TESTICULAR EPIDERMOID CYST WITH CALCIFIED CAPSULE : A CASE REPORT

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Abstract : A 28-year-old man was referred to Gunma University Hospital for his hard nodule in his left testis. Ultrasonography showed hyperechoic mass with irregular margin. Serum tumor marker levels were within normal limit. Calcified element of mature teratoma or burned-out tumor was suspected. Left inguinal orchiectomy specimen showed epidermoid cyst of the testis with calcified capsule. We reported this case with some discussion on the treatment of epidermoid cyst of the testis.

Key words : Epidermoid cyst, Testis, Capsular calcification
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INTRODUCTION

Epidermoid cyst of the testis is a rare, benign testicular tumor. It is generally regarded as a monodermal or a monophasic teratoma¹⁾. We treated a patient with epidermoid cyst with calcified capsule, mimicking an infantile type of mature teratoma or a calcified lesion of burned-out tumor. We report this case with some discussion on management of epidermoid cyst of the testis.

CASE REPORT

A 28-year-old man was referred to our hospital. He has been aware of hard nodule in his left testis for 15 years. He got married and was anxious about the nodule. A hard nodule of about 10 mm in diameter was palpable in the upper pole of the left testis without tenderness. On ultrasonography, hyperechoic mass was detected and the margin was slightly irregular (Fig. 1.). Calcified element in the testis reminded us of an osseous element of the infantile type of mature teratoma or a calcified element of burned-out tumor. Serum HCG-beta, AFP and LDH levels were within normal limit. On X-ray and whole abdominal CT scan, no metastatic lesions were found. We did not rule out

the malignant element in the tumor and performed left inguinal orchiectomy on August 22, 1996. Macroscopically, the tumor had calcified capsule and keratinized substance as a content (Fig. 2.). Histopathological findings showed the epidermoid cyst with calcified capsule (Fig. 3.). He was followed-up without adjuvant treatment and had no tumor recurrence 6 months after operation.

Fig. 1. Ultrasonographic appearance of the tumor in the left testis.

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Fig. 2. Macroscopic appearance of resected specimen.

Fig. 3. Microscopic appearance of the tumor
Calcified cyst wall of the cyst with keratinized substance (H.E×88).

DISCUSSION

Epidermoid cyst accounts for about 1% of testicular tumor. The prognosis was extremely good and no tumor recurrence was reported²⁾. In Japanese literatures, 107 cases of epidermoid cyst of the testis were reported so far³⁾. So our case seems to be the 108th reported case.

Five criteria for histological diagnosis of simple epidermoid cyst of the testis were established by Price⁴⁾ in 1969 as shown in table 1. In our case, most part of cyst wall was calcified. It was presumed that fibrous capsule got calcified and that epithelium disappeared. We diagnosed the tumor as an epidermoid cyst. This calcified capsule obscured preoperative clinical features. Typical findings on ultrasonography was a round hypoechoic mass inside the testis with a hyperechoic margin²⁾. We encountered a hyperechoic mass in the case of infantile type of mature

teratoma with osseous element or in a case of calcified element of burned-out testicular tumor. We presumed these types of tumor rather than an epidermoid cyst.

Testis sparing surgery was introduced to an epidermoid cyst of the testis^{1,2,5)}. If frozen section examination of tumor (less than 3 cm in diameter) and adjacent testicular tissue reveals an epidermoid cyst without adjacent testicular intraepithelial neoplasia, only cyst should be excised. Then, if the final histological diagnosis confirms the presence of an epidermoid cyst, no additional treatment is necessary. If the diagnosis is a dermoid cyst, in which the skin appendages are found, or a teratoma, a inguinal orchiectomy must be performed.

However, considering the limitation of accuracy of frozen section examination⁶⁾, we think that this algorithm is not always valid and in some cases, an inappropriate excision of the scrotum and testicular parenchyma has a possibility of tumor dissemination. Testis sparing surgery is indeed a fascinating method for its functional and cosmetic results. However, its indication should be limited to a typical case.

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Table 1 · Five criteria for histological diagnosis of simple epidermoid cyst of the testis (by Price in 1969).

1. Cyst located inside testicular parenchyma
2. Lumen of cyst contains keratin
3. Wall of cyst composed of fibrous tissue with an inner lining of squamous epithelium
4. No teratomatous or adnexal structures, e.g. sebaceous glands, hair follicles, within cyst or in adjacent testicular parenchyma
5. Absence of scar in remaining testicular tissue