

Unusual Presentation of Hydatid Cyst in a Child

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1. Abstract

Pulmonary hydatid disease remains an important healthcare problem in children. We report a case report of a 4-year-old child with chronic cough and hemoptysis for 2 months. he had no contact with dogs. Pleuropulmonary examination showed well-transmitted bladder murmurs and well-perceived vocal vibrations. The diagnosis of pleuropneumopathy was retained and the patient was treated with amoxicillin - acid clavulanic antibiotic therapy. In front of non-clinical improvement, ultrasound showed a left basal, rounded, thickened-walled, non-vascularized, non-doppler, single loculate basal cyst formation which is related to a hydatid cyst. Surgery consisted of a left posterolateral thoracotomy associated with a puncture-evacuation of the contents of the hydatid cyst, an exteriorization of the proligueus membrane. The recovery was good.

2. Introduction

Hydatidosis is a parasitosis due to the development of the larval form of taenia echinococcus granulosis. Hydatid cyst is a public health problem in endemic countries. In children, it sits in the lung and then the liver. We report an unusual observation of pulmonary hydatid cyst in a 4 years child after consent of his parents.

3. Case Report

This was the 4-year-old boy, from rural area. He was fully vaccinated, with no prior history of recent known tuberculosis infection. He didn't have a foreign body syndrome or repetitive respiratory infections and no contact with dogs. He had a chronic dry, di-

urnal and nocturnal cough with a single episode of low-abundance hemoptysis for 2 months a week, with night-sweating fever and general state conservation. On his admission, the general examination found a conscious child, afebrile at 36.8°C, normocard at 115 beats per minute, eupneic at 28 breaths per minute. His oxygen saturation was 98% in ambient air, Weight = 16.5 kg (M); Height = 101 cm (M). Pleuropulmonary examination showed well-transmitted bladder murmurs and well-perceived vocal vibrations. He had no percussion dullness. A strict face chest x-ray showed left basal opacity of watery tone erasing the cul de sac and diaphragmatic dome and not continuing up with a line of damsel (Figure 1). The biological balance showed hyperleukocytosis at 14100/mm³ with polynuclear predominance at 7995/mm³, a high CRP at 41 mg/l. A tuberculosis assessment including 3 koch bacillus casings were negative, a tuberculin intradermoreaction was negative and a genexpert in sputum was negative. The diagnosis of pleuropneumopathy was suspected and the patient was treated with amoxicillin acid clavulanic antibiotic therapy at a dose of 80 mg/kg/d in three doses per day for 14 days. In front of non-clinical improvement in particular a persistence of sweats, a profile radiograph showed a left basale opacity g watery tone well limited (Figure 2). An ultrasound showed a left basal, rounded, thickened-walled, non-vascularized, non-doppler, single loculate basal cyst formation, measuring 6.4 cm x 6.3 cm which may be related to a hydatid cyst (Figure 3). Hydatid serology was negative. An abdominal ultrasound to search for other locations was normal. The surgery consisted of a left pos-

terolateral thoracotomy associated with a puncture-evacuation of the contents of the hydatid cyst, an exteriorization of the proligueus membrane with a closure of the fistulas and an abundant washing. The improvement was good, the condition of the surgical site was clean, the child no longer had cough or hemoptysis. A chest X-ray after removal of the post-operative J6 tube was without abnormalities (Figure 4).



Figure 1: Chest x-ray showed left basal opacity of watery tone erasing the cul de sac and diaphragmatic dome



Figure 2: Profile radiograph showed a opacity of basale left watery tone well limited.



Figure 3: Ultrasound showed a left basal, rounded, thickened-walled, non-vascularized, non-doppler, single loculate basal cyst formation, measuring 6.4 x 6.3 cm which may be a hydatid cyst.



Figure 4: After 6 days of surgery chest x-ray was without abnormalities

4. Discussion

Pulmonary hydatid cyst is due to *Echinococcus granulosus* which is responsible for this infection, it is known in the achievement of certain animals such as dogs. In fact, man is an accidental intermediate host in parasite's life cycle. The lung is infested after crossing the liver filter, either directly by the lymphatics. Hydatid cysts grow faster in the lung than in the liver due to the elastic structure of the lung and can be invasive to most of the lobe by reaching giant dimensions [1]. Many studies reported a male predominance hydatid cyst [2]. This may be explained by the earlier and frequent contact of boys with dogs. Our patient was male. In the literature, a pulmonary hydatid cyst most commonly produces symptoms of cough, chest pain, breathlessness, expectoration, fever, hemoptysis [3]. Our patient had chronic cough and hemoptysis which wrongly led to bacterial or tuberculous pneumonia. Thus we emphasize the interest of thinking about a hydatid cyst even in the absence of clinical signs. Chest radiographs and thoraco-abdominal ultrasound are very useful for the diagnosis of pulmonary hydatidosis and evaluation of lesion extension [4]. The radiological findings are multiples. Larbaoui distinguishes 6 types according to the evolutionary stage of the pulmonary hydatid cyst [5]. The simple cyst is a young cyst that comes in the form of a round or oval homogeneous opacity of water tone with sharp contours and variable diameter called cannon ball image. In our context, profile radiography helped to better guide the diagnosis. Often ultrasound is very helpful in showing the cyst and looking for other locations especially in the abdomen [6]. It made it possible to retain the diagnosis in our patient. Biological diagnosis of hydatidosis is based on different immunological examinations that are often lacking in isolated and uncomplicated lung cysts. The sensitivity of immunology increases markedly in case of complication or associated liver cyst [7]. In our case, the serology was negative probably because the hydatid cyst was simple and we didn't have other location. Surgery is the treatment of choice for most patients with pulmonary hydatid disease. The aim of surgery is evacuation of the cyst, removal of the endocyst, and management of the residual

cavity [8], which was done in our case. Capitonnage seems better in childhood pulmonary hydatid cyst surgery.

5. Conclusion

Hydatid cyst remains a public health problem in children in Morocco. We must keep it in mind in front of cough hemoptysis and imaging of chest both face and profile. Often, Ultrasound confirm diagnosis. If unique hydatid cyst, conservative surgery is the treatment. The eradication of this parasitosis is based on prophylaxis.

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