

Testicular epidermoid cyst and organ preserving surgery

Salih Somuncu, Murat Cakmak, Pinar Atasoy*, Hulya Akman, Sevgi Ulusoy

Departments of Pediatric Surgery and *Pathology, Kirikkale University, School of Medicine, Kirikkale, Turkey

Correspondence: Salih Somuncu, Kirikkale Üniversitesi Tıp Fakültesi Çocuk Cerrahisi Anabilim Dalı 71100, Kirikkale, Turkey.

E-mail: somuncusal@yahoo.com

ABSTRACT

Epidermoid cyst is a rare and non-teratomatous, benign tumour of the testis. Testis-sparing surgery is recommended as surgical treatment. We present a 9-year-old-boy with testicular epidermoid cyst. The embryology, histogenesis and treatment of epidermoid cyst of testis, are discussed.

KEY WORDS: Epidermoid cyst, testis, organ-preserving surgery

Testicular epidermoid tumours are uncommon, benign tumours and account for less than 1% of all testicular neoplasms. They are extremely rare in childhood and they account for 3% of all pediatric testicular tumours.^[1] Epidermoid cysts are benign testicular tumours, which are composed entirely of keratin producing epithelium.^[1] It is a nonteratomatous benign tumour and testis sparing surgery is recommended as the surgical treatment.^[2] We present a 9 year-old-boy with testicular epidermoid cyst, who experienced a testis- sparing surgery.

CASE REPORT

A 9-year-old boy presented with a painless mass in the right testis. There was no history of trauma and other systemic illness. A 2x1x1 cm. diameter, semihard, non-tender, right testis was in heterogenous pattern and intratesticular nodules were found in physical examination. The left testis was normal. There was a slight asymmetry of the testicles, with the right testis bigger than the left testis. Serum a-fetoprotein and serum b-HCG were in normal limits. Abdominal ultrasonography was normal.

Testicular ultrasonography revealed a 15x10x10 mm. diameter, heterogenous and hypoechoic intratesticular nodular mass with irregular border, which contains multiple calcific foci associated with distal acoustic shadowing. The cystic mass was uniocular. There was no evidence of increase in flow of the right testicular mass, in colour doppler ultrasonography.

A right scrotal transverse incision was performed and multiple keratinous materials beneath the tunica albuginea and intratesticular cystic mass, were found [Figure 1]. The testicular mass was excised by wedge resection. The section of cystic lesion showed white-yellowish keratinous material [Figure 2]. The testicular tunica was closed and the testis was placed within the scrotum.

Histopathologic examination demonstrated an encapsulated cyst lined by squamous epithelium containing keratinous material and histological diagnosis was that of epidermoid cyst of the testis [Figure 3]. The postoperative period was uneventful.



Figure 1: The macroscopic view of testicular epidermoid cyst



Figure 2: The view of white-yellowish keratinous material in testicular epidermoid cyst

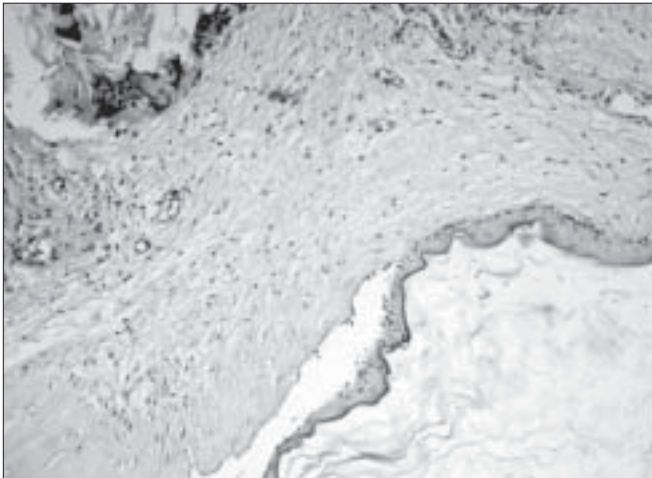


Figure 3: The view of cyst lined by squamous epithelium and containing keratinous material in histopathological examination. H/E, 100x

DISCUSSION

The epidermoid cyst was firstly described in 1942 by Dockerty and Priestly.^[3] Testicular epidermoid cysts are rare and benign tumours and its prevalence is approximately 1% of all testicular tumours.^[1] Epidermoid cysts differ from dermoid cysts, as they contain skin and skin appendages and differ from teratomas, as teratomas contain derivatives of all germ layers.^[1] The absence of mesodermal and endodermal components distinguishes epidermoid cysts from dermoid cyst or teratoma, which have malignant potential. Epidermoid cysts are benign and don't have risk of recurrence and metastasis.^[2] Epidermoid cyst of the testis is defined as an

intraparenchymal testicular cyst, which is filled with keratinized material and lined by squamous epithelium, but without teratomatous elements or cutaneous adnexal structures.^[2] Focal calcification may be found on the cyst wall. or within the cystic lumen.^[2]

The histogenesis of epidermoid cyst is unclear. The prevailing hypothesis is that of germ-cell origin, developing along the line of epidermal differentiation, as a monodermal expression of a teratoma.^[4] Other hypotheses include that of squamous metaplasia of the rete testis and inclusion of epidermal cyst.^[4]

Epidermoid tumours are generally benign tumours in both prepubertal and postpubertal ages.^[1] Intratubular germ-cell neoplasia (carcinoma in-situ) has not been reported in testicular epidermoid tumours, in childhood and adults. Radical orchiectomy has been extensively applied in the early years on the century.^[2] Some authors have encouraged testis-sparing surgery in adults in the recent years.^[2] Recently, organ preserving surgery has become favored according to traditional orchiectomy, because testis-sparing surgery may offer better psychologic and cosmetic results and the preservation of fertility. Ciftci *et al.* reported that there was no recurrence in their 3 cases.^[5] This approach has been recommended as the treatment of choice, in prepubertal ages.^[6] So we used testis-sparing surgery in our case.

Testicular epidermoid cyst is a rare benign tumour and it is classified as intraparenchymal testicular cyst without teratomatous elements. So organ preserving surgery is suggested in testicular epidermoid cyst, in prepubertal ages.

REFERENCES

1. Dieckmann KP, Loy V. Epidermoid cyst of the testis: A review of clinical and histogenetic considerations. *Br J Urol* 1994;73:436-41.
2. Ross JH, Kay R, Elder J. Testis sparing surgery for pediatric epidermoid cysts of the testis. *J Urol* 1993;149:353-6.
3. Dockerty MB, Priestly JT. Dermoid cysts of the testis. *J Urol* 1942;48:392.
4. Price EB. Epidermoid cyts of the testis. A clinical and pathologic analysis of 69 cases from the testicular tumor registry. *J Urol* 1969;102:708-13.
5. Ciftci AO, Kologlu M, Senocak ME, Tanyel FC, Büyükpamukcu M, Büyükpamukcu N. Testicular tumors in children. *J Pediatr Surg* 2001;36:1796-801.
6. Eisenmenger M, Langs S, Donner G. Epidermoid cysts of the testis: Organ- preserving surgery following diagnosis by ultrasonography. *Br J Urol* 1993;72:955.