International Surgery Journal
Tonape T et al. Int Surg J. 2019 Sep;6(9):3386-3388
http://www.ijsurgery.com
pISSN 2349-3305 | eISSN 2349-2902

DOI: http://dx.doi.org/10.18203/2349-2902.isj20194082

Case Report

Intraoperative decision preventing orchidectomy

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Received: 22 May 2019
Revised: 05 August 2019
Accepted: 07 August 2019

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ABSTRACT

Adenomatoid tumors are regarded as distinctive benign mesothelial neoplasms of the paratesticular region, most commonly occurring at the tail of the epididymidis. Because of its rarity, the clinical and histopathological aspects are discussed. We present the case of 40 years old male patient came to our OPD with complaints of left hemiscrotal swelling since 6 months duration. A clinical diagnosis of testicular neoplasm was made, but the final diagnosis of adenomatoid tumor was made after excision. Due to its low incidence in intrascrotal pathology, we believe it is important for