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Case Report: Secondary Pleural Hydatidosis

Mehmet Oğuzhan ÖZYURTKAN, Semih KOÇYİĞİT, Muharrem ÇAKMAK,
İbrahim Ethem ÖZSOY, Akın Eraslan BALCI

Fırat Üniversitesi Tıp Fakültesi, Göğüs Cerrahisi Anabilim Dalı, Elazığ, Türkiye

SUMMARY: Hydatid cyst has a predilection to locate in liver, lungs, and brain. Intrathoracic extrapulmonary locations are generally the mediastinum, pleura, pericardium and chest wall. Pleural involvement usually follows the rupture of a pulmonary or hepatic cyst inside the pleural space causing secondary pleural hydatidosis. Radiological investigations of a patient suffering from cough and dyspnea revealed multiple cysts located in the posterior lower right hemithorax, and implanted in the diaphragmatic pleura and parietal pleura lining the chest wall. He had undergone two hepatic hydatid cystectomy operations. These multiple cysts were removed by thoracotomy. The possibility of secondary pleural dissemination should be considered in patients with lobulated cystic masses as well as a previous hepatic cystic hydatid disease,

Key Words: Hydatid cyst, Pleura, Thoracotomy

Olgu Sunumu: Sekonder Plevral Hidatidoz

ÖZET: Hidatik kist sıklıkla karaciğer, akciğer ve beyini tutmaktadır. İntratorasik ekstrapulmoner tutulum yerleri arasında mediyasten, plevra, perikard ve göğüs duvarı sayılabilir. Karaciğer veya akciğerdeki bir kistin plevra içine rüptüre olmasıyla sekonder plevral hidatidozise sebep olan plevral tutulum meydana gelir. Öksürük ve nefes darlığı ile başvuran bir hastanın radyolojik incelemelerinde sol hemitoraks bazalinde, diyafragmatik ve göğüs duvarı pariyetal plevrası boyunca yayılan multipl kistler saptanmıştır. Hastanın özgeçmişinde iki kez karaciğerden hidatik kistektomisi mevcuttu. Plevral kistleri torakotomiyle çıkarıldı. Özgeçmişinde hepatik kist hidatik öyküsü olan kişilerde saptanan intraplevral lobule kistik yapılar, akla kist hidatiğin sekonder plevral yayılımını getirmelidir.

Anahtar Sözcükler: Kist hidatik, Plevra, Torakotomi

INTRODUCTION

Also known as echinococcosis or hydatidosis, human hydatid disease is the most severe helminthic zoonosis, which has important medical, social and economic effects in Turkey (1). The liver and the lungs are the most commonly affected areas in adults. Intrathoracic extrapulmonary locations are very rare, and generally include the mediastinum, pleura, pericardium and chest wall (2). Pleural involvement is rare, and usually follows the rupture of a pulmonary or hepatic cyst inside the pleural space causing secondary pleural hydatidosis (SPH) (3). Surgery is the treatment of choice for hydatid disease, and antihelmintic therapy has been advocated to reduce the incidence of recurrence (4). Herein we report a case of multiple pleural hydatid cysts.

CASE REPORT

A 70-year-old man was admitted to our clinic with a complaint of coughing and dyspnea. There was diabetes mellitus in the past story of the patient. He had no history of contact with carnivores, and sheep, but he had underwent two hepatic hydatid cystectomy operations at the ages of 53 and 61 years. Routine biochemical analyses were within the normal limits, and electrocardiogram was also normal. Physical examination revealed dullness to percussion and diminished breath sounds over the right lower lung field. Computed tomography (CT) scan of the thorax showed two lobulated cystic lesions, 11 x 6 cm and 6 x 3 cm in size, at the lower right hemithorax (Figure 1). Magnetic resonance imaging of the thorax revealed multiple cysts located in the posterior lower right hemithorax. These cysts were implanted both in the diaphragmatic pleura and parietal pleura lining the chest wall (Figure 2). A right posterolateral thoracotomy was performed for the patient, and multiple intact and ruptured hydatid cysts were found in mild turbid pleural fluid. We removed the pleural fluid and all of the cysts and performed visceral pleural decortication. No intraparenchymal cysts were found. There were no complications in the postoperative period and he was discharged 10 days after the operation. The antihelmintic agent albendazole (10 mg/kg) was administered daily for three months postoperatively. There was no recurrence of the disease during a follow-up of 6 months.

