

Testicular Sparing Surgery For A 5-Year- Old Boy with Sertoli's Cell Tumour of the Testis: Case Report

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Abstract

Introduction: Steroli's cell tumors SCT are rare testicular tumor. Very few cases were published in the literature. A new case of Sertoli's cell tumor that is reported and treated by testicular sparing surgery.

Case Presentation: A 5-year-old boy with Sertoli' cell tumor presents with gynaecomastia and precocious puberty. He was treated by successful testicular sparing surgery.

Conclusions: SCTs are rare testicular tumors. Testicular sparing surgery can be applied.

1-Introduction

Sertoli's cell tumors (SCTs) are tumors of Sertoli cells, which are the feeder of the sperm-producing germ cells [1]. They are very rare type of testicular tumors, forming less than 1% of testicular cancers and few cases had been reported in the literatures [2],[3],[4]. They come the 2nd commonest type of testicular cancers in children after Ledig's cell tumors [5]. They form in the normally descended testicle [6]. The majority of SCTs of the testes are seen in infants less than 6 months[7] and uncommonly in men older than 50 years of age[8]. Nearly almost all patients with testicular neogrowth presents with testicular mass and 10% of them presents with gynaecomastia and precocious puberty due to increased estrogen secretion[6],[9],[10],[11]. Most of them behave a benign behavior and only 10% are malignant [2],[6] usually in adults not in children [3],[8],[12]. The gold standard treatment of any testicular neoplasms is orchiectomy [8],[12] but being mostly benign in children, testicular sparing surgery should be thought of for cosmetic and functional purposes [1],[5],[6].

2- Case Presentation

A 5-year-old boy with bilateral gynaecomastia since when he was two months old was referred for urological evaluation. He was completely healthy before. He had no history of any drug intake and no family history of testicular cancers. O/E, he looks healthy more mature than his age compared to his siblings Fig. 1.

**5 Years
Patient**

9 Years

2 Years



Figure 1: Precocious Puberty

Both breasts were enlarged and on palpation there were bilateral discoid, firm & mildly tender breast enlargement under the nipple. No axillary lymphadenopathy Fig. 2.



Figure 2: Bilateral Gynecomastia

Examination of the scrotum revealed a 3 cm firm, well localized and mildly tender mass at the lower pole of the left testis Fig. 3, the right testis was normal.



Figure 3: Left testicular mass

Abdominal examination revealed no organomegaly. Chest was clear. Scrotal ultrasound showed a hypoechoic mass in the lower pole of the left testis of about $34 \times 32 \times 31$ mm. Blood investigation, Liver function tests were normal. Alpha-fetoprotein, B- human chorionic gonadotropin (β -hCG), Testosterone, Estradiol, Progesterone, LH, FSH, Prolactin, TSH were all normal. Abdominal ultrasonography was normal.

Owing to the presence of the functional testicular mass in a child, the patient was taken to the operating theatre for radical orchiectomy but being mostly benign, testicular sparing surgery may be considered.

3- Surgical procedure

After a proper informed consent from the patient and his relatives regarding left orchiectomy, the left testis was explored through left inguinal incision, the spermatic cord was controlled early with atraumatic clamp, the testicle was delivered to the wound. On palpation of the left testicle, there was about 3 cm firm to hard well defined mass at the lower pole of the left testis. It was easily enucleated completely with preservation of normal testicular tissue. Cut sections of the tumor revealed yellowish discoloration of the tumor and the specimen was sent for histopathological examination Fig. 4.



Figure 4 : The tumor after complete excision.

The histopathological examination showed Sertoli cell adenoma (Myer's type 1) with no evidence of increased mitotic activity. The line of excision was free of tumor. After surgery gynaecomastia regressed gradually and disappeared after 18 weeks. Follow up for 18 months, by physical examination and ultrasonography there was no recurrence of the tumor and no testicular atrophy.

4-Discussion

This five-year-old boy presents during infancy with gynaecomastia , which is similar to other case reports ^(8,9,10,12). Development of the tumor in a normally positioned testis is similar to another study ^(6,9). Liver function tests, Alfa-fetoprotein & B- human chorionic gonadotropin (β -hCG) were within normal, which is compatible to other studies ^(8,10). Although he presented with gynaecomastia, the estradiol level was unexpectedly normal. This is unusual and different from what was seen in other studies and gynaecomastia cannot be explained unless on the basis androgen insensitivity ^(8,9,12). These tumors are usually benign in children ^{1, 2} and 10% are malignant and only 21 patients were reported to be malignant ¹¹. There is no way to confirm their benignity neither by tumor markers nor ultrasonography except by frozen section^(8,12) which was not available to our patients. This is considered as a deficiency of this study. The size of the tumor (3 cm in size) is not consistent with what was published as it was usually smaller ^(9,12). The gold standard treatment of any testicular neoplasm is radical orchiectomy ⁽¹²⁾ but Sertoli's cell tumor being mostly benign in children , testicular sparing surgery in a form of enucleation at line of cleavage between the tumor and the testis should be thought of for cosmetic and functional benefits ^(1,5,7,11). This need to be done after being confirmed by frozen section which unfortunately may not available all the time ⁽¹²⁾. This is critical regarding preoperative informed consent about the possibility of radical orchiectomy. For the above mentioned reason, testicular sparing surgery was applied to this patient and proved to be effective during 18 months postoperative follow up by physical examination and ultrasonography without testicular atrophy and recurrence of the tumor.

5- Conclusion

Any patient with gynaecomastia need urological evaluation to find the cause. The fact that Sertoli's cell tumors are usually benign in children encourages selective application of testicular sparing surgery in their treatment. These tumor being very rare and the long term sequel of such treatment is not well known makes long term follow up a wise option.

CONFLICT OF INTERESTS

There are no conflicts of interest.

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عملية المحافظة على الخصية في معالجة ورم سارتولي: حالة مسجلة

الخلاصة

يعتبر ورم سارتولي للخصية من الأورام النادرة و هناك حالات قليلة جدا مسجلة. في هذه المقالة حالة جديدة لورم الخصية تم تسجيلها لحالة ولد عمره ٥ سنوات يعاني من تورم الثديين و النضوج المبكر بسبب ورم سارتولي في الخصية اليسرى ومعالجته بعملية المحافظة عليها. و تم الاستنتاج بأن هذه العملية يمكن تطبيقها لمعالجة ورم سارتولي للخصية.

الكلمات الدالة: ورم الخصية, ورم ساتولي, طفل, تضخم الثديين, عملية المحافظة على الخصية.