valley being one such area.[2-5]

Hydatid cysts commonly affect the liver and lungs though any part of the body can get affected. Cardiac involvement is uncommon (0.02 % - 2%) and isolated pericardial hydatid cyst is a rare disease entity. [5-8] The rarity of isolated pericardial hydatid cyst prompted us to prepare a report of this disease.

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PATIENTS AND METHODS:

This was a retrospective study analyzing all cases, managed in the Department of Cardiovascular & Thoracic Surgery of Sher-i- Kashmir Institute of Medical Sciences, Srinagar, Kashmir, India from March 1990 to March 2008, as cardiothoracic hydatid cysts or pericardial cysts of any origin. This is the only department in the Kashmir valley managing cardiothoracic surgical diseases in adult as well as pediatric population. The records of all the patients were obtained from a retrospectively kept hospital database in the Medical Records Department. From the data, the cases were qualified to be suffering from isolated pericardial cysts only if cyst material retrieved at surgery proved to be of hydatid nature and patient was not suffering from hydatid cyst of any other organ.

As per the record, all the patients whether symptomatic or asymptomatic were detected initially by chest x-ray. The asymptomatic ones had their radiographs for unrelated reasons. After observing the abnormality, the patients were subjected to CT scan of the chest. MRI study was done only in the last case of our series as this facility was not available before that. Serological analysis by ELISA for detection of IgG circulating anti-echinococcal antibodies in serum was performed in all the cases. All the cases were treated by surgical operation. The patients were administered antibiotics as per the prevalent hospital protocols and culture/ sensitivity reports. As per the records preoperatively particular care was taken to protect recurrence by avoiding spillage of cyst material and use of hypertonic saline. The cysts removed during surgery were sent for histopathological analysis. The patients were followed up for a period of up to 3 years except 4 patients who were lost to follow-up within 6 months of surgery. After surgery, all the patients were advised albendazole (10mg/kg body weight) for 3 months with a break of 1 week after every 3 weeks.

RESULTS:

Out of the total of 783 cases of cardiothoracic hydatid cysts seen over a period of 18 years, only eleven (1.4%) patients had hydatid cysts confined only to pericardium. The cases with pericardial cysts of all origins managed were 27 (including 11 hydatid cysts). The details of theses patients are given in table-I.

The percentage if taken with respect to hydatid cysts of all organs (including the liver which is the commonest site)

Table I: Details of Patients with Pericardial Hydatid Cyst

Serial number	Age in Years/ Sex	Symptomatology	No & Size of cysts (in cms) as determined by CT Scan/MRI	Preoperative Serological Analysis	Surgical intervention
1	29/M	Asymptomatic	Single , 4.8 x 4.2	Negative	ATL,excision
2	32/ F	Chest pain	Single , 7.3 x 8.9	Negative	ATL,excision
3	48/F	Asymptomatic	Single , 4.6 x 4.5	Negative	ATL,excision
4	37/M	Arrhythmias	Single , 7.2 x 5.6	Negative	ATL,excision
5	15/M	Chest pain	Single , 6.9 x 8.1	Negative	ATL, Enucleation and tube drainage of residual cavity
6	28/M	Chest pain, arrhythmias	Single 5.2 x 5.1	Positive	ATL,excision
7	17/F	Asymptomatic	Single , 6.1 x 5.2	Negative	ATL,excision
8	62/M	Chest pain mimicking angina	Multiple(two)8.6 x 5.2 and 4.3 x 3.8	Negative	MS ,excision
9	56/M	Chest pain	Single , 7.7 x 5.9	Positive	ATL,excision
10	41/F	Asymptomatic	Single , 4.4 x 3.7	Negative	ATL,excision
11	14/F	Sepsis	Single , 9.6 x 8.5	Positive	MS, Enucleation and tube drainage of residual cavity

will certainly be very low but since extra thoracic cysts are treated at multiple centers in Kashmir valley, the exact cumulative data is not available. However if the percentage of pericardial hydatid cysts (n= 11) is considered with respect to the total number of pericardial cysts of all origins (n= 27) is considered, if forms about 41 %, keeping in view the fact that our department is the only one treating cardiothoracic patients in the valley. The complications encountered in our series were wound infection in two and prolonged discharge through tube drain in one patient. No mortality and recurrence occurred in this series.

DISCUSSION:

Hydatid disease is one of the major health problems in Kashmir valley like many other endemic areas of the world. Pericardial hydatid cysts are however rare entities even in theses endemic areas as we experienced and as is evident in literature. The hydatid cysts remain mostly asymptomatic and as they grow in size, various symptoms arise. We also noticed this trend and the asymptomatic patients have smaller size than the symptomatic ones. But since the number of cases is small, it is not safe to define any particular dimension when the cyst is likely to become symptomatic. Symptoms can be quite variable with chest pain due to stretch of pericardium, arrhythmias, and pain mimicking coronary syndromes being common presentations as is the case with our series also.[9]

We found that serological studies are not very sensitive in picking up the pericardial cyst and it is CT scan of chest which gave us the definitive diagnosis preoperatively. Similar results have been found by other workers.[10] However where MRI facilities are available; that can be highly sensitive and specific diagnostic tool and it can offer the surgeon the exact anatomical location and size of the lesion.[11] We were fortunate enough in not having any mortality though fatal outcomes are mentioned in the literature. [10] We were again fortunate enough not to have any recurrence in the cases which were not lost to follow-up, though recurrent cases are reported in literature.[12] We attribute this to strict prevention of spillage of cyst contents, thorough sterilization of cyst cavity with scolicidal agent and postoperative use of albendazole.

CONCLUSIONS:

We conclude that pericardial hydatid cyst is a rare disease but in endemic areas, a very high suspicion is justified in any cystic disease of pericardium. Once diagnosed, this disease would require early surgical excision to prevent complications. During surgery all precautions should be taken to prevent recurrence.

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