Epidermoid cyst of the testis : A case report

Received: 4/12/2010 Accepted: 27/4/2011

Noel S. AL-Sakkal * Pishtewan H. AL-Bazzaz **

Abstract

Background and objectives: Epidermoid cyst of the testis is a very rare benign lesion that accounts for about 1% of all testicular tumors.

Case report: 16-year old male with epidermoid cyst of the testis is described in which the diagnosis was unsuspected clinically and diagnosed histopathologically. The clinical, histogenesis, pathology and management are briefly reviewed.

Key words: Testis, epidermoid cyst

Introduction

Epidermoid cyst of the testis is a very rare benign lesion, was first described in 1942 by Dockerly and Priestly [1] and accounts for about 1% of all testicular tumors [2]. It 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 structure such as hair follicles or sebaceous glands [3, 4]. The clinical manifestation is indistinguishable from that of the much more commoner malignant germ cell tumor, most of the patients are asymptomatic, with the mass being detected either at self-examination or during physical examination as a painless mass [5]. The origin of epidermoid cyst of the testis is controversial [3], but they are considered as examples of monomorphic development of teratomas [2,6]. We report this case because it is rare and to the best of our knowledge it is the first case to be reported in Erbil, Kurdistan, Iraq.

Case presentation

16-year-old male presented with painless left testicular mass. There was no history of trauma and other systemic illness. Physical examination revealed left scrotal swelling, not tender, firm solid in consistency with no evidence of lymphadenopathy or gynecomastia and no evidence of hydrocele. The contra -lateral testis was normal. Laboratory tests results, including level of tumor markers serum alpha-fetoprotein and beta-human chorionic gonadotropin were normal. Testicular ultrasonography revealed solid mass within the testis with concentric rings of hypoechogenicity and hyperechogenicity. The surrounding parenchyma and the epididymis were normal. Inguinal orchiectomy was performed.

Pathological examination:

Gross examination: The specimen consisted of a testis measuring 5 cm in diameter with spermatic cord. On slicing the cut surface shows a well-demarcated whitish mass with concentric layers of white paste like material measuring 1.5 cm in diameter (Fig. 1 & 2).

Microscopic examination: Shows a cyst lined by keratinized squamous epithelium and contains laminated layers of keratin. The adjacent testicular parenchyma revealed seminiferous tubules with maturation arrest (Fig. 3). A diagnosis of epidermoid cysts of the testis was made.

*Media Diagnostic Center, 60th street, Private Sector, Erbil, Iraq.
**Department of Surgery, College of Medicine, Hawler Medical University, Erbil, Iraq.

Figure.1: Testis and spermatic cord shows well-defined white-yellow mass.

Figure 2: Cut surface of the testis with spermatic cord revealed well-demarcated whitish mass with concentric layers of white-yellow paste like material.

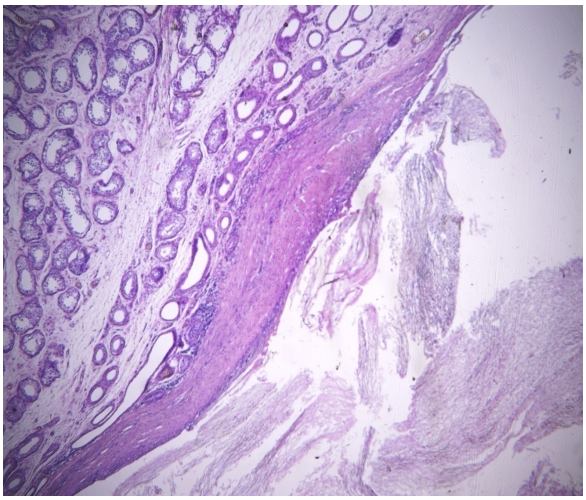

Figure 3: Epidermoid cyst lined by keratinized squamous epithelium and the lumen contains laminated keratin. The surrounding testicular parenchyma shows maturation arrest.

