

Case Report

Epidermoid Cyst of the Testis (About a Case)

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Abstract: Epidermoid cyst (EC) of the testis is a rare benign tumor without malignant potential. The diagnosis can be made on ultrasound and MRI. In case of a single small lesion, conservative surgery is possible. It requires an anatomopathological confirmation per operative. It is a constantly benign tumor that must be differentiated from testicular teratomas, justifying the search for associated tumor contingents requiring orchiectomy.

Key words: Epidermoid cyst, testicle, ultrasound.

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INTRODUCTION

Epidermoid cyst (EC) of the testis is a rare benign tumor. The preoperative diagnosis can be made on the basis of imaging data, which will lead to conservative treatment. We report an observation whose interest lies mainly in the quality of the preoperative iconography.

OBSERVATION

Mr. Y, 66 years old, with no known pathological history, was admitted to the urology department of the IBN ROCHD University Hospital in Casablanca for a large painful bursa that had been evolving for 2 years. The physical examination revealed a large painful and non-inflammatory bursa, with a positive transillumination test.

He had no urinary disorders or other associated signs.

An ultrasound of the scrotal contents showed a round, well-delineated, heterogeneous hypoechoic right testicular formation with alternating hypoechoic and hyperechoic concentric bands, without flow on color Doppler. We also note the presence of a bilateral hydrocele of medium abundance.

DISCUSSION

KEs are the most common benign tumors arising from the testis [1]. They were first described in 1942 by Dockerty and Prestly [2]. Despite this, benign tumors of the testis are rare and account for approximately 3% of tumors of the male gonad [3].

In more than 85% of cases, these KEs are diagnosed between the ages of 20 and 40 years; the age limit varies from 3 to 77 years [4]. The majority of affected patients are Caucasian or Asian; only one case has been reported in a black subject [5]. In 80% of cases, patients are asymptomatic. However, it may occasionally manifest as scrotal heaviness, pain or testicular enlargement [5]. Usually, KEs are single, firm, painless tumors with an even surface, however clinical examination does not allow for a definite diagnosis. They can also be bilateral or multiple unilateral [6, 7].

In 1969, Price defined five pathological criteria that must be present in order to conclude that KE is isolated [2, 4, 8-11]:

1. The KE must be in the testicular parenchyma.
2. The wall of the KE must be made of fibrous tissue and lined totally or partially by squamous epithelium.

3. The lumen of the KE should contain keratin lamellae or amorphous material.
4. No teratomatous elements or skin appendages should be found in the cyst wall or in the adjacent testicular parenchyma.
5. No hyaline scars (probable remnants of a germ cell tumor) should be found in the adjacent testicular parenchyma.

All these criteria are essential in order not to miss a teratoma or a germ cell tumor associated with KE.

Macroscopically, KE presents as an easily cleavable whitish nodule with a white, lumpy substance corresponding to a coiled keratin concretion on cross section [4].

Tumor markers (alphafetoprotein and beta-HCG) are always negative in isolated KE [3, 5, 7, 9].

Ultrasound represents the imaging modality of choice in the diagnostic approach and management of KE of the testis, with high frequency probes (7.5-10MHz), it highlights features that help orient the diagnosis [4, 6, 9, 10, 12-14].

Ultrasound reveals features that suggest an epidermoid cyst, which presents as a round, well-limited intra- testicular lesion surrounded by normal testicular parenchyma, with an "onion skin" appearance (Fig. 1), which is specific but not always found: it corresponds to alternating hypoechoic and hyperechoic concentric bands, attributable to the different layers of keratin that are more or less compact [8, 9, 15]. A laminated or heterogeneous appearance has also been described. The echogenicity of the wall is variable, and focal calcifications can be found [15]. There is no flow in color Doppler (Fig. 2).

MRI also allows a diagnostic and therapeutic approach to KE of the testis [9]. However, it does not seem to be more contributory than ultrasound. MRI in some cases shows a typical "bull's eye" image. The capsule and the center appear in T1 and T2 hyposignal, while between these two areas there is a T1 and T2 hypersignal corresponding to desquamated cellular debris rich in water and lipid [9, 11, 16].

There is no intra-lesional enhancement after gadolinium injection, as it is an avascular structure [16].

These two radiological techniques allow to strongly orientate the preoperative diagnosis and condition for some the surgical procedure.



Figure 1: Scrotal ultrasound: well circumscribed mass at the pole of the right testicle containing alternating hyperechoic and hypoechoic rings, showing a laminar aspect (onion skin)



Figure 2: The epidermoid cyst does not show a signal in color Doppler

TREATMENT IS SURGICAL

Enucleation with extemporaneous pathological analysis can be proposed when the lesion is less than three centimeters long, its appearance on imaging is suggestive of an epidermoid cyst, and the tumor markers (a-feto-protein and b-human chorionic gonadotropin) are negative [8-10, 13, 14]. In case of diagnostic doubt, total orchiectomy should be performed.

CONCLUSION

KE are rare tumors of the testicle. Today, the preoperative workup (clinical, biological, radiological) allows to evoke the diagnosis. Ultrasound and MRI findings may suggest a testicular epidermoid cyst. Conservative surgery is permissible in case of diagnostic certainty on extemporaneous pathological analysis. Biopsies of the adjacent parenchyma (at least

two) should always be performed. At the slightest anatomopathological doubt, orchiectomy should be performed. No author suggests simple surveillance even in case of a typical ultrasound appearance.

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