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Case Report

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DOUBLE LUNG LOCALIZATION OF HYDATIDOSIS: REPORT OF ONE CASE

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ABSTRACT

Hydatidosis is a cosmopolitan antropozoonosis caused by the development in humans of the larval form of Echinococcus granulosus. It is a parasitic infection constituting a public health problem in the countries of the Mediterranean basin, particularly in Morocco, where it is endemic. The most frequent locations are the liver, lungs and spleen. The pulmonary localization is predominantly right and lower lobar, single in 2/3 of cases and double in 12% of cases. We report in our work a case of hydatid cyst with double right pulmonary localization admitted to our hospital.

KEYWORDS: Double Hydatid Cyst; Lung; Ct Scan; Imaging.

The Story

He is an 11-year-old grandchild, male with no particular history, living with his parents in the countryside and used to playing with the domestic dog. He had complained for several months of progressive right chest pain associated with a feeling of fickle fever. The persistence of the symptoms associated with the onset of a productive cough with hydatid vomiting and dyspnea required admission to the emergency department of our hospital. Physical examination revealed right pulmonary condensation syndrome in a child with generally preserved general condition. An emergency x-ray of the lungs shows two distinct well-limited opacities of homogeneous water tone at the right apical and basal site. A chest CT scan without and with injection was performed, thus making it possible to suggest the diagnosis of a double right pulmonary localization of hydatidosis in stages I (upper lobe) and IV (lower lobe), confirmed by biological tests highlighting highlight the echinococcus granulosus (Figure 1a and 1b).

The patient underwent surgical resection of the cysts with cures of Albendazole pre and postoperatively for three (03) months under clinical and laboratory monitoring. The evolution was favorable marked by simple postoperative procedures.

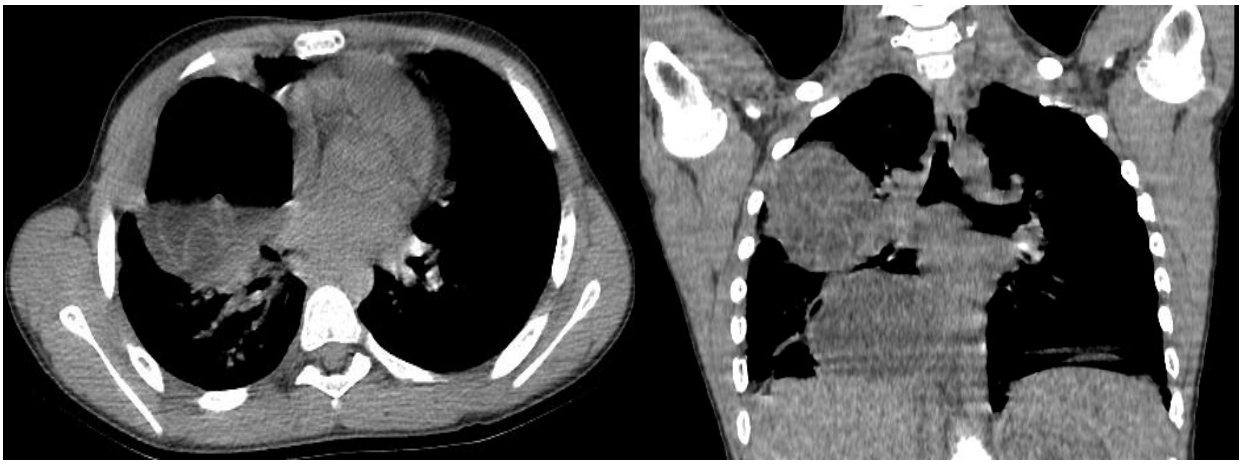

Figure 1 (a, b): Thoracic CT with injection of contrast product in axial section with coronal reconstruction (mediastinal window) showing two well-limited oval formations hypodense of fluid density located in the ventral segment of the right upper lobe (stage I) and in the lower lobe containing a hydro level -aeric and floating membranes realizing the sign of the snake (stage IV).

The Comments

Hydatidosis is a rare parasitic disease in sub-Saharan countries and common in Mediterranean countries such as Morocco where it is endemic. It is caused by the development in humans of the larval form of Echinococcus granulosus. The definitive host is the dog which infests itself by ingesting the infested meat of the intermediate host which is the sheep. The latter infests himself by grazing on grass soiled by dog droppings. Humans are an accidental host who become infected during contact with dogs or after ingestion of water, contaminated food or infested meat. After passing through the intestinal barrier, the parasite enters the mesenteric blood capillaries and passes through the portal circulation to reach the liver parenchyma where it can grow. It can reach the lungs by means of the portocaval anastomoses, or by the chyliferous way by the thoracic duct. This physiopathological mechanism is at the origin of the frequent localizations of hydatidosis which are hepatic and pulmonary. The embryo can therefore infest any organ in the human body from the systemic circulation.

