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### Case Report

#### Aspiration of mediastinal hydatid cyst – A case report

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**ABSTRACT:** Mediastinal hydatid cyst is very rare and has been only anecdotally reported in the literature. Because of surrounding vital structures, the cyst should be treated without delay, surgery being the mainstay of treatment. Here we report a case of hydatid cyst of the mediastinum which was managed by trans-thoracic aspiration followed by albendazole therapy.

**KEY WORDS:** Hydatid cyst; Mediastinum; Percutaneous aspiration

#### INTRODUCTION

Hydatid cyst caused by *Echinococcus granulosus* tapeworm, is one of the most serious pulmonary diseases caused by helminths and poses a serious problem in India, where it is endemic. Liver and lungs are the most common sites of infection, but it is known to occur in all possible unusual anatomical locations<sup>1,2</sup>. Extrapulmonary but intrathoracic hydatid cysts are very rare<sup>3</sup>, its reported incidence being between 0.5-0.8 percent. Treatment of choice so far has been surgical. In recent years percutaneous aspiration has been reported to be a safe treatment modality of pulmonary hydatid cyst<sup>4</sup>. We report a case of a patient with anterior mediastinal hydatid cyst, which was successfully treated by percutaneous aspiration followed by albendazole therapy.

#### CASE DETAILS

A thirty-year old man presented with mild retrosternal chest pain of 45 days duration. A chest radiograph showed a well defined rounded opacity in left para-mediastinal area (**Figure 1**). Contrast-enhanced CT scan of the thorax showed a rounded opacity of size 4.2 x 5.2 cm and of cystic consistency in left mediastinum near carina (**Figure 2**).

The differential diagnoses included bronchogenic cyst and hydatid cyst. A history of contact with pet animals was elicited. Abdominal ultrasonography revealed a normal liver with no evidence of any co-existing cyst. Surgical excision of the cyst was advised for which the patient was unwilling. Patient gave consent for fine needle aspiration under CT guidance and for surgery in case of a complication if needed. 200 ml clear fluid containing sand was tapped. Analysis of fluid revealed hooklets and scolices along with hydatid sand.

The procedure was uneventful. Post procedure chest radiograph revealed significant decrease in the size of the cyst (**Figure 3**). The patient was noted to expectorate membranes for a few days after the procedure, suggesting rupture of

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the cyst into the bronchus. The patient was discharged after stabilization on supportive treatment along with albendazole (400 mg

BD). Serial chest skiagrams showed dramatic resolution in the size of the cyst (**Figure 4**).



**Figure 1: Chest radiograph PA view showing rounded well defined opacity in the left para-mediastinal area**



**Figure 2: Contrast CT scan thorax showing a rounded opacity of cystic consistency in the left mediastinum near carina**



**Figure 3: Post procedure chest radiograph showing decrease in size of the cyst**



**Figure 4: Serial chest radiograph showing almost complete resolution of the cyst**

## DISCUSSION

Hydatid disease has been acknowledged as an important clinical entity since ancient times. It has been seen in various anatomical locations, most common being liver and lungs.<sup>5</sup> However; extrapulmonary intrathoracic hydatid cysts are very rare. In one study, out of 1,619 intrathoracic hydatid cysts, only eight (0.5%) were situated in the mediastinum.<sup>6</sup> Primary hydatid cyst of the mediastinum, although extremely rare, is a distinct clinical entity, which must be considered as one of the differentials in a patient with mediastinal mass, especially if the patient is from an endemic area.<sup>7</sup>

In general, mediastinal echinococcosis is neither clinically nor radiologically distinguishable from other mediastinal cystic lesions.<sup>8</sup> In our case, a provisional diagnosis of bronchogenic cyst was initially made, which later proved to be hydatid cyst. Chest pain and cough have been reported to be most common presenting features of mediastinal hydatid disease.<sup>9</sup> Rarely they have also been reported to cause Horner's syndrome and superior vena caval obstruction.<sup>10</sup> The patient had presented with retrosternal pain.

Though surgical intervention has been reported to be the treatment of choice, as transthoracic needle aspiration is not a recommended diagnostic modality in hydatid disease. Percutaneous aspiration of a suspected hydatid cyst is believed to be associated with the risk of allergic reactions which can result in systemic anaphylaxis and possible spreading of the cyst contents.<sup>10</sup> In recent years, however, percutaneous aspiration has been reported to be safe as a treatment option of pulmonary hydatid cyst.<sup>4</sup> This patient was managed successfully by percutaneous aspiration without any complications.

Percutaneous aspiration may be a safe option in managing mediastinal hydatid cyst as in cases of other pulmonary hydatid cysts but needs to be validated.

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