

Forearm Subcutaneous Hydatid Cyst: An Unusual Case

Hani Redouane*, Ben-aissi Mohamed, Boufettal Moncef, El Bardouni Ahmed, Berrada Mohamed Saleh

Orthopedic Surgery Department of Ibn Sina Hospital Mohammed V University, Rabat, Morocco

Original Research Article

*Corresponding author

Hani Redouane

Article History

Received: 28.08.2018

Accepted: 08.09.2018

Published: 30.09.2018

DOI:

10.21276/sjams.2018.6.9.23



Abstract: Subcutaneous hydatid disease is very rare, even in endemic areas. The symptomatology is often discreet, the diagnosis is oriented by imaging: ultrasound and / or MRI, and the treatment is surgical. Here, we present a case of primary subcutaneous hydatid disease of the forearm.

Keywords: Hydatid disease, forearm, unusual localization, subcutaneous.

INTRODUCTION

Echinococcosis is a widespread zoonosis that is endemic in most sheep-raising countries. The infestation usually involves the pulmonary and digestive systems, but it occasionally affects other organs. Primary musculoskeletal hydatidosis is very rare and represents 1%–5% of all cases of echinococcosis [1]. Patients are typically asymptomatic and the cyst presents as a slow growing soft tissue tumour [2]. Here, we present a case of primary subcutaneous hydatid disease of the forearm.

PATIENT AND OBSERVATION

A 51-year-old man living in a rural area in Larache- Morocco, was admitted for exploration of a postero-lateral mass of his right forearm evolving gradually and insidiously for 5 years. There was no history of trauma, abdominal pain, chest pain, urticaria, fever, or weight loss. On physical examination, there was a firm and tender mass on the postero—lateral aspect of the right forearm. Standard radiographs showed only soft-tissue swelling extending from the humeral condyle to the lower third of the forearm (Fig. 1).

MRI was performed to better study the nature and the relationship of the mass with the surrounding structures and showed a unilocular cystic lesion with hypointense T1 signal and hyperintense T2 signal enhancing after gadolinium injection without muscle or bone lesion (Fig. 2). Under general anesthesia, complete surgical resection was carried out without destroying the cyst wall. Histopathological examination of the specimen confirmed the existence of mother and daughter cysts. The patient was started on albendazole (10 mg/kg/day) for three cycles of 21 days each, with 1 week break between cycles. At 12 months follow-up, the patient was completely asymptomatic with no evidence of recurrence on clinical and radiological examination.

DISCUSSION

Diagnosis of hydatid disease should be considered if the patient lives in a geographic region where the infestation is known to occur, or if the patient has migrated from or visited an endemic area [3]. This parasitic anthrozoosis is caused by invasion of the tissues by the larvae of *Echinococcus granulosus*. The

intermediate host is the sheep and the final host the dog [4]. The larvae develop in cystic form, usually in the liver (60–70%) and lungs, and ultimately cause symptoms due to local compression, as well as systemic symptoms of allergic type. Primary muscle or subcutaneous hydatidosis is extremely rare (1–5%) and a very few cases were reported in the literature. The patient described here had a hydatid cyst of the forearm with no other organ involvement. It has been hypothesized that subcutaneous implantation could occur by direct contact, following a dog bite [5]. Another possibility is that the liver or lung circulation could be bypassed by precapillary anastomoses [6]. Surgical excision of the cyst has long been considered the only effective treatment and is still the treatment of choice [7]. If it is impossible to excise a large cyst in bloc, the cyst should be drained intraoperatively, irrigated with a scolicidal agent, such as hypertonic saline, and then excised [2,7]. Currently complementary chemotherapy (albendazole) and percutaneous treatments have become widely recommended [8].

Figures



Fig-1: Forearm radiographs showing soft-tissue swelling



Fig-2: MRI examination revealed a 12× 6 cm cystic lesion with hypointense T1 signal and hyperintense T2 signal

CONCLUSIONS

Hydatidosis should be kept in mind as a differential diagnosis for soft-tissue masses, especially in countries endemic for *Echinococcus*.

DECLARATION OF INTEREST

The authors declare that they have no conflicts of interest in relation to this article.

REFERENCES

1. Basarir K, Saglik Y, Yildiz Y, Yetis T, Cebesoy O. Primary muscular hydatidosis mimicking soft tissue tumour: a report of five cases. *Journal of Orthopaedic Surgery*. 2008 Dec;16(3):368-72.
2. Özkoç G, Akpınar S, Hersekli MA, Özalay M, Tandoğan R. Primary hydatid disease of the quadriceps muscle: a rare localization. *Archives of orthopaedic and trauma surgery*. 2003 Jul 1;123(6):314-6.

3. Alouini RM, Mhiri MS, Allani M, Bahri M, Arifa N, Jemni HG, Kochtali H, Tlili KG. Hydatid cyst of soft tissues: MR imaging findings (report of three cases). *Journal de radiologie*. 2005 Apr;86(4):421-5.
4. Orhan Z, Kara H, Tuzuner T, Sencan I, Alper M. Primary subcutaneous cyst hydatid disease in proximal thigh: an unusual localisation: a case report. *BMC musculoskeletal disorders*. 2003 Dec;4(1):25.
5. Daoudi A, Shimi M, Lahrach K, Elibrahimi A, Loudiyi WD, Amar MF, Chbani B, Boutayeb F, Elmrini A, Chakour K. Isolated echinococcosis of the flexor digitorum profundus: a case report. *Chirurgie de la main*. 2009 Jun;28(3):175-9.
6. Bayram M, Sirikci A. Hydatid cyst located intermuscular area of the forearm: MR imaging findings. *European journal of radiology*. 2000 Dec 1;36(3):130-2.
7. Mseddi M, Mtaoumi M, Dahmene J, Hamida RB, Siala A, Moula T, Ayeche MB. Kystehydatiquemusculaire: A propos de 11 cas. *Revue de chirurgie orthopédique et réparatrice de l'appareil moteur*. 2005 May 1;91(3):267-71.
8. Buyukbebeci O, Gulec A, Gokalp A, Karakurum G. Combined treatment of primary hydatid disease of the vastus lateralis muscle. *Orthopedics*. 2004 Jun 1;27(6):621-2.