



Hydatid Cyst of the Scrotum Miming a Testicular Tumor

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Abstract:

Hydatid disease constitutes a genuine public health problem. Hydatidosis varies from one region to another, and its prevalence in the Maghreb is moderate. We report the case of a 43 year old male who presented with a painless right testicular mass of one year duration. Local examination showed hard, nontender, right testicular mass of 9x5 cm. Levels of serum α -fetoprotein and human chorionic gonadotrophin were within normal limits. Scrotal ultrasound revealed heterogenous mass arising from the testicle. High inguinal orchidectomy was performed as diagnosis was not absolutely clear. The final pathology report revealed hydatid cyst of the testis. In most cases, ultrasound is the key of diagnosis but sometimes imaging is not specific and only histological examination allows confirming the diagnosis as in the case of our patient.

Key words: Echinococcus, Cyst, Scrotum, Testicular Neoplasms, Orchiectomy.

Introduction

Hydatid cyst disease is endemic in Middle East, India, Africa, South America, New Zealand, Australia, Turkey and Southern Europe [1]. Man gets infested by taking foods contaminated by the eggs or proglottid-containing faeces of definitive hosts, viz. dog, fox, or by contact with the infected animals [2]. The liver and lung are the most commonly infected organs with respective rates of 65 percent and 25 percent. However, in our knowledge a primitive scrotal localization has only been reported in the literature five times previously [3]. We present a rare case of a primitive hydatid cyst localized in the scrotum that was provisionally diagnosed as testicular tumor. We discuss the physiopathology,

epidemiology, clinical and therapeutic aspects of this disease through the study of this case and a review of the literature.

Case Report

A 43-year-old male presented with a painless right testicular mass of one year duration. There was no history of trauma or infection. Physical examination revealed a healthy fit patient with normal vital signs. Chest, heart and abdominal examinations were normal. Local examination showed a right testicular mass of approximately 9x5 cm; the mass was hard in consistency, with a smooth surface,

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and no tenderness. The swelling did not show transillumination and had no fluid thrill. No palpable lesion was found in the left testis.

Laboratory investigations revealed normal blood counts. Levels of serum α -fetoprotein and human chorionic gonadotrophin were within normal limit. Scrotal ultrasound showed echogenous mass of the testicle with a heterogeneous echotexture [Fig.1].

High inguinal orchidectomy was performed as diagnosis was not absolutely clear and the specimen was sent for histopathological examination. Peroperatively, a mass measuring 9x5 cm was found. On sectioning the specimen, friable and brown necrotic material was observed. The final pathology revealed a hydatid cyst which has acellular and eosinophilic laminated layers; the outer layer is a dense fibrous tissue with chronic inflammatory cells [Fig.2].

Discussion

Hydatid disease constitutes a genuine public

health problem [4]. The geographical distribution is correlated with economic and cultural levels. The prevalence of hydatidosis is variable; it is endemic in Middle East, India, Africa, South America, New

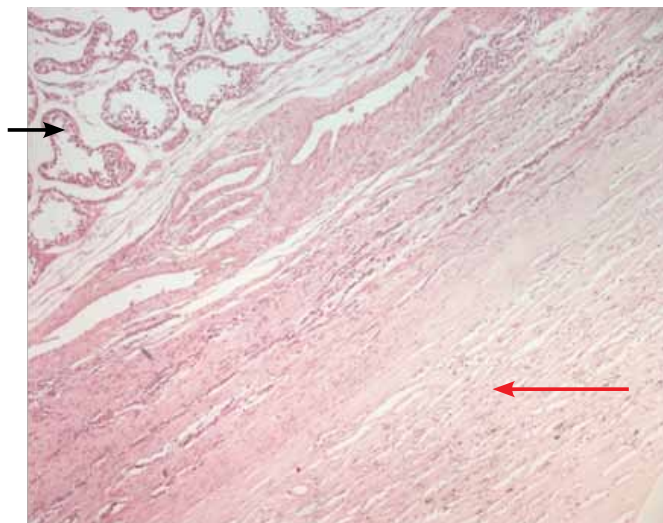


Fig.2: The outer layer of the the hydatid cyst is a dense fibrous tissue with chronic inflammatory cells (red arrow). Normal contiguous testicular parenchyma is shown (black arrow).



