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Mediastino-Pulmonary Hydatidosis Complicated by False Aneurysm

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Abstract **Case Report**

Multiple thoracic hydatidosis with vascular involvement is exceptional but has a very poor prognosis. The authors report the observation of a 32 year old patient, hospitalized for cough and recurrent hemoptysis. Chest radiography showed "balloon-like" images. Chest CT scan showed cystic formations in the lungs and a false aortic aneurysm. Hydatid serology was strongly positive. A medical treatment with albendazole was prescribed, but the patient died of massive hemoptysis before surgical resection of the false aneurysm, which was recommended under extracorporeal circulation. An analysis of our observation and of other cases of arterial complications of hydatid disease reported in the literature is made to relate the clinical, radiological and therapeutic characteristics of this rare but very serious complication of hydatid disease.

Keywords: HYDATIDOSIS, False aneurysm, mediastinal.

INTRODUCTION

Echinococcosis is a worldwide parasitic disease the arterial localization of echinococcosis is rare. It accounts for less than 2% of all hydatid cysts of the thorax [1]. It poses a problem of positive diagnosis in the absence of appropriate radiological and biological studies. It can present with multiple clinical aspects, which make a positive diagnosis more difficult.

We report the observation of an arterial localization of echinococcosis collected in the radiology department of the IBN ROCHD hospital (CASABLANCA). We discuss the clinical, radiological, biological and therapeutic specificities of this condition.

OBSERVATION

Mr B.A, 32 years old, of rural origin, was admitted in May 2021, in a medical department for diffuse chest pain, cough and hydatidoptsies, evolving in a context of altered general condition.

On admission, the clinical examination showed a fever of 39°C and left basi-thoracic rales. The cardiovascular examination did not reveal any murmurs or signs of right heart failure. The rest of the somatic examination was unremarkable.

Chest X-ray showed "balloon-like" left lung opacities, some of which were excavated in favor of a hydatid origin.

The thoracic computed tomography (CT) showed a pseudoaneurysm of the aortic arch within a compressive mediastinal hydatid cyst, associated with multiple left pleuropulmonary and homolateral retroperitoneal cystic formations.

A medical treatment based on Albendazole, at a dose of 800 mg per day in 2 doses, was started. Surgical removal of the compressive mediastinal cyst and the pseudoaneurysm, under extracorporeal circulation, was indicated but not performed, given the sudden occurrence of a fulminant hemoptysis.

