wjpmr, 2019,5(7), 01-03

SJIF Impact Factor: 4.639

WORLD JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.wjpmr.com

Case Report

ISSN 2455-3301

WJPMR

AN UNUSUAL LOCALIZATION OF A HYDATID CYST CONCEALING A TUBERCULOMA !

Dr. Hanane Boussima*, Deka Ibrahim, Kawtar Majdoub, Amina Kerroumi, Nawal Doghmi, Mohamed Cherti

Department of Cardiology B, Ibn Sina University Hospital, Rabat, Morocco.

***Corresponding Author: Dr. Hanane Boussima**

Department of Cardiology B, Ibn Sina University Hospital, Rabat, Morocco.

Article Received on 25/04/2019 **Article Revised on 15/05/2019** **Article Accepted on 05/06/2019**

ABSTRACT

Morocco is an endemic area for both hydatid cyst and tuberculosis (TB). The coexistence of these two diseases at the heart is unusual, especially when localized in the same lesion. We report a case of a 22 year-old male patient presented with dyspnea, and who finally was diagnosed to have a myocardial hydatid and tuberculosis cyst.To our knowledge, this is the first case in a male patient with such feature reported in the literature.

KEYWORDS: Hydatid cyst, tuberculosis, coexistence.

CASE REPORT

A 22 year-old male patient presented to our center with a history of dyspnea, chronic fever and gradual weight loss for the past 4 months.There was no known heart disease and no history of contact with dogs or TB.

The physical examination revealed a fever (38,5 °c), no sign of respiratory or cardiovascular dysfunction, and no lymphadenopathy was found. Routine laboratory tests showed elevated C-reactive protein (150mg/L), with a white blood cell count of 21,300/ul. Renal and liver functions were normal. Human immune deficiency virus (HIV) and hepatitis B and C viral infections were excluded. The Chest X‑ray and electrocardiography were normal.

Transthoracic echocardiography (figure 1) showed a large, and heterogeneous cystic mass in the inferolateral wall of the left ventricle (LV). There was no evidence of pericardial effusions. Heart valves were normal. The cardiac magnetic resonance imaging (MRI) (figure2) showed an abscess-like lesion (77x38 mm) in the inferolateral and inferior wall of the left ventricle. Multiple small cystic masses typical of hydatid cysts were also seen within the mass.These lesions are at hyposignal T1, hyper signal T2 without contrast enhancement on dynamic acquisition. Other similar but smaller findings were located in the left lung with parietal contrast enhancement suggesting an infectious origin. associated with a bilateral pleural effusion.The result of the specific antiE granulosus antibody ELISA test was positive.Thoracic Computerized tomographic (CT) scan revealed a small cystic mass in the left lung. We conclude to a hydatid cyst. Search for an abdominal and cerebral localization were negative

We initiat the treatment with albendazole, and sent the patient to cardiac surgery. Cytology of the aspirated cyst fluid and histology of the cyst wall showed caseating granuloma, which is compatible with TB infection. A diagnosis of myocardial hydatid disease and tuberculosis is made. Antibacillary treatment is associated with albendazol.

The echocardiography control after 6 months showed a recurrence of the hydatid cyst, confirmed by the MRI revealing a large cystic mass with a clear content and small communication with the left ventricle. Thoracic CT scan control is normal. A surgical intervention is proposed, refused by our patient.

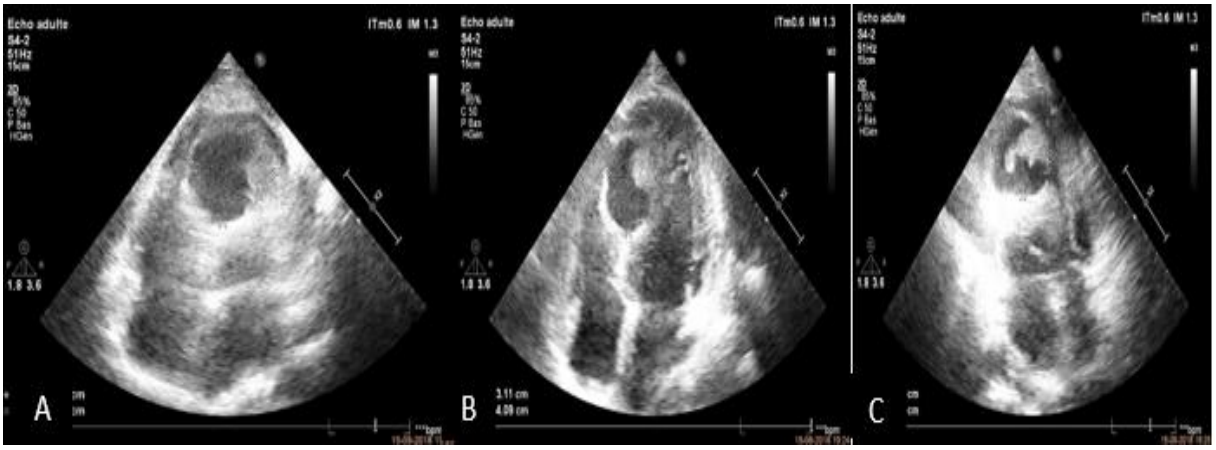

Figure 1 : (A)(B)(C): Echocardiographic views showing a cystic image with thickened wall, in the inferolateral and inferior wall of the left ventricle.

