

Giant Hydatid Hiding the Heart!

Parimal Tayde*, Anil Wanjari and Vikram Kokate

Department of Medicine, Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences, Sawangi Dt Wardha, Maharashtra, India

Abstract

Hydatidosis or echinococcosis a common parasitic infestation caused by *Echinococcus* spp. Dog is the principle reservoir of adult worm. Hydatid cyst is commonly found in liver and lungs. Slaughterers, tanners, shepherds, butchers and veterinarians and those coming in close contact with the animals are at a high risk of contracting this disease. Herein, we present case of a 16-year-old young male who had large hydatid cyst in the lung, double the size of his heart and this giant cyst occupied almost entire hemithorax. It obliterated the right heart border and the costophrenic angle mimicking a large pleural effusion. The lateral view and CT Thorax revealed the giant Hydatid cyst.

The patient underwent surgical intervention, received albendazole and discharged uneventfully.

Keywords: *Echinococcosis*; *Pulmonary*; *Echinococcus granulosus*; *Echinococcus multilocularis*

Introduction

Hydatid disease is a parasitic infestation caused by the larval stage of *Echinococcus* spp. *E. granulosus* and *E. multilocularis* are responsible for disease in humans. Even though it may involve any organ, the most common location is the liver, followed by the lungs. Dogs are the principle reservoir of adult worm. Persons in close contact with an infested animal or consuming contaminated water or food are at risk for contracting this disease [1]. Other mammals such as sheep, camels and cattle serve as intermediate host for the larvae [1].

Main occupations at risk of this disease include slaughterers, tanners, shepherds, butchers, and veterinarians and all those who come in close contact with the animals during work.

Countries like New Zealand, Australia, America with large numbers of breeding cattle and sheep flocks are endemic for the disease [2].

Herein, we present a case of a young male with giant hydatid cyst in lung.

Case Presentation

A 16-year-old young male came to the outpatient department complaining of cough, right sided chest pain, low grade fever and progressive dyspnea since 3 months. On physical examination, patient was afebrile, respiratory rate was 22/min, pulse and blood pressure were normal. The percussion note was dull on right side with absent breath sounds. Routine blood and urine tests were normal. The white blood cell (WBC) count was 7600/ μ L with a normal differential count. Chest x-ray (CXR) showed a large homogeneous opacity in right hemithorax which obscured the right heart border and extended up to lateral chest wall and caused blunting of costophrenic and cardiophrenic angles. However the upper border of opacity was convex (Figure 1). The initial impression was large right sided pleural effusion. A lateral film showed a cystic lesion with ill defined margins in the right lower and mid zone (Figure 2). Such lesions could be infectious or neoplastic.

Abdominal ultrasound study was normal.

Computed tomography (CT) confirmed the cystic nature of the lesion. It also showed multiple daughter cysts within the main cyst (Figure 3).

He was started on albendazole and underwent right thoracotomy and complete enucleation of the hydatid cyst.



Figure 1: Chest X-ray showing a dense homogenous radiopaque opacity involving most of the right hemithorax, obscuring right heart border and blunting costophrenic angle, mimicking a large pleural effusion.

Microscopic examination of the fluid showed numerous scolices.

Pharmacotherapy with albendazole was continued. After 10 days of hospitalization, he was discharged in stable condition. He is on regular follow up and doing well.

Discussion

When humans swallow tapeworm eggs from contaminated water or food or by direct contact with infested animals, they can develop Hydatid cyst. Thus occupational exposure is an important risk factor for people working in close contact with animals.

***Corresponding author:** Dr Parimal Tayde, Assistant Professor, Department of medicine, DMIMS, Sawangi, Dt-Wardha, Maharashtra -442001, India, E-mail: parimaltayde@yahoo.co.in

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Figure 2: lateral x ray showing well defined rounded cystic mass in anterior mediastinum.

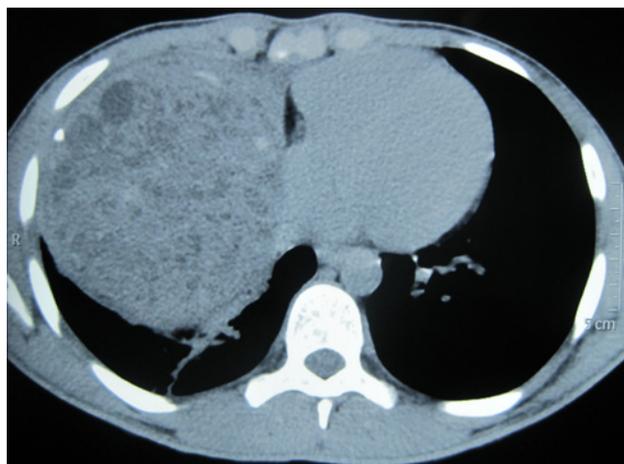


Figure 3: The thoracic CT shows homogenous cystic mass in right hemithorax multilocular cysts with clear borders.

It is commonly found the liver and the lung is the second site of involvement but it can be found in any site. In pediatric age group, the cyst is more commonly found in the lungs than in the liver [3].

In the lung, it is more often on the right side of lung and in most instances, the cyst is solitary [4].

Giant hydatid cysts of the lung are defined as cysts measuring 10 cm or more [5].

The cyst may rupture in a bronchus or pleura or get secondarily infected. Clinically cyst may remain asymptomatic till it becomes large or it may produce compression symptoms.

Anaphylactic shock is a rare presentation.

Radiological findings range from round or oval cysts or cavity, water lily sign, meniscus sign, and hydropneumothorax. A water-lily radiological sign is a diagnostic feature for a cyst associated with communication with small bronchioles and with a detached laminated membrane [6].

It is usually treated medically (albendazole with a dose of 15 mg

per kg of body weight for three courses of 28 days each, with a rest of 2 weeks in between) [7].

Surgical intervention is the mainstay of treatment in giant lung hydatid. Medical therapy with albendazol and/or praziquantel is also used as an adjunct.

A high index of suspicion is of utmost importance for the correct diagnosis of hydatid disease, particularly in those with high risk occupation.

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