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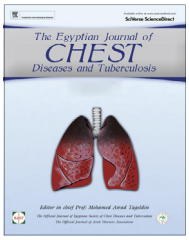

CASE REPORT

Coexistent pulmonary hydatid disease and tuberculosis in an adult male

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KEYWORDS

Chest;
Tuberculosis;
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Abstract Hydatid disease with pulmonary tuberculosis coexisting in a patient is an extremely rare occurrence. A patient presenting with nonspecific chest symptoms must be adequately investigated and hydatidosis must be ruled out. This case report presents the unusual coexistence of tuberculosis and hydatid disease in an adult male and its subsequent diagnosis and management.

Case report

A 26 year old man was admitted with a history of vague chest pain for 2 months. The pain was gradual in onset, associated with cough and purulent sputum. There was no history of hemoptysis or fever in the recent past. There was a history of weight loss over the past 6 months. On examination he was of average build and moderately nourished. Vital signs were stable. Chest examination revealed decreased air entry at bilateral basal regions and few crepitations. Systemic examination was unremarkable. Chest X ray revealed fibrotic lesions in the right upper zone with circumscribed hyper-dense lesions in bilateral mid-lower zones (Fig. 1). Blood investigations were normal except for a mildly elevated total leucocyte count of 12,000/cumm. Sputum was negative for AFB. Chest spirometry revealed a decreased FEV1 of 51% predicted. A CT scan of the chest was done which was suggestive of fibronodular lesions in the right upper lobe along with bilateral cystic lesions in the lower lobes measuring approx. 8 cm in diameter each (Fig. 2). A provisional diagnosis of bilateral hydatid disease of the lungs was made and the patient was subsequently started on Tab. Albendazole. A serological test for echinococcus antibodies was negative. Since his symptoms were subacute, with institution of albendazole therapy, he was taken up for exploratory thoracotomy and enucleation of the cyst two weeks later. Thoracotomy findings included multiple nodular lesions in the right lower lobe. A ruptured hydatid cyst cavity was found in the posterior aspect of the right lower lobe. Multiple fibronodular lesions were found in the right upper lobe as well, which were excised and sent for histopathological examination. The pericyst cavity was obliterated. The patient developed a bronchopleural fistula postoperatively which was managed with intercostal chest tube drainage. Remainder of the postoperative course was uneventful. Histopathological report revealed that the cystic lesion contained fragments of glistening lamellated

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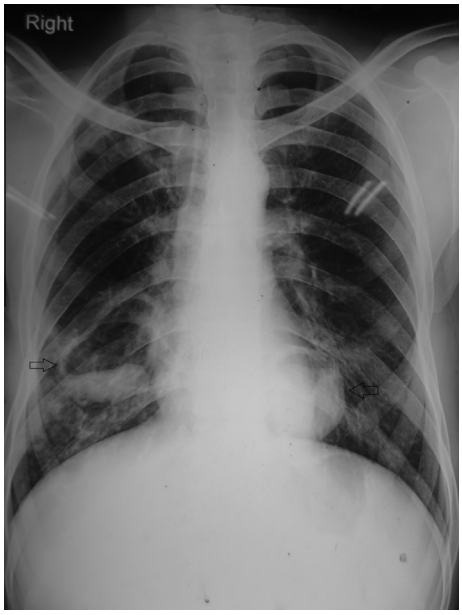

Figure 1 Chest X Ray showing bilateral cystic lesions (arrows).

