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Case Report

Multiple cystic echinococcosis mimicking metastatic malignancy

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ABSTRACT

Cystic echinococcosis is seen worldwide. Considerable public health problems are encountered in endemic areas, such as South and Central America, the Middle East, sub-Saharan Africa, Russia, China, Australia and New Zealand. We have presented a case of innumerable cystic echinococcosis of lung and liver. The multiple lesions of cystic echinococcosis in chest X-ray graphy can imitate the metastatic malignancy of lung.

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Cystic echinococcosis is seen worldwide. Considerable public health problems are encountered in endemic areas, such as South and Central America, the Middle East, sub-Saharan Africa, Russia, China, Australia and New Zealand. Most cases in the USA and Central Europe occur in immigrants from endemic areas.[1] Of patients with cystic echinococcus, 85–90% show single organ involvement and 70% harbour a solitary cyst. The liver is the most common site of cyst formation, followed by the lung in 10–30% of cases and other sites (usually the spleen, kidney, orbit, heart, brain and bone) in 10% of cases.[1]

1. Case report

50 year old man was referred to our clinic with chest pain, loss of appetite, weight loss, and dyspnea. There was no importance in his medical history except smoking cigaratte. Physical examination revealed coarse crackles at middle and lower area of both lungs and expiratuar rhonchi. There was bilateral multiple nodular lesions at his chest X-ray (Fig. 1).

Further imaging was obtained in the form of a computed tomography (CT) scan. It demonstrated multiple cystic lesions that were various in diameter and located at both lungs (Fig. 2A, B). Also a cystic lesion approximately 7 cm in a diameter was located at the right lobe of liver (Fig. 3).

After imaging procedures he was hospitalized and bronchoscopy was done. Endobronchial lesion was not observed and bronchial lavage was obtained. Pathologic examination of the bronchial lavage showed germinative membranous structures of E. granulosus. Peripheral eosinophilia was present (18%), erythrocyte sedimentation rate was 102 mm/h (0–20 mm/h), and C-reactive protein was 97.1 mg/L (0–5 mg/L). All other biochemical tests were normal. Indirect haemagglutination test was positive.

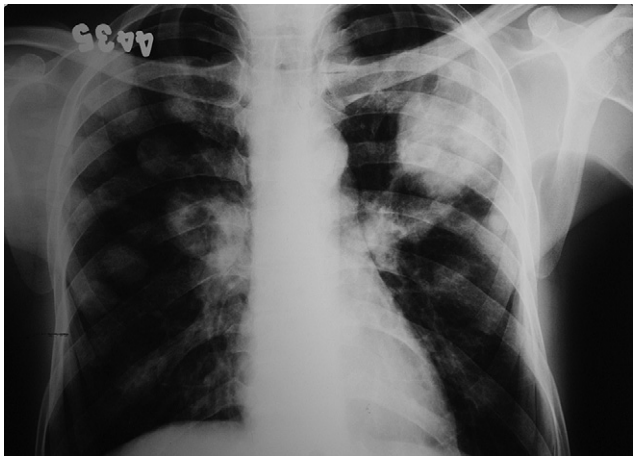

Fig. 1. Chest X-ray showing innumerable nodular lesions in both lungs resembling metastasis.

