Muscular hydatidosis

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Case report:

A 24-year-old man, who had been living in France for I year, consulted for a progressive pain in his right thigh, worsened

during physical exercise. His past medical history included a chronic bronchitis treated with salbutamol and he was a daily tobacco smoker.

He was initially living in Morocco, where he still frequently visited his family, who work as traditional shepherds.

Physical examination found a painful mass in his right thigh. Echography and magnetic resonance imaging showed an oval cystic formation 9.2 cm by 4.3 cm in size, located in the vastus medialis muscle, compatible with a myxoid tumour or a hydatid cyst (Fig. 1a). The cyst was classified as stage CE3 following the WHO standardized US classification.

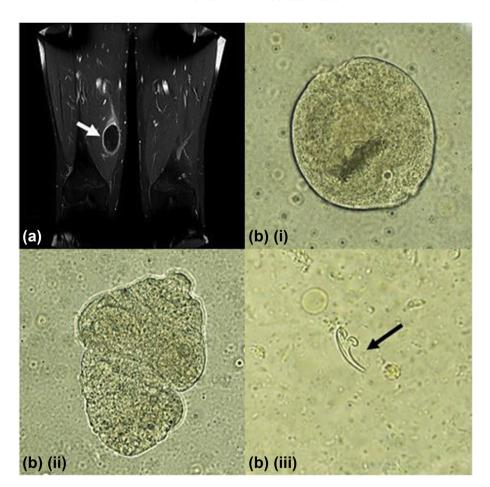


FIG. 1. (a) Magnetic resonance imaging of right thigh in a patient diagnosed with solitary muscular hydatidosis. (b) Scolex, (i) and (ii) original magnification × 400, Wright stain, and typical hooklets, (iii) black arrow, original magnification × 1000; Wright stain, of *Echinococcus granulosus*.

A thoraco-abdominopelvic scan did not detect any other cyst. No remarkable biological parameters were found, except for a positive hydatidosis serology: ELISA with an index of 1.07 (threshold 1.00) confirmed by immunoblotting.

After a multidisciplinary board, it was decided to perform cyst excision. Surgery was performed as an open en-bloc excision of the cyst with a safe layer of healthy muscle around the lesion and was considered complete.

Microscopic examination revealed scolex (Fig. 1a) and typical hooklets (Fig. 1b). Molecular identification based on the cytochrome C oxidase subunit I nucleotide sequencing identified *Echinococcus granulosus*.

Albendazole treatment (400 mg, twice daily) was maintained for 6 weeks after surgery. During 2 months of follow up, the patient still had pains and lameness. An MRI is planned for the 6th month after surgery.

Cystic echinococcosis is highly endemic in North Africa especially in rural and pastoral areas [1,2]. Hydatid cysts are rarely located in muscle tissue and solitary intramuscular cysts without any other localization, like in liver or lungs, are unusual [3,4].

Conflict of interest

We declare no conflict of interest.

References

- Brik K, Hassouni T, Youssir S, Baroud S, Elkharrim K, Belghyti D. Epidemiological study of *Echinococcus granulosus* in sheep in the Gharb plain (North-West of Morocco). J Parasit Dis 2018;42: 505–10.
- [2] Thys S, Sahibi H, Gabriël S, Rahali T, Lefèvre P, Rhalem A, Dorny P. Community perception and knowledge of cystic echinococcosis in the High Atlas Mountains, Morocco. BMC Public Health 2019;19:118.
- [3] Tekin R, Avci A, Tekin RC, Gem M, Cevik R. Hydatid cysts in muscles: clinical manifestations, diagnosis, and management of this atypical presentation. Rev Soc Bras Med Trop 2015;48:594–8.
- [4] Kurz K, Schwabegger A, Schreieck S, Zelger B, Weiss G, Bellmann-Weiler R. Cystic echinococcosis in the thigh: a case report. Infection 2019;47:323–9.