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Yazışma /Correspoding Author: M. Oğuzhan Özyurtkan
Tel: (90) (424) 233 35 55 Fax: -
E-mail: moozyurtkan@hotmail.com

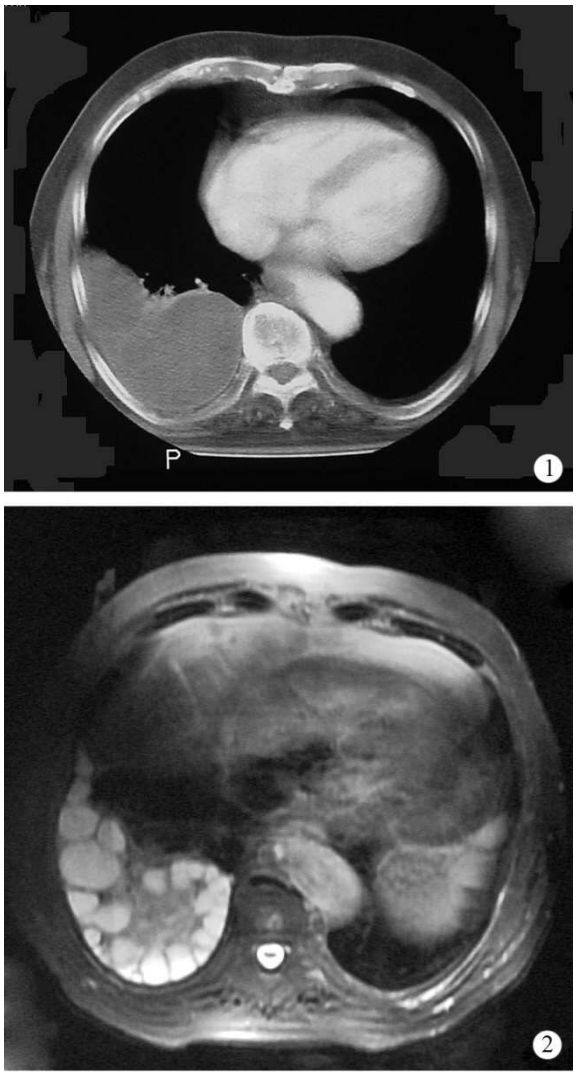

Figure 1. Computed tomography scan of the thorax showing two lobulated cystic lesions at the lower right hemithorax. **2.** Magnetic resonance imaging of the thorax revealed multiple cysts implanted in the diaphragmatic pleura and parietal pleura lining the chest wall

DISCUSSION

Hydatid cyst has a predilection to locate in liver, lungs, and brain. Extrapulmonary intrathoracic hydatid cysts are found in chest wall, mediastinal, pericardial, myocardial, lobar fissure and pleural locations (2). To date, pleural hydatid cysts were reported to be the most common forms of extrapulmonary intrathoracic cysts with an incidence of 53- 72% (1, 2).

Although, in rare instances, SPH has been associated with a haematogenous dissemination of the larvae, usually it is caused by a rupture of a neighbouring cyst with dissemination of the contents of the cyst along the pleura. Since in about 90% of episodes the cyst is no longer fertile after rupture, SPH is a rare event occurring in less than 10% of such cases. Three different forms of SPH have been described: pleural granulomatosis, hydatidothorax, and pleural hydatid graft (3). The case reported here is an example of this last form, and we suggest that our patient had SPH having undergone surgery for hydatid cyst in the liver 17 and 9 years before.

Cystic hydatid disease is asymptomatic in 30% of the patients, and when symptoms occur, they are usually due to the compression of the underlying pulmonary tissue by the cyst and/or to the presence of complications, such as rupture or infection (4). Ruptured hydatid cyst in the thorax may cause an eosinophilic pleural effusion or pleural empyema (5, 6). Our patient suffered from cough and dyspnea. During thoracotomy, we found multiple ruptured and intact hydatid cysts and mild pleural fluid. The eosinophil count of the fluid was less than %10 of the total nucleated count, demonstrating this mild effusion was not eosinophilic.

Surgery is the treatment of choice for patients with intrathoracic hydatid disease and thoracotomy was used in all patients. Extrapulmonary lesions were removed by cyst extirpation from the surrounding tissue or by pericystectomy (1). Medical therapy with albendazole has been proposed as adjunct therapy to surgical procedures, as a primary medical therapy in patients who cannot have complete cyst removal by surgery (4). Also medical therapy is useful when surgery is technically difficult or contraindicatied due to high risk of morbidity or mortality (7).

Hydatid cysts may be located in many different sites, including extrapulmonarily in the pleural space. We think that this case is an example of SPH which emphasizes when detection of pleural lobulated cystic masses or effusion in a patient having previous hepatic cystic hydatid disease, the possibility of secondary pleural dissemination should be considered.

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