Pulmonary hydatid cyst is an apparently benign disease that can be single or multiple, but serious due to the mechanical, infectious or metastatic complications that can occur. Diagnosis is based on history, clinic, hydatid serology and imaging. The right lung localization is generally predominant with major involvement of the lower lobe.[1] The apical localization of pulmonary hydatidosis has been rarely described in the literature, but the dual localization is not uncommon in countries with high endemicity. Physiopathologically, we distinguish primary multiple hydatidosis related to iterative infestations by life in rural areas as the case of our patient therefore explaining the difference in stage of these cysts, secondary metastatic hydatidosis due to an opening of the hydatid cyst in the venous circulation, and secondary bronchogenic hydatidosis by rupture of the hydatid cyst in the bronchi.[2]

Pulmonary hydatid cyst may be discovered incidentally during a routine examination (chest X-ray or CT scan) or be diagnosed with inconsistent symptoms of chest pain, hydatid vomiting or dyspnea.

The radiological aspects depend on the variable evolutionary stage of the cyst which can be healthy, crack or rupture (intra-bronchial or pleural) or become superinfect. When it is large it can be responsible for compressing adjacent structures. On thoracic CT, six (06) evolutionary stages are described ranging from stage I where the cyst is healthy as is the case for the upper lobe localization in our patient, to stage VI sequellar. In stage II, the cyst takes on the appearance of a crescent due to the introduction of air between the endocyst and the pericyst with partial detachment of the endocyst. Stage III is linked to a total detachment of the endocyst without evacuation of its fluid content with the presence of air bubbles within it in the form of trapped clearances or honeycomb. Stage IV corresponds to an intracystic hydro-aeric image by partial evacuation of the fluid content with a collapsed endocyst partially "double-arched appearance" or totally floating on the "water lily" liquid or completely submerged "sign of the snake". This is the case in our patient for the cyst with a lower right lobe localization in the form of a hypodense mass with a hydro-aeric level containing within it floating membranes thus making the sign of the snake, thus reflecting the cystic rupture. Complete evacuation of hydatid fluid with retraction of the endocyst in a "bell" characterizes stage V.[3] In our patient, there was no multi-visceral localization of hydatidosis on the cuts made in the abdominal region.

The medical treatment of hydatid cysts is based on the use of imidazoles (albendazole and mebendazole) which are recommended in multi-visceral forms, and as an adjuvant for isolated forms because they can generate satisfactory results. Surgical treatment depends on the clinical picture of the patient and the progressive stage of the pulmonary hydatid cyst. The prevention of hydatidosis relies on health education of populations for behavior change, veterinary control of the slaughter of livestock, the slaughter of stray dogs and the systematic deworming of domestic dogs.

CONCLUSION

Hydatidosis is a parasitic disease caused by Echinococcus granulosus, which occurs frequently in Morocco where it is endemic. The pulmonary localization is frequent and constitutes the second after that of the liver. The preferred site of the pulmonary hydatid cyst is the predominantly right lower lobe. The multiple localization of hydatidosis in endemic settings is not uncommon, linked to repeated infestations favored by life in rural areas. The elements of radiological semiology associated with the positivity of hydatid serology allow a positive diagnosis. The treatment is medico-surgical and prevention consists of intervening on a link in the chain of transmission.

Conflicts of interest: None.

REFERENCES

1. Abada D, Dhahri B, Aouina H, Ben Moussa H, et al. Aspects cliniques et radiologiques du kyste hydatique du poumon: à propos de 26 observations. Rev Mal Respir, 2009; 26(HS1): 77. PubMed | Google Scholar
2. Racil H, Ben Amar J, El Filali Moulay R, Ridene I, et al. Kystes hydatiques compliqués du poumon. Rev Mal Respir, 2009; 26(7): 727-34. PubMed | Google Scholar
3. Sajiai H, Rachidi M, Aitbatahar S, Serhane H, Amro L. Kyste hydatique pulmonaire : double localisation pulmonaire apicale inhabituelle. A propos d'un cas. Revue PAMJ, 14/11/2016.