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HYDATID CYST OF THE CALF SIMULATING DEEP VEIN THROMBOSIS

Traumatology

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ABSTRACT

The localization of the hydatid cyst is rare; even in endemic countries [1.2].Muscular localization of this parasite is rare. Disease is still an important cause of morbidity in the world. Herein, we report a rare observation of a hydatid cyst in Leg calves simulating a deep-vein thrombosis (DVT) while discussing its clinical and radiological characteristics and its therapeutic management. The diagnosis is based on imaging and immunological reactions and it has been confirmed by histology. The patient received surgical excision supplemented by chemotherapy with antiparasitic agents.

KEYWORDS

Hydatid Cyst. Calf. Deep Vein Thrombosis.

Introduction

Localization of the hydatid cyst is rare, even in endemic countries [1.2].The preferred locations of human echinococcosis are both the lungs and their 85% of cases [3].The disease is still a major cause of morbidity in the world. Most cases are usually asymptomatic, and when symptoms are apparent due to compression of adjacent structures by enlarging cysts.

We report the rare observation of a hydatid cyst in the calves simulating a DVT while discussing its clinical and radiological peculiarities and its therapeutic management.

Observation:

A 36-year-old patient, of rural origin, with a notion of contact with dogs, having as a pathological antecedent nephrectomy on pynephrosis of the right kidney in 2015, addressed to the emergency department for suspicion of thrombophlebitis of the lower limb on an edema of the lower left limb; evolving since 3 days; the whole evolving in a picture of apyrexia without alteration of the general state.

On examination we find an asymmetry of the two calves with redness, palpation found a hot limb, with a small poorly limited mass of the posteromedial face of the leg adherent to the deep plane, sensitive to palpation and quivering, Homans positive (Fig1). Venous Doppler of the lower limb found no sign in favor of TVP.

The ultrasound notes the presence of a deep collection opposite the muscles of the posterior-internal face of the upper 1/3 of the left leg, heterogeneous, well-limited thick-walled measuring 52 × 20mm (at 20mm of the skin), associated with a thickening of the skin (12mm) and an infiltration of the subcutaneous fat compared probably with an abscess of the posterolateral aspect of the leg (Fig2).

There are multiple ganglia of left inguinal inflammatory tendon, without articular effusion of the knee and ankle.

MRI reports well-circumscribed heterogeneous lesional fluid formation of the posterior-internal muscular compartment of the upper 1/3 of the left leg below the left popliteal fossa affecting the medial head of the gastrocnemius muscle and the solar muscle, of oval shape with a long axis parallel to the Heterogeneous T1-weighted hypo intense T2-weighted hypo intense T2-weighted posterior plane, suppressing multiple millimetric vesicles with T1-weighted hyposignal, T2 hypersignal, the largest of which measured 7-8mm with hypersignal DW1 with no diffusion restriction in the vesicles intra lesional. It is raised on the periphery in relatively thin section as well as at the level of its incomplete septs (Figure 3).

The patient was operated on 21-03-2017 from a posterolateral approach of the leg, finding a formation of 123g and measuring 13 × 11 × 3cm completely resected (Fig4).

At the section, we find a polycystic focus extended on 9cm necrotic, with translucent membranous content, located 0.3cm from the deep limit covered with a muscular flap of 7 × 4 × 0.3 and 1.5cm of the limit of excision the closest.

Microscopy: conjunctivo-muscular adipose tissue housing a formation lined by an anhist cuticle of laminated appearance. The cystic wall is fibrous and extensively remodeled by a polymorphic inflammatory infiltrate rich in eosinophilia polynuclear cells and foamy hepatocytes with a giant cell granulomatous reaction of the foreign body type.

Discussion

Skeletal muscle is the seat of 1% of echinococcal localizations in humans [3, 4, 5].

The frequency of muscular hydatidosis is currently decreasing, despite the diffusion of powerful imaging techniques.

The involvement predominates on the muscles of the neck, trunk and root of the limbs, this can be explained by the richness of the vascularization of these territories [5]; the localization at the level of the muscles of the leg remains rare.

The muscle constitutes an environment unfavorable to the development of the hydatid larva because of the muscular contractility on the one hand and the production of lactate on the other hand [6]

Hexacanth embryos arriving in the digestive tract are most often

stopped by the liver and lungs acting as true filters.

A very small number of embryos arrive in the great circulation where they spread throughout the body.

The involvement of less vascularized areas is explained by some authors by a direct mode of contamination, secondary to the bite of an infested animal or the staining of a wound by the defecation of infected animals [7, 8].

This situation is probably that of our patient who reported an antecedent of wound at the level of the same leg.

Moreover, muscular hydatidosis is most often isolated primitive [6]; it is associated with other hydatid localizations in only 8% of cases.

In clinical terms, the symptomatology of muscular hydatidosis is not specific. It is most often a soft-tissue tumor, of very slow evolution, which can also evoke a cold abscess, a myositis, or a calcified hematoma [9].

