

CLINICAL CASE

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Multiple Malignant Pulmonary Echinococcosis Suggesting Metastatic Carcinoma – Case Report

Złośliwa rozsiana bąblowica płuc sugerująca przerzuty raka – opis przypadku

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Abstract

Background. Pulmonary echinococcosis can present with manifestations suggestive of metastatic malignant lung disease.

Material and Methods. A critically ill, emaciated patient was admitted to the hospital with findings suggestive of massive malignant metastatic spread to both lungs. Extensive clinical workup failed to disclose primary malignant neoplasm. Biopsy of the pulmonary lesion was performed.

Results. The biopsy disclosed echinococcosis of both lungs. Treatment with Mebendazole resulted in regression of echinococcosis.

Conclusions. Multiple malignant echinococcosis of lungs may simulate metastatic spread of cancer. Biopsy may be necessary for diagnosis. Treatment should be prolonged (*Adv Clin Exp Med* 2005, 14, 3, 617–619).

Key words: pulmonary echinococcosis, pulmonary hydatidosis, malignant pulmonary echinococcosis.

Streszczenie

Wprowadzenie. Bąblowica płuc może przebiegać pod postacią sugerującą przerzuty raka.

Materiał i metody. Mężczyzna w bardzo ciężkim stanie został przyjęty do kliniki z objawami wskazującymi na liczne przerzuty raka do obu płuc. Kompleksowe badania kliniczne nie wykryły ogniska pierwotnego nowotworu. Wykonano otwartą biopsję zmian w płucach.

Wyniki. Pobrany materiał pozwolił na rozpoznanie bąblowicy obu płuc. W wyniku leczenia Mebenzadolem uzyskano ustąpienie bąblowicy.

Wnioski. Rozsiana bąblowica płuc może imitować przerzuty raka do obu płuc. Właściwe rozpoznanie wymaga biopsji. Leczenie powinno trwać długo (*Adv Clin Exp Med* 2005, 14, 3, 617–619).

Słowa kluczowe: bąblowica płuc, złośliwa bąblowica płuc.

While hemoptysis, dyspnea, and multiple non-calcified pulmonary nodules are usually suggestive of metastatic lung disease, primary echinococcosis can present with similar manifestations [1].

Case Report

A 58-year-old man was admitted to the Kaplan Hospital because of hemoptysis, dyspnea and fatigue of 18 months duration. His past history was unremarkable except for an 80 pack-year history of

smoking. On physical examination he appeared sick and malnourished, with a respiratory rate of 20 per minute. No other abnormal physical findings were noted. The chest roentgenogram showed multiple non-calcified nodules of various sizes, up to 5 cm in diameter, scattered throughout both lung fields (Fig. 1). The pertinent laboratory data included hematocrit 40%, white blood count 10 000 per mm³ with 21% eosinophils, and erythrocyte sedimentation rate of 75 mm per hour. Serum albumin was 4.0 gm per 100 ml, globulin 4.2 gm per 100 ml. Cytologic and bacteriologic



Fig. 1. Multiple non-calcified pulmonary nodules are seen over both lung fields

Ryc. 1. Rozsiane, niezwapnione guzki widoczne w obu polach plucnych

studies of the sputum were negative. The Casoni skin test for *Echinococcus granulosus* was negative. Exhaustive search for a primary malignant neoplasm was negative. Repeated percutaneous fine needle aspirations of the lung nodules yielded only pigment-laden macrophages. The patient refused any further diagnostic workup, but consented to an open lung biopsy. This disclosed diffuse pulmonary involvement by cysts of *Echinococcus granulosus*. Because of the patient's clinical deterioration, resection of all parasitic cysts was not contemplated at this time.

Ultrasonographic study of the liver performed after the operation disclosed multiple cysts, ranging from 2–6 cm in diameter, some containing daughter cysts. Treatment with Mebendazole 30 mg/kg body weight was started. As further clinical deterioration was noted during the next two months, and no regression was observed on radiograms, the Mebendazole dose was increased to 50 mg/kg body weight. Nine months later, clinical and radiographic improvement was noted, with marked regression of hydatidosis over the next two months. Ultrasonographic study documented complete re-

solution of liver cysts, and blood eosinophilia disappeared.

Discussion

The diagnosis of pulmonary hydatidosis can be difficult. Usually the disease presents on roentgenograms as one or more discrete round lesions, typically sharply defined, and often with a surrounding inflammatory reaction. However, a "cannonball" appearance of the lesion is not uncommon [2, 3], and presentation as a large pulmonary mass has also been described [4]. Complete or partial calcification of some of the cysts is often looked for, but in the series of Amir-Jahed and colleagues, it was present in only eight of 222 patients (3.6%) [5]. A special form has been described, the so-called multiple malignant pulmonary hydatidosis, with multiple cysts compressing lung parenchyma and causing atelectasis. In this variant, progressive respiratory deficiency may develop, leading to right ventricular failure [1]. Not infrequently pulmonary echinococcosis is misdiagnosed as metastatic carcinoma.

Imaging studies include ultrasonography, computerized tomography, and magnetic resonance imaging.

The Casoni skin test is not specific. It has been reported as positive in 59–100% of patients, depending on the organ involved. In patients with involvement of lungs, liver and spleen, it has been reported as positive in 72%, 92 and 100%, respectively [5–7]. False negative results occurred in 41% of patients, and false positives in 6–10% [5–7]. Therefore, histologic diagnosis of a biopsy specimen may be necessary, before treatment can be started.

The suggested daily dose of Mebendazole for liver and lung echinococcosis is 30–50 mg/kg body weight, administered in courses of 21–30 days each. The length of time elapsed before regression and resolution is variable. Therefore, absence of early response to therapy should not be interpreted as failure, and treatment should be continued at least for one year [8–10]. In our patient, a high dose of Mebendazole was administered for 11 months, before clinical and radiographic evidence of improvement was noted.

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