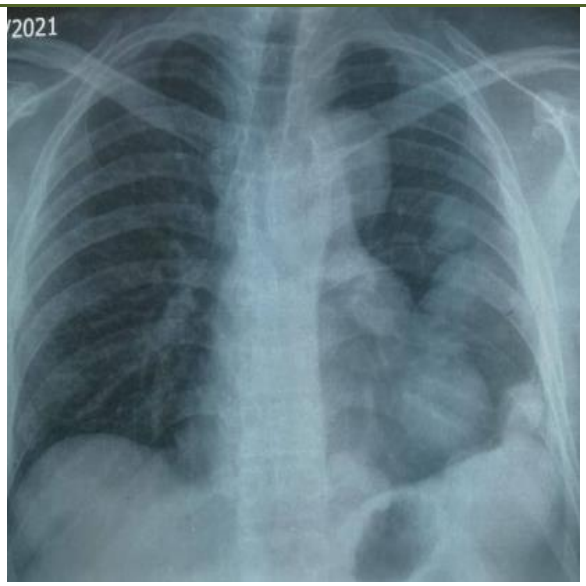

Figure 1: Frontal chest radiograph. Left mediastinal and pulmonary opacities

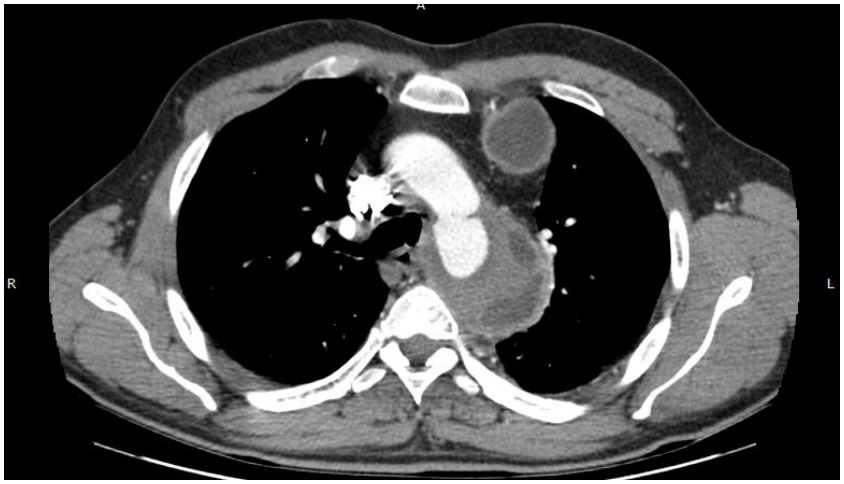

Figure 2: Axial CT: posterior mediastinal hydatid cyst causing a false aneurysm of the aortic arch

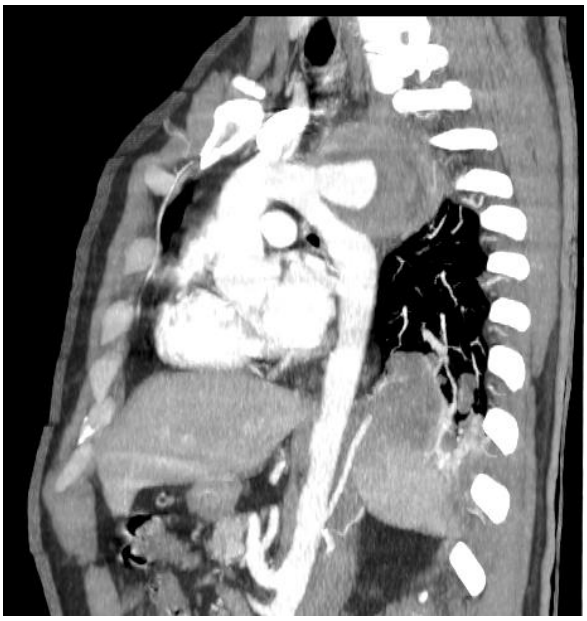

Figure 3: Sagittal CT MIP reconstruction: false aneurysm of the aortic arch

DISCUSSION

Arterial localization in echinococcosis is exceptional. Arterial hydatid cysts are mainly seen in young people. It is rare in childhood and old age. Indeed, male professions are the most exposed: shepherds, veterinarians, slaughterhouse workers... The few cases reported in the literature are generally from North Africa (5 cases). The few published observations may be related to a lack of knowledge of this location, or to the sudden death of patients by anaphylactic or hemorrhagic shock before reaching the health care facility.

Arterial hydatid cysts represent only 10% of all primary extrahepatic and extrapulmonary sites [1]. Among the 9 cases reported in the literature, the affected arterial segments were: ascending aorta in 1 case [3], aortic arch in 1 case [6], There were 2 cases of descending aorta [8, 9], 2 cases of abdominal aorta [4, 5], 1 case of thoracoabdominal aorta [7], 1 case of hepatic artery [2], and 1 case of femoral artery [1].

The clinical polymorphism of arterial hydatid cysts can be explained by the anatomical evolution and variable localization of the cysts. Thus, general allergic manifestations (flush, urticaria, pruritus) are frequent. Anaphylactic accidents can be fatal, which may explain the rarity of the reported observations (3 cases in the literature).