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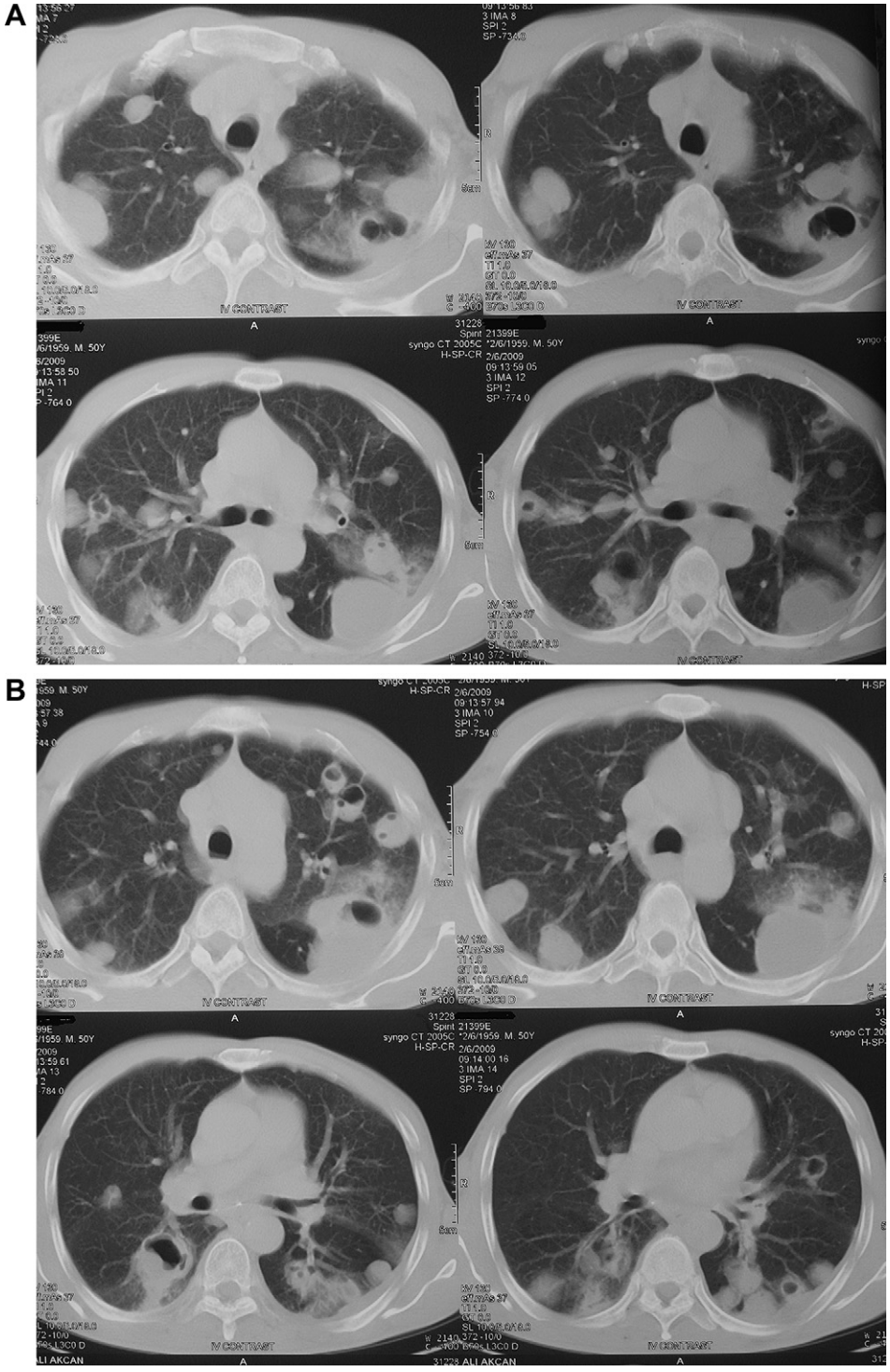

Fig. 2. Thorax CT revealing bilateral multiple nodular lesion.

Albendazole was started at a dose of 15 mg/kg/day. The patient was advised for the surgical resection of cyst in liver but he did not accept it.

2. Discussion

Echinococcosis is classified under the category of invasive cestode (tapeworm) infections. Mainly two forms of echinococcosis are defined: 1) cystic echinococcosis, which is caused by E. granulosus and has a worldwide distribution with a predominance in sheep-raising areas; 2) alveolar echinococcosis which is rare and potentially fatal. E. multilocularis is restricted to the northern hemisphere.[2]

Patients with cystic echinococcosis mostly have single organ involvement (85–90%), and the liver is the most common site of involvement, followed by the lung. Of patients with lung cysts, ~20–40% also have liver cysts.[3] Pulmonary hydatid disease affects the right lung in ~60% of cases, 30% exhibit multiple pulmonary cysts, 20% bilateral cysts and 60% are located in the lower lobes.[3,4]

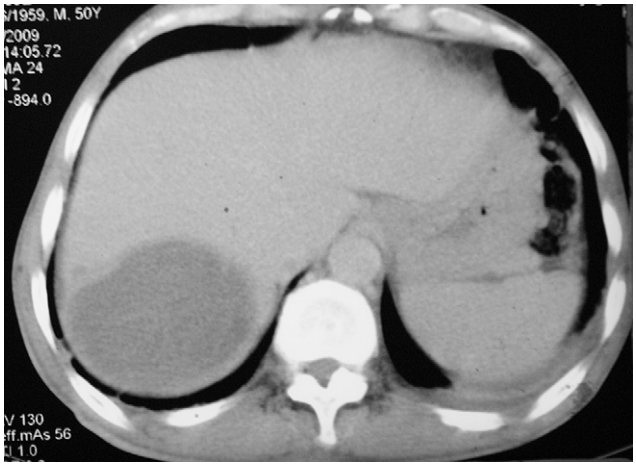

Fig. 3. CT revealing a large hepatic lesion.

Clinical features of E. granulosus infection depend upon the cyst site and size. Small cysts may remain asymptomatic indefinitely, but cysts may enlarge to >20 cm in diameter and cause symptoms by compressing adjacent structures. Mediastinal cysts may erode into adjacent structures causing bone pain, haemorrhage or airflow limitation. Symptomatic hydatid disease of the lung, however, more often follows rupture of the cyst. The cyst may rupture spontaneously or as a result of trauma or secondary infection.[5]

The most valuable diagnostic method in pulmonary hydatid disease is the plain chest radiograph.[3] Typical chest radiographic appearances of uncomplicated pulmonary hydatid disease are one or more homogeneous round or oval masses with smooth borders surrounded by normal lung tissue.[6]

In conclusion, we have presented a case of innumerable cystic echinococcosis of lung and liver. The multiple lesions of cystic echinococcosis in chest X-ray graphy can imitate the metastatic malignancy of lung.

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