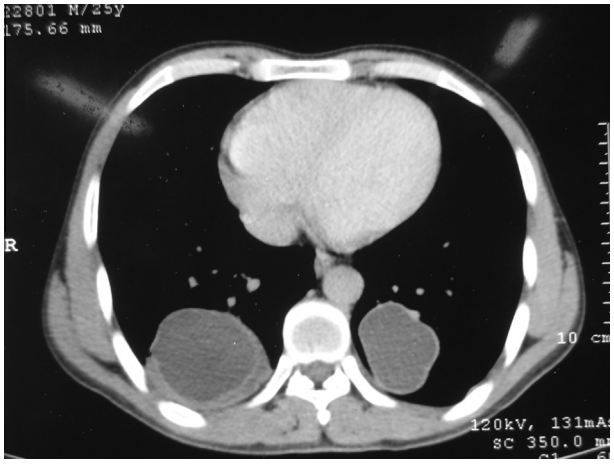

Figure 2 CT Scan picture showing bilateral cystic lesions.

membranous tissue. Sections of the lung parenchyma revealed numerous caseating as well as non caseating epithelioid cell granulomas along with Langhans giant cells and an accompanying neutrophilic infiltrate. The patient is presently on antitubercular therapy along with Albendazole.

Discussion

Tuberculosis is a common disease in India. Hydatid disease is not uncommon either but a patient harbouring both diseases is a rare occurrence [1]. Low socioeconomic status as well as unhygienic practice contributes to the occurrence of these diseases [7]. The incidence of human echinococcosis is closely related to the prevalence of the disease in domestic animals. Humans become exposed to eggs of tapeworm after close contact with dog or its contaminated environment. Typically larvae that pass through the liver are trapped in pulmonary arterial capillaries and develop into hydatid cysts [2]. Symptomatology of both diseases is essentially the same, ranging from a mild cough with or without expectoration, to chest pain, fever and at times hemoptysis. Differentiating one from the other may not be possible based on history and physical examination alone. Precise diagnosis and subsequent treatment would be dependent on radiological features as well as histopathology.

Sporadic citations of the concomitant occurrence of these two diseases have been reported in literature. Hijazi et al.[3] presented a rare report of a ruptured hydatid cyst with tuberculosis in a pregnant patient presenting with anaphylactic shock and acute respiratory failure. She was managed with cyst resection followed by antitubercular and albendazole therapy. Yucel et al. [6] presented a report of a 21 year old male with coexistent pulmonary tuberculosis and hydatid cyst.

Serological diagnosis for either of the two diseases may not be confirmatory [4]. Due to a wide spectrum of presentation, false negatives may be seen as was the case with this patient. Radiological features may be more conclusive with computerized tomography leading the battery of investigations that are used for the protocol directed investigation of these patients [5]. Diagnosis of an intact hydatid cyst is usually based on a suspicion resulting from an unexpected finding on routine chest radiographs. Radiographically the hydatid cyst appears as a homogeneous spherical opacity with definite edges. A small cyst may appear as a small "vesicle" and is difficult to recognize until it grows large enough to present a clear image on the chest radiograph. The presence of hydatid disease should be considered in a patient who presents with a well-explained spherical density of the lung, particularly in a patient who has been living in an endemic area.

Histopathology is vital especially for the patients undergoing invasive procedures such as a thoracotomy and cyst resection. Histological findings include characteristic lamellated appearance of the hydatid cyst, with or without the presence of daughter cysts. Casesating or non caseating epithelioid cell granulomas with Langhans giant cells are features of tuberculosis [8].

Operative management of pulmonary hydatid disease ranges from enucleation of the cyst or pericystectomy with closing of the bronchial openings with or without capitonnage of the pericystic space as a first choice of treatment. It is imperative to continue medical treatment postoperatively and to have a conservative rather than a radical approach. Surgery would not be the ideal approach for disseminated and complicated hydatidosis. Resection remains the mainstay of treatment of a destroyed lobe or lung [8–10].

Hydatid disease with pulmonary tuberculosis coexisting in a patient is an extremely rare occurrence. Though tuberculosis is a much more widespread disease in this country, a patient presenting with nonspecific chest symptoms must be adequately investigated and hydatidosis should be ruled out. Even the availability of a basic chest X-ray in the periphery would point the clinician towards a presumptive diagnosis and referral of these patients to the nearest tertiary equipped centre.

Conflict of interest

None.

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