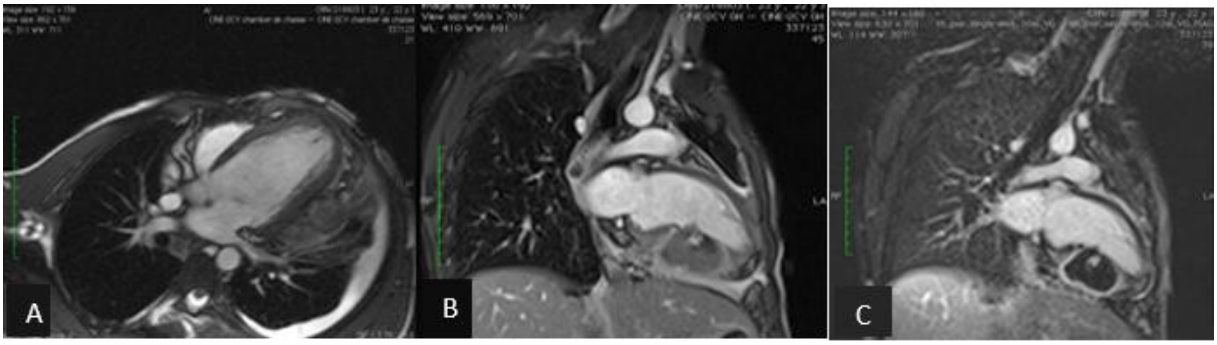

Figure 2 :First MRI : (A) 4-chamber MRI view showing hyposignal cyst images in the free wall of the left ventricle) (B) 2-chamber view showing hyposignal cystic images in the inferior wall of the left ventricle. (C) 2-chamber view showing contrast enhancement at the periphery of the cyst.

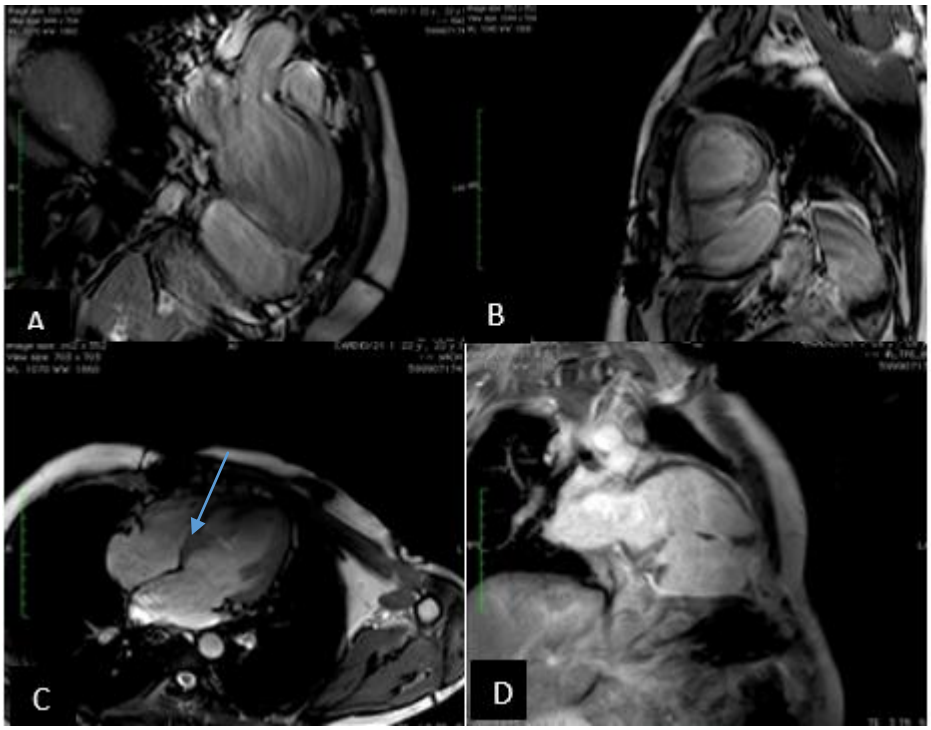

Figure 3: MRI 6 months later : (A)(B) 2-chamber and Mid ventricular Schort axis views showing a cyst with clear content in the infero-lateral and inferior wall respectively. (C) 4-chamber view showing the communication between the cyst and the left ventricle with a bidirectional shunt. (D) 2-chamber view showing contrast enhancement at the periphery of the cyst.