Fig.1: Echogenous mass of the testicle with a heterogeneous echotexture (arrow).

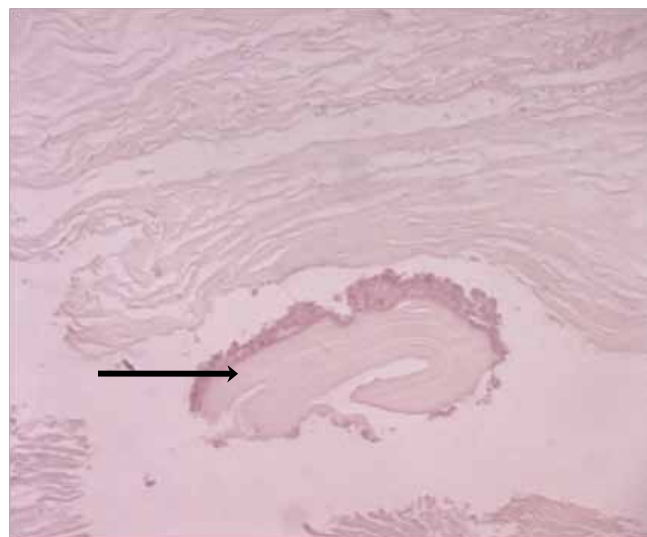


Fig.3: Laminated layer of the hydatid cyst (arrow) is acellular and eosinophilic.

Zealand, Australia, Turkey and Southern Europe [5]. The Maghreb is an intermediate zone. The prevalence of hydatidosis is 15 cases per 100,000 population per year in Tunisia, and 8 cases per 100,000 population per year in Morocco [6].

Echinococcus granulosus is a small cestode tapeworm [5] hosted in the small intestine of carnivores (dogs, wolves and other canines) [6]. Eggs are voided with feces which are infective to intermediate hosts. Once the hexacanth embryo is released and penetrates the intestinal wall, it often enters the portal venous circulation to reach the liver [2]. A total of 60-75% of cases exhibit liver forms of the disease, whereas 15 to 30% migrate to the lungs through the hepatic veins. The two organs can be affected simultaneously in about (5-13%) of cases. Brain, spine, bone, breast, heart, spleen, pancreas and testis are rarely affected. Only 6 cases of hydatid cysts of the testicle are identified in the literature. Contamination of the testis would be secondary to the rupture of an intra-abdominal cyst or primitive cyst, as was the case in our patient [7].

In most cases imaging is specific, especially on ultrasound which allows classification into 5 types according to Gharbi [8]. Type I, II and III do not pose a diagnosis problem. In these cases the cyst may be single or multi-loculated, with homogeneous or heterogeneous fluid content presenting a thick membrane. Imaging might demonstrate a vesicle membrane disjoining or a daughter vesicle [9,10]. In type IV, imaging is not specific and ultrasound shows a pseudo-tumoral appearance. Differential diagnosis in this case is testicular tumor. Sometimes the diagnosis is very difficult through imaging only and final pathology after surgery is necessary to carry out a diagnosis. The other diagnosis that may be discussed is urogenital tuberculosis especially in type V, which shows a calcified cyst. In this case other lesions of tuberculosis are frequently found in the urogenital tract. In biology, hyper-eosinophilia is found in 33 to 53% of cases, but it is not specific.

Hydatid serology with enzyme immunoassays (ELISA IgG) is positive in 81 to 94% of cases. It helps diagnosis only when positive [11]. In our case, ultrasound showed a type IV cyst, according to Gharbi's classification, and the diagnosis was not clear. Hence, testicular tumor was highly suspected, and the patient was subjected to high inguinal orchidectomy. Histological examination revealed the diagnosis of hydatid cyst.

The prognosis depends on early diagnosis and surgery. Long-term and close follow-up of patients is important to prevent recurrence. Hydatid cyst of the testis, although rare, should be kept in differential diagnosis of testicular tumor.

Conclusion

In endemic countries hydatidosis of the scrotum has to be taken into account in cases of scrotal swelling. In most cases, ultrasound is the key for diagnosis but sometimes only histological examination allows the confirmation of the diagnosis as in our case.

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