A number of cysts are revealed by complications such as nerve compression (sciatic nerve) or infections.

In our case, unilateral localization of the cyst in the leg with edema and calf pain caused a picture of deep venous thrombophlebitis; but the Doppler ultrasound has eliminated the diagnosis of DVT, but the scanner is talking about an abscess.

MRI has made it possible to make the exact diagnosis and to explore the lesion and its anatomical and vasculo-nervous relationships, which was essential preoperatively.

In addition, the biological diagnosis of muscular hydatidosis is difficult [10]. Hyperoesinophilia is observed in our patient. Hyperoesinophilia is neither constant nor specific, and immunological reactions are often negative when the cyst is not cracked or remodeled [9].

Nevertheless, they complement the clinical and diagnostic imaging and especially the monitoring of treatment [11]. The persistence of a high titer of antibodies or better a re-ascension observed 6 months to 1 year after an intervention are in favor of a secondary echinococcosis [10]

On the biological level, hyperoesinophilia is observed but the hydatid serologies were negative. As in our case of infection, hydatid serology is usually only positive when there is infection or cracking of the cyst [7.12]

The removal of hydatid cysts from the soft tissues sometimes causes problems [13]. The usual absence of a cleavage plane, especially when the cyst is infected, makes the cystectomy difficult [7.13], in our case the presence of three cysts, two of which were communicating at the level of the twin muscles and one non-communicating and deep in the solar muscle.

The need to protect surgical drapes with compresses impregnated with H2O2 does not always prevent operational contamination, especially in case of cracking or infection of the cyst, resulting in a relatively frequent rate of local or distant recurrences [6.13].

Albendazole-based drug therapy is necessary to achieve complete curative treatment and prevent reinfection.

Prophylaxis is a real treatment that must act at all levels of the epidemiological chain [14]

Conclusion:

The hydatid cyst of the soft tissues remains rare even in endemic countries and the localization in the leg is even more exceptional.

The discovery of hydatid cyst on suspicion of DVT on clinical and pathological radio arguments makes it known that Echinococcus remains a public health problem and poses a problem of eradication and management.

Conflicts of interest :

"The authors do not declare any conflict of interest."

Figures :

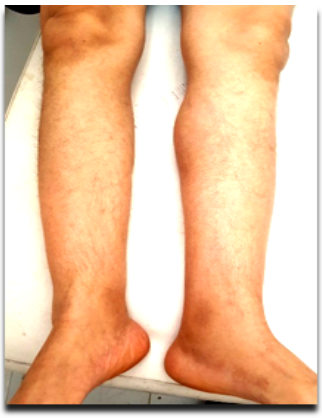

Figure 1: asymmetry of the two calves with redness.

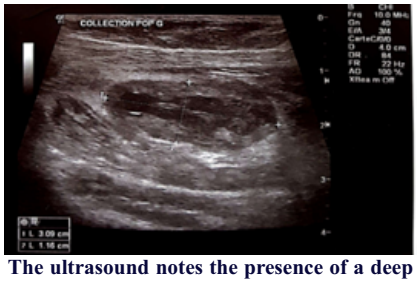

Figure 2: The ultrasound notes the presence of a deep collection next to the muscles of the postero-internal face of the upper 1/3 of the leg.

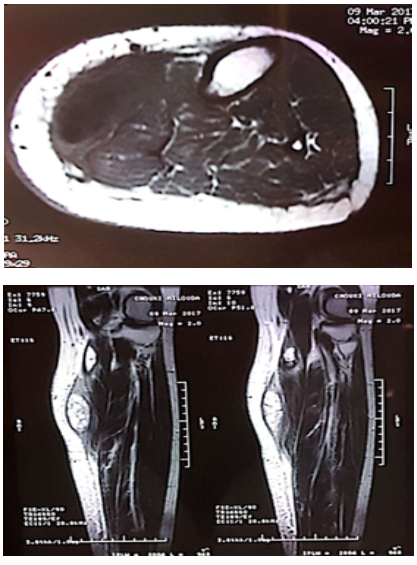

Figure 3 (a) and (b): MRI of the leg speaks of well-circumscribed heterogeneous lesional fluid formation of the posterior-internal muscular compartment, with heterogeneous T1 hypo intense and T2 hypersignal intermediary, repressing multiple millimetric vesicles in T1 hyposignal, T2 hypersignal franc.

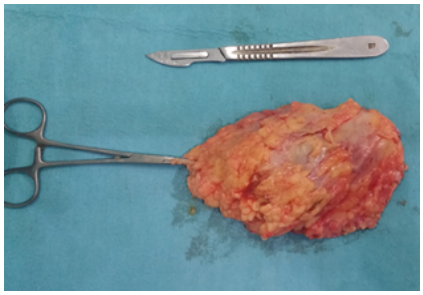

Figure 4 : Pathology Piece 123g formation and measuring 13 × 11 × 3cm resected completely.

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