The evolution of an arterial hydatid cyst leads to fissuring and rupture, a brutal accident that result in a large opening of the cyst in the lumen of the artery. Depending on the contents of the ruptured cyst, the hydatid embolism may be microscopically composed of hydatid fluid and scolex, or macroscopically with migration of daughter vesicles or hydatid membranes. The immediate consequence of rupture may be rapid death by anaphylactic shock or massive visceral embolism.

The surgical indications are formal and must be made as soon as arterial hydatid cysts are diagnosed. A complete surveillance must be set up to detect and treat any intraoperative anaphylactic shock. Preoperative medical treatment with albendazole limits the risk of accidental transmission and thus constitutes postoperative treatment. Good blood maceration can neutralize arterial hydatid embolism [10, 11].

CONCLUSION

Multiple thoracic hydatidosis with pulmonary and vascular involvement is rare but serious, and life-threatening. It poses a problem of therapeutic management, hence the interest in preventing disseminated forms by early diagnosis and management of vascular localizations.

BIBLIOGRAPHIE

1. Morar, R., & Feldman, C. (2003). Pulmonary Echinococcosis. *Eur Respir J*, 21, 1069-77.
2. Mahdhaoui, A., Bouraoui, H., Souissi, J., Mabrouk, K. H., Bahri, F., & Amara, H. (2004). Echinococcose cardiaque, à propos d'une double localisation : artère pulmonaire - ventricule gauche. *Rev Med Interne*, 25, 94-6.
3. Afif, H., Aichane, A., Trombati, N., Bahlaoui, A., Bouayad, Z., & Boumzebra, M. (2000). Hydatidose pulmonaire multiple en lâcher de ballons avec localisation cardiaque. *Revue des maladies respiratoires*, *17*(3), 697-699.
4. M'Raihi, M. L., Djemel, A., M'Zah, N., Mechmeche, R., Zegaya, M., & Ben Ismail, M. (1989). Hydatidose pulmonaire multiple associée à un kyste hydatique intracardiaque. *Rev Pneumol Clin*, *45*, 78-80.
5. Chafik, A., El Messlout, A., Khallafi, S., Achir, A., Smahi, M., & Alaziz, A. (2001). La dissémination bronchogène du kyste hydatique pulmonaire. *Rev Mal Respir*, *18*, 333.
6. Struillou, L., Rabaud, C., Bischoff, N., Preiss, M. A., May, T., & Canton, P. (1997). Complications du kyste hydatique cardiaque. *Presse Med*, *26*, 1192-4.
7. Laglera, S., Garcia-Enguita, M. A., Martinez-Gutierrez, F., Ortega, J. P., Gutierrez-Rodriguez, A., & Urieta, A. (1997). A case of cardiac hydatidosis. *British journal of anaesthesia*, *79*(5), 671-673.
8. Pansard, Y., De Brux, J. L., Cohen-Solal, A., Steg, G., Himbert, D., & Popoff, A. (1987). Kyste hydatique du coeur droit et hypertension pulmonaire post-embolique. *Archives des maladies du coeur et des vaisseaux*, *80*(5), 667-669.
9. Kabbaj, N., Chat, L., Dafiri, R., & Imani, F. (1998). Rare cause of ischemic cerebrovascular accident in young subjects: Cardiac hydatid cyst. *Journal of Radiology (Paris)*, *79*(1), 53-56.
10. Mohapatra, M., Sahoo, P. K., Pattnaik, S. C., Sahoo, S., Pattnaik, M. R., & Behera, S. (2003). Imaging of rupture cardiac hydatid cyst located on the interventricular septum with pulmonary embolism, a case report. *Indian Journal of Radiology and Imaging*, *13*(2), 203-5.
11. Paşaoğlu, I., Doğan, R., Hazan, E., Oram, A., & Bozer, A. Y. (1992). Right ventricular hydatid cyst causing recurrent pulmonary emboli. *European Journal of Cardio-thoracic Surgery: Official Journal of the European Association for Cardio-thoracic Surgery*, *6*(3), 161-163.