

ALBENDAZOLE AND ALVEOLAR DISEASE: A CASE REPORT

Kh. Daneshjou, Z. Haghshenas

Department of Pediatrics, Imam Khomeini Medical Complex, School of Medicine, Tehran University of Medical Sciences, Tehran, Iran

Abstract- *Hydatidosis is a zoonosis transmitted by domestic and wild animals. Two distinct clinical presentations are as follows: unilocular or cystic hydatid disease and the more malignant form, called alveolar hydatid disease.*

This case report presents a patient who complained of chest pain and hemoptysis and his lung CT scan suggested solid tumor. He was found to have alveolar disease which responded to albendazole medical therapy. Acta Medica Iranica: 40(2): 104-105; 2002

Key Words: *Alveolar hydatid disease, echinococcosis, medical therapy, albendazole*

INTRODUCTION

Hydatid disease is the most widespread serious human cestode infection in the world. The parasite is acquired in childhood (1). Echinococcosis has two forms: unilocular cyst and alveolar cyst disease (2).

Alveolar disease is less cystic in appearance and resembles a diffuse solid tumor (1). Medical therapy for inoperable cysts with either albendazole or mebendazole has provided improvement in most patients and cure in some (3,4).

CASE REPORT

An eleven year old boy was referred to our unit from Mianeh region with chief main complaint of chest pain and hemoptysis. Chest x-ray showed a large cystic appearance with a diameter of about 5 cm at upper lobe of left lung and multiple cysts in other parts of both lungs. CT findings suggested a solid tumor and serological study confirmed hydatid disease.

The diagnosis was alveolar hydatid disease. Because of multiple cysts in other parts of the lungs and inoperable task, medical therapy was started (200 mg albendazole twice a day for 4 weeks). After a course of medical management, chest pain and hemoptysis suppressed gradually.

Another 6 courses were performed. Control CT scan showed reduction in diameter and augmented density of cyst fluid of other tissues, it was a good response to medical therapy. After 3 years of follow up, the patient remains symptom free.

DISCUSSION

Hydatid disease is the most widespread serious human cestode infection in the world (1). Echinococcosis has two forms: hydatid or unilocular cyst disease caused by *E. granulosus* or *E. vogelli*, and alveolar cyst disease caused by *E. multilocularis*.

Humans acquire echinococcosis by ingesting viable parasite eggs with their food (2). In areas with endemic form of *E. granulosus*, the parasite is often acquired in childhood, but liver cysts require many years to become large enough to be detected or cause symptoms.

In children, the lungs appear to be the most common site, although 70% of adults have disease in their right lobe of the liver (1). Approximately one fifth of children with a pulmonary cyst have also a concurrent liver cyst (3).

Reproduction of *E. multilocularis* resembles a malignancy (1).

Their gradual invasion to adjacent tissues is tumor like, and the parasite infection may "metastasize" to distal parts of the body. Symptoms are usually of gradual onset referring to the organ involved which is often the liver (2). Symptoms of alveolar hydatid disease most often occur in older adults but have been reported in children as young as 5 years of age. The most common findings are hepatomegaly, and liver tenderness (3).

Alveolar disease is less cystic in appearance and resembles a diffuse solid tumor. CT findings are similar to that of ultrasonography and can sometimes be helpful in distinguishing alveolar from cystic forms, geographically both occur (1).

Serologic sensitivity is 80-100% and specificity is 88-96% for the liver cyst infection but lower for lungs (50-56%) or other organ involvements (25-56%) (2). Most patients with alveolar hydatidosis, however develop detectable antibody responses (1). Alveolar echinococcosis is often confused with hepatoma cirrhosis and sometimes pancreatic

Correspondence:

Kh. Daneshjou, Department of Pediatrics, Imam Khomeini Medical Complex, Tehran University of Medical Sciences, Tehran, Iran
Tel: +9821 2545346. E-mail: Dr-Daneshjou@hotmail.com

carcinoma, metastatic liver disease and cholangitis (1). Optimal treatment of symptomatic cysts is surgical dissection of the cyst. Medical therapy for inoperative cysts with either albendazole or mebendazole has provided improvement in most patients (55-79%) and cure in fewer cases (29%).

The preferred agent is albendazole, three or more cycles of 400 mg of albendazole twice a day for 4 weeks followed by a 2 week rest period without therapy (2,6).

Alveolar hydatidosis is frequently incurable by any modality. Medical therapy with albendazole may slow the progression of the disease (1,8).

Other trials of albendazole also have shown beneficial effects in many, but not all (3).

In general, because alveolar hidatid disease is usually polycystic and inoperable, in addition favorable response to albendazole has been shown in alveolar hidatid disease, this drug is highly effective and should be tried before surgical intervention.

REFERENCES

1. Onald Blonton. Echinococcosis In: Behrman Richard E, Kliegman Robert M, Jenson Hal B. Nelson textbook of pediatrics 16th ed, Philadelphia, W. B sunders company 2000; 1079-81.
2. Charles H, Kings. Cestodes-echinococcosis In: Mandell Gerald L, Bennett John E, Dolin Raphael. Principles and practice of infectious 5 th ed, New Youk, Churchill livingstone 2000; 2962-3.
3. Jerrold A. Turner cestodes-echinococcosis In: Feigin Ralph D, Cherry James D. textbook of pediatric infectious diseases 4th ed, Philadelphia W. B. Sunders company 2000, 2522-7.
4. Xiao S, Feny J, Yao M. Effect of antihydatid drugs on carbohydrate metabolism of metacestode of echinococcus granulosus, Med J Engl Sep 1995; 108(9): 682-8.
5. Tsinoyiamis EC, Siakas P, Moutesidou KJ, Preoprative benzimidazole therapy in human hydatid liver disease. Int Surg. Apr June 1995; 80(2): 131-3.
6. Owczarczyk Skoczynska M, Olen ski J, Grzeszczuk A. Echinococcus granulosus cysts in the liver. Ultra sonography finding during medical treatment. Pol merkuriusz lek Jul 1999; 7(37): 4-7.
7. Dzhabarova Vi Novik Ts. The experimental chemotherapy of larval alveolar echinococcosis. The search for an optimal regimen of albendazole use. Med Merkuriusz Mosk Jan Mar 1999; (1): 52-5.
8. Afif H, Aichame A, Trombati N, Bahlaoui A. Multiple pulmonary hydatidosis with floating ballon appearance and cardiac localization. Rev Mal Respir. Jun 2000; 17(3): 697-9.