DISCUSSION

Cystic echinococcosis is a parasitic disease that is endemic in some parts of the world, and its incidence may exceed 50 cases per 100 000 population, In Morocco it is 5.2 cases per 100,000 in habitants with a predominance of females and young adults.[1] The pulmonary and hepatic lesions are the most described. Cardiac localization remains rare and represents only 0.5 to 2% of all.[2] The most common cardiac involvement is left ventricle (50-77%), which is followed by interventricular septum, atrium, right ventricle and then pericardium, respectively.[3]

Cardiac tuberculosis is also a rare disease, estimated as 1% of all cases of tuberculosis, and it usually manifests as tuberculous pericarditis.[4] Involvement of endocardium or myocardium is extremely rare.[5]

Hydatid disease, as well as tuberculosis, is still prevalent in Morocco. Tuberculosis and hydatic disease co-infection has been reported in the literature up to now in seven case reports, However, pulmonary TB and pulmonary and/or hepatic hydatid cysts were shown in most of these cases.[6] Pericardial localization was reported by Saniye Giri and al. In a 15-year-old-girl patient who applied with cardiac tamponade accompanied by pleural and pericardial effusion and was diagnosed as pericardial hydatid cyst and pericardial tuberculosis.[6] To our knowledge, this is the first case report of coexistence myocardial tuberculosis and hydatid cyst.

The interrelationship of infection with TB and echinococus diseases have been investigated. Increased a T-helper2(Th2) response in helminth infections suppresses T-helper 1(Th1) response. Patients in whom the Th1 response has been suppressed are more susceptible to other pathogens such as viruses, bacteria and tuberculosis.[7] Low socioeconomic status as well as unhygienic practice contributes also to the occurrence of these diseases.

Echinococcosis of the human cardiovascular system may result in a wide variety of clinical and pathological manifestations witch depends on the size, location, and integrity of the cyst. Although the majority of patients with cardiac echinococcosis are initially asymptomatic. Patients may experience symptoms secondary to myocardial compression due to expansion or rupture of the cyst. Bacteria may enter the cyst and convert it into a pyogenic abscess.[8] The clinical manifestations of TB are also heterogeneous and non specifc, largely dependent on the bacillary load, the host immunity, and the extent of organ involvement.

Thus, in both conditions, symptomatology may be similar. Differentiating one from the other may not be possible based on history and physical examination alone. Precise diagnosis and subsequent treatment would be dependent on radiological features as well as histopathology.[9] With the advent of more advanced imaging modalities such as cardiovascular magnetic resonance and computed tomography (CT) scan, the diagnosis of a cardiac tuberculoma, previously described only after autopsy, is becoming more and more important to keep in mind as a differential diagnosis.[10]

Our case is of particular interest not only because a hydatid cyst and TB is rarely seen at the heart, but because the coexistence the both diseases in the same lesion.

In endemic areas, TB should be taken into consideration as a differential diagnosis of all masses in all anatomic locations. Consequently, a combination of clinical history, imaging findings, serologic test, and hystological results should be perfomed in order to prevent any misdiagnosis and its related complications.

Conflict of interests: The authors declare no conflicts of interest.

BIBLIOGRAPHY

1. Derfoufi O, Akwa EN, Elmaataoui A, Miss E, Esselmani H, Lyagoubi M,et al. Profil épidémiologique de l'hydatidose au Maroc de 1980 à 2008.Ann Biol Clin, 2012; 70(4): 457–61.
2. Dighiero J, Canabal EJ, Aguirre CV, Hazan J, Horzales JO. Echinococcus disease of the heart. Circulation, 1958; 17: 127–32
3. Alam S, Umer US, Gul S, Ghaus S, Farooq B, Gul F.Uncommon sites of a common. Disease-Hydatid cyst. J Postgrad Med Inst, 2014; 28: 270-6.
4. Fowler NO. Tuberculous pericarditis. JAMA, 1991; 266(1): 99-103.
5. Kapoor OP, Mascarenhas E, Rananaware MM, Gadgil RK. Tuberculoma of the heart. Report of 9 cases. Am Heart J., 1973; 86(3): 334-340.
6. Saniye Girit, Esra Polatoğlu and al. Pericardial hydatid cyst and tuberculosis co-existence.Turkish Journal of Thoracic and Cardiovascular Surgery, 2018; 26(2): 312-315.
7. Yang YR, Gray DJ, Ellis MK, Yang SK, Craig PS, McManus DP. Human cases of simultaneous echinococcosis and tuberculosis - significance and extent in China. Parasit Vectors, 2009; 2: 53.
8. Birincioglu CL, Bardakci H, Küçüker SA, Ulus AT, Arda K, Yamak B, et al. A clinical dilemma: Cardiac and pericardiac echinococcosis. Ann Thorac Surg, 1999; 68: 1290–4.
9. Pepi M, Muratori M. Echocardiography in the diagnosis and management of pericardial disease. J Cardiovasc Med (Hagerstown), 2006; 7: 533‑44.
10. Valeria Pergola, Mohammed Al-Admawi,et al. An unusual cardiac mass: Echocardiography, computed tomography,and magnetic resonance imaging. Journal of Cardiology Cases, 2016; 13: 143–145.