



CLINICAL IMAGES

Natural involution of pulmonary hydatid cyst and an iatrogenic cause of the Cumbo sign

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A young female patient presented with a history of coughing. The chest radiograph (CXR) showed a well-defined rounded soft-tissue density in the right lower zone (Fig. 1a). On computed tomography (CT) scan of the chest (Fig. 1b) the diagnosis of hydatid cyst was made and serology confirmed this. A follow-up CXR was performed after a few months of

medical treatment, which showed the endocyst membranes in the process of detaching from the pericyst (Fig. 2). Further involution of the cyst showed the classic image of the 'water lily' sign on CXR (Fig. 3), the detached endocyst membranes



Fig. 1a. Presenting CXR showing a rounded well-defined mass lesion in the right lower zone.

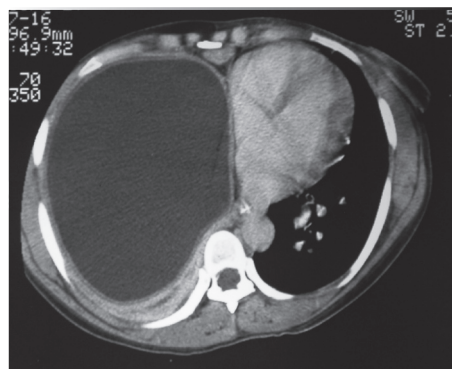


Fig. 1b. CT chest imaging demonstrating the presenting features of a pulmonary hydatid cyst. A large cystic lesion with a thin border occupies the lower right chest cavity, with associated mass effect on the heart which is displaced to the left.



Fig. 2. CXR features the endocyst membranes detaching from the pericyst.

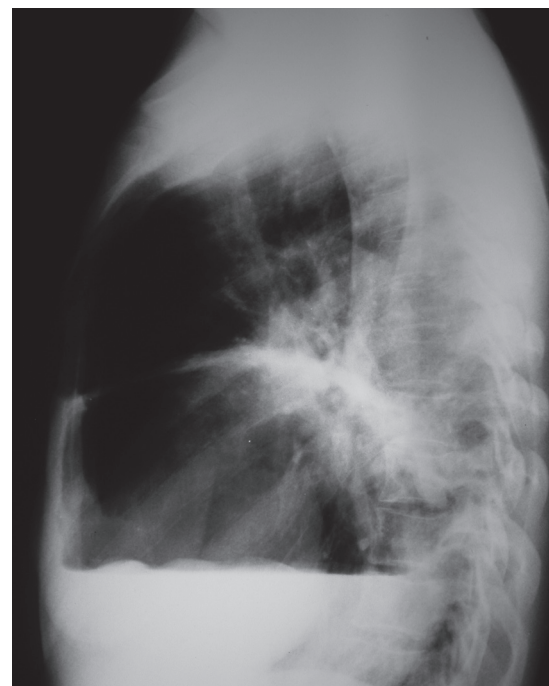


Fig. 3. CXR features the 'water lily' sign; the endocyst membranes are floating at the bottom in cyst fluid.

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floating on top of remaining fluid consequent to collapse of the endocyst and partial evacuation of fluid. A drain was inserted to drain the cyst fluid; subsequent imaging showed the 'onion peel/Cumbo' sign, with air trapped among endocyst membranes as illustrated on CT scan of the chest (Fig. 4).

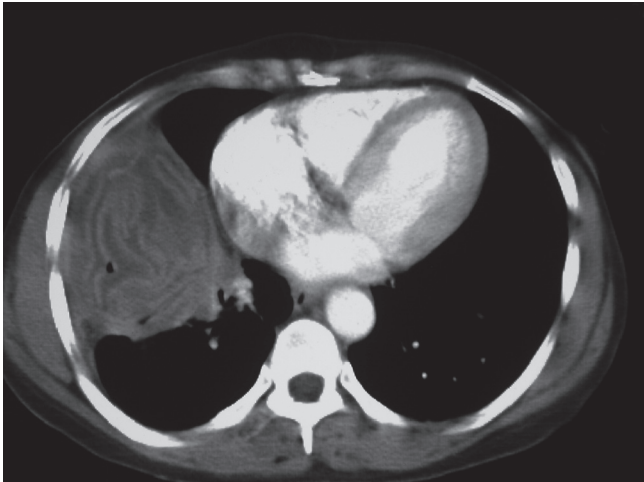
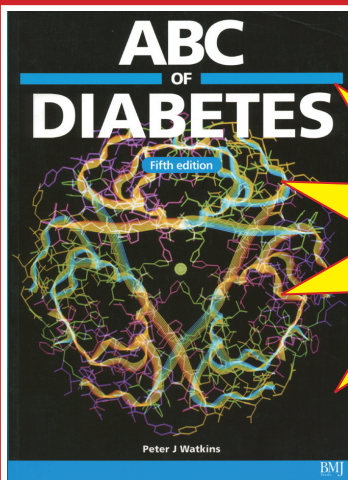


Fig. 4. CT chest image of the 'onion peel/Cumbo' sign where air is trapped among endocyst membranes as the cyst fluid has drained away.

Hydatid disease involves the lung in 24% of cases.^{1,2} Owing to haematogenous spread the lung is the second most common site seen in adults and the most common site in children.^{1,3} Pulmonary hydatid disease has a predilection for right posterior lung segments, with 60% occurring in the lower lobes.^{1,2} Cysts in the lung can enlarge, with diameters from 1 cm to 20 cm, as the lung is the only organ that allows this degree of expansion.^{1,2} Various signs are described and recognised on CXR/CT imaging, e.g. the 'water lily' sign,⁴ where endocyst membranes float at the bottom of cyst fluid, and on CT imaging where there are the crescent, reverse crescent, onion peel/Cumbo signs.^{1,2,5} The Cumbo sign is seen when bronchi/bronchioli are eroded and air enters into the cyst and gets trapped among the endocyst membranes. In our patient air entered the cyst iatrogenically resulting in the Cumbo sign.

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