

Epidermoid cysts of the testis

Published on 23.08.2008

DOI: 10.1594/EURORAD/CASE.1947

ISSN: 1563-4086

Section: Uroradiology & genital male imaging

Imaging Technique: Ultrasound

Case Type: Clinical Cases

Authors: Moschouris H, Lampropoulos Th, Drossos Ch, Filaditakis S, Matsaidonis D

Patient: 22 years, male

Clinical History:

A 22-year-old male presented with a palpable, painless right testicular mass.

Imaging Findings:

The patient presented after there was a minor blunt injury to his penis. On physical examination, a firm, painless nodule was palpated in the right testis. There were no clinical signs of inflammation, and the patient was referred for an ultrasound examination.

Discussion:

Epidermoid cysts (EC) are thought to be benign tumours that are rarely located in the testes. They are lined with keratinising, stratified, squamous epithelium supported by fibrous tissue. They contain only keratohyaline material and no skin appendages, in contrast to dermoids. They are usually found in men who are 20–30 years of age and may be found in singles or multiples. On ultrasound, EC appear as round, mainly hypoechoic testicular lesions with sharp borders, and often, a lamellar configuration with concentric rings or lines of alternating echogenicity ("onion ring sign") is seen. This is attributed to layers of keratin debris with varying densities. Sometimes, a round echogenic focus is present in the centre ("target" sign). Nevertheless, the ultrasonographic image may be atypical, because the texture and the density of the cyst contents are variable. Calcification of the mass may also be a feature to be noted. Due to the absence of vascularity, no signals are detected on colour doppler imaging. The differential diagnosis of a complex cystic testicular lesion should include other cystic neoplasms (mainly teratomas, which may be malignant), as well as abscesses and haematomas of the testicle. The imaging findings that support the preoperative diagnosis of EC give substantial information to avoid performing an unnecessary orchiectomy.

Differential Diagnosis List: Epidermoid cysts of the testis.

Final Diagnosis: Epidermoid cysts of the testis.

References:

- Langer JE, Ramchandani P, Siegelman ES, Banner MP. Epidermoid cysts of the testicle: sonographic and MR imaging features. *AJR* 1999 Nov;173(5):1295-9. (PMID: [10541108](#))
- Dogra VS, Gottlieb RH, Rubens DJ, Liao L. Benign intratesticular cystic lesions: US features. *Radiographics*. 2001 Oct;21 Spec No:S273-81. (PMID: [11598263](#))
- Oyen RH. Scrotal ultrasound. *Eur Radiol* 2002;12:19-34. (PMID: [11868071](#))
- Cho JH, Chang JC, Park BH, Lee JG, Son CH. Sonographic and MR imaging findings of testicular epidermoid cysts.

AJR 2002 Oct;179(4):1075. (PMID: [11856711](#))

Feld R, Middleton WD.

Recent advances in sonography of the testis and scrotum.

Radiol Clin North Am. 1992 Sep;30(5):1033-51. (PMID: [1518927](#))

Figure 1

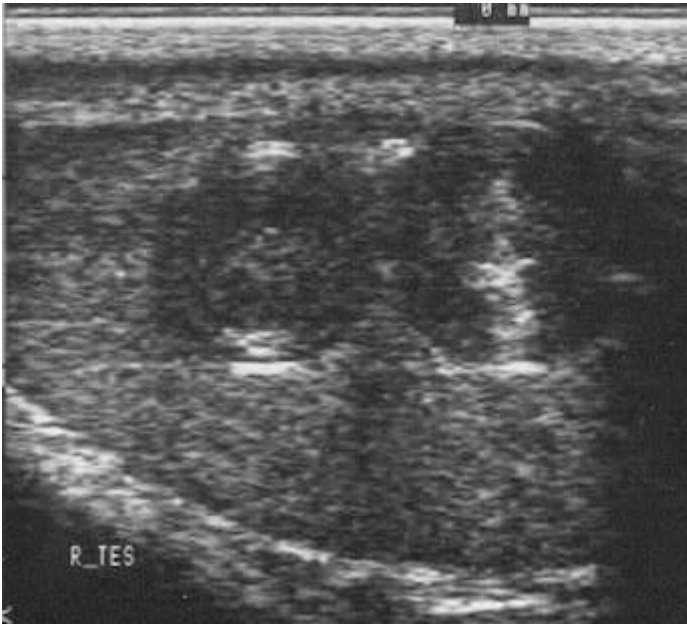
a



Description: A duplex combined image of the right testis, longitudinal section: Two round, well circumscribed, mainly hypoechoic lesions, in contact with each other, are located in the anterior part of the right testis. There are concentric alternating hyper- and hypoechoic layers at the part of the periphery of both lesions and a hyperechoic centre in one of them. There is no posterior enhancement.

Origin:

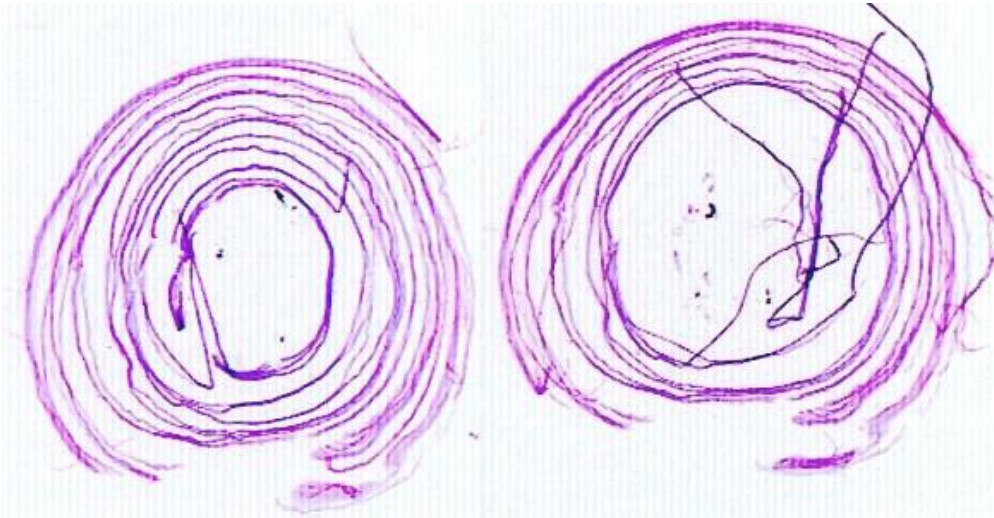
b



Description: A localised view of the lesions showing the same features as in Fig. 1a. **Origin:**

Figure 2

a



Description: Multiple concentric layers of keratin (haematoxylin-eosin). **Origin:**