



Case Report

Multi Organ Echinococcosis Including Liver, Lung, and Breast: A Rare Case Report

Authors

Dr Nafees Ahmad Khan, Dr Salauddin, Prof. Mohammad Shameem, Dr Ashish Jain, Dr Arshad Ejazi, Dr Arif, Dr Shahzad

Department of Pulmonary Medicine, J.N. Medical College, AMU Aligarh

Department of Pulmonary Medicine, Max super-speciality Hospital, Saket, New Delhi

Corresponding Author

Dr Nafees Ahmad Khan

Assistant Professor, Dept of Pulmonary Medicine, J.N. Medical College, AMU Aligarh U.P. India 202002

Email: Nafees.doc@gmail.com, Phone - +91-8587052608

Abstract

Hydatid disease (HD) is endemic in the many part of the world with more prominent regions are South America, New Zealand, Australia, Middle East Africa, Turkey and Southern Europe, but small foci are common in almost every region of the world including India where the prevalence of Hydatid cyst high in Tamil Nadu, Andhra Pradesh, and Jammu and Kashmir. Infestation by Echinococcus granulosus in humans most commonly occurs in the liver (55-70%) followed by the lung (18-35%); the two organs can be affected simultaneously in about 5-13% of cases. Incidence of unusual sites is about 8-10%. It is not very common to find multi-organ involvement of hydatid cyst. We present a case of a 23-year-old Female with multi-organ echinococcosis with extensive pulmonary and hepatic involvement including breast.

Keywords: Hydatid cyst, multi-organ involvement, lung, liver.

Introduction

Hydatid disease is caused by larvae of the tapeworm Echinococcus. Four species are recognized and the vast majority of infestations in humans are caused by E. granulosus. E. granulosus causes cystic echinococcosis, which has a worldwide distribution. The most common organ involvement is liver followed by Lung. Incidence of HD involving the spleen, kidney, peritoneal cavity, skin and muscles is about 2% each and incidence of the heart, brain, ovaries, pancreas, gallbladder, vertebral column, breast, and bones thyroid gland, involvement is about 1%

each^[1]. Multi-organ abdominal HD is the most serious form of HD and is potentially fatal.

Case report

This was a 23 year old female patient presented to us with the c/o cough and right hycondrial pain for 1 months which was not relived with cough syrup and pain killers. A chest X-ray done show multiple rounded opacity in B/L lung field. At the time of presentation she was having pain in Rt hypocondrium and cough. The examination at admission showed pulse, 120/min; respiration-20/min, blood pressure-100/64 mmHg, afebrile on

touch, she was conscious and well oriented. There was no palpable superficial lymph nodes, no generalized edema, normal breath sound. Her abdomen was soft and flat, and there was some tenderness in right upper quadrant but no rebound tenderness or rigidity. Her routine blood investigation was normal including complete blood count, normal eosinophils, renal functions and liver functions. She was advised to do a chest X ray (Fig-1) which showed multiple cystic lesion in bilateral lung field. MRCP (Fig-2) was also done which showed multiple cystic lesion in liver with few of them showing hydatid membrane within it. Her serum echinococcus IgG (EIA) was >200 u/ml. (normal is <8). In v/o very high IgG level and characteristic radiological findings she was diagnosed as hydatid cyst of the lung, liver and Left breast and she was started on albendazole.