Discussion

Epidermoid cyst of the testis is a rare cause of testicular swelling [7]. The majority of patients are in the 2nd to the 4th decade of life, and patient's age ranges from 3 to 77 years [8, 9]. Epidermoid cyst differs from dermoid cyst, as they contain skin and skin appendages and differ from teratoma as teratoma contains derivatives of all germinal layers [10]. The absence of mesodermal an endodermal components distinguishes epidermoid cyst from dermoid cysts or teratoma. The histogenesis of epidermoid cyst of the testis is controversial; therefore the clinical management has been controversial [8]. The prevailing hypothesis is that of germ cell origin developing along the line of epidermal differentiation as monodermal expression of teratoma [11]. Other hypothesis is that of squamous metaplasia of epithelium of the seminiferous tubules [12] or squamous metaplasia of the rete testis [13]. Epidermoid cyst of the testis cannot be differentiated reliably from the far more common malignant testicular mass on a clinical basis. Simple excision of the cyst does not exclude the possibility of the remote focus of viable tumor. Consequently inguinal orchiectomy should

be the treatment of choice with subsequent proof placed on the pathologist to exclude associated lesions [14]. When imaging findings suggest that an intra- testicular mass is likely to be an epidermoid cyst conservative management can be performed rather than orchiectomy [2, 6, and 15]. Testis-sparing surgery in adults because may offer better psychologic and cosmetic results and the preservation of fertility [16].

Conclusion

Epidermoid cyst of the testis is a very rare and should be included in the differential diagnosis of testicular mass. Although ultrasonography may suggest the diagnosis. Final histopathologic examination is the most crucial part of diagnosis.

References

1. Loya AG, Said JW and Grant EG. Epidermoid cyst of the testis. Radiographics 2004, 24: 5243-5246.
2. Lev R, Mor Y, Leibovitch I, Golomb J, Perelman M, Heyman Z, Ramon J. Epidermoid cyst of the testis in an adolescent: case report and review of the evolution of the surgical management. J Pediatr Surg 2002, 37: 121-123.
3. Ross JH, Kay R, Elder J. Testis sparing surgery for pediatric epidermoid cysts of the testis. J Urol 1993, 149: 353-356.
4. Buckspan MB, Skeldon SC, Klotz PG, Pritzker KPH. Epidermoid cyst of the testicle. J Urol 1985, 134: 960-961.
5. Langer JE, Ramchandani P, Siegelman ES, Banner MP. Epidermoid cyst of the testicle: Sonographic and MR imaging features. AJR Roentgenol 1999, 173:1295-1299.
6. Docal I, Crespo C, Pardo A, Prieto A, Alonso P, Calzanda J. Epidermoid cyst of the testis: a case report. Pediatric Radiol 2001, 31:365-367.
7. Garrett JE, Cartwright PC, Snow BW, Coffin CM. cystic testicular lesions in the pediatric population. J Urol 2000, 163: 928-936.
8. Malek RS, Rosen JS, Farrow GM. Epidermoid cyst of the testis: a critical analysis. Br J Urol 1986, 58: 55-59.
9. Heidenreich A, Engelman UH, Vietsch HV, Derschum W. Organ preserving surgery in testicular epidermoid cysts. J Urol 1995, 153:1147-1150.
10. Dieckmann KP, Loy V. Epidermoid cyst of the testis: a review of clinical and histogenetic considerations. Br J Urol 1094, 73: 436-441.
11. Price EB Jr. Epidermoid cyst of the testis. A clinical and pathological analysis of 69 cases from the testicular tumor registry. J Urol 1969, 102:708-713.
12. Oslen JG, Calderin VO. Epidermoid cyst of the testis: United states Armed Forces Medical Journal 1955, 6: 747-749.
13. Halley JBV. Epidermoid cyst of the testicle. J Pathol Bacteriol 1961, 82: 73-76.
14. Johnson JW, Hodge EE, Radwin HM. Epidermoid cyst of testis: a case for orchiectomy. Urology 1987, 29(1): 23-25.
15. Valla Js. Testis-sparing surgery for benign testicular tumors in children. J Urol 2001, 165: 2280-2283.
16. Ciftci AO, Bingol-Kologlu M, Senocak ME, Tanyel FC, Buyukpamukcu M, Buyukpamukcu N. Testicular tumor in children. J Pediat Surg 2001, 36: 1796-1801.