Fig 01

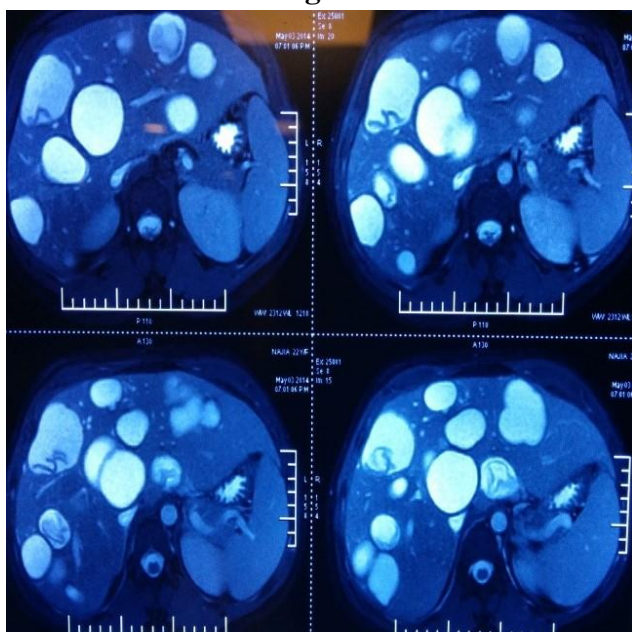


Fig 02

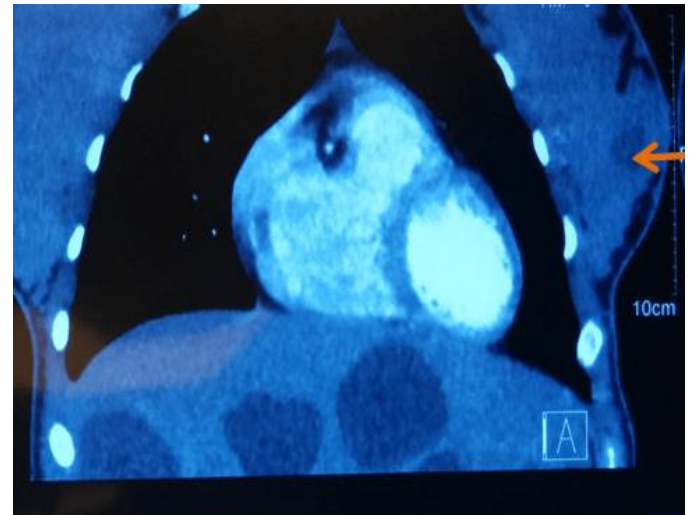


Fig 03

Discussion

Hippocrates was first to illustrate a liver hydatid cyst. Hydatid disease is endemic cattle farming areas of Asia, North and East Africa, South America, Australia, and the Middle East¹. Dogs and other carnivorous animals are definitive hosts, while sheep, cattle, horses, and goats are intermediate hosts. Humans are an accidental and dead-end intermediate host^{2,3}. Clinical presentation depends upon the size, site, and depth of the lesion. Unless these slowly enlarging cysts express space occupying effects on specific organs, patient usually remain asymptomatic. Pulmonary symptoms include cough, chest pain and haemoptysis, while hepatic involvement may cause fever, right upper quadrant pain, pruritis, urticaria, or eosinophilia. Other presentations may include anaphylaxis, pathological fractures (bone involvement), neurological deficit (CNS involvement), pericarditis, arrhythmias (CVS involvement) and pelvic masses⁴. Radiographic imaging studies are important in detecting and evaluating echinococcal cysts. Plain films will reveal unruptured pulmonary cysts as rounded masses of uniform density while ruptured cysts result in complex cavitory lesions with variable radiographic features, which include an air-fluid level, a floating membrane (water-lily sign), a double wall, an essentially dry cyst with crumpled membranes (serpent sign, rising sun sign) or an

empty cyst⁵. The most useful diagnostic utility is ultrasound or CT, on which lesions appear well defined, with or without internal separation^{6,7}. Treatment modalities include medical therapy with albendazole, percutaneous aspiration, infusion of scolicalid agents and re-aspiration of cyst content (PAIR) and surgical resection. Treatment is based on considerations of the size, distribution, location and manifestations of the cysts, as well as the overall health of the patient⁸. This patient had disseminated i.e. pulmonary and abdominal echinococcosis so 400 mg of oral albendazole twice daily started. Although echinococcosis is mainly prevalent in rural areas, patients present at all levels of health care owing to complications of the disease or the lack of a definitive diagnosis. Various radiological modalities are used in the diagnosis, treatment and follow-up of echinococcosis. Involvement of breast is extremely rare in hydatid cyst. But in our case there was a small hydatid cyst in left breast (Figure-3). Prompt recognition of the radiological features may prevent serious life threatening complications, which makes the radiologist an important role-player in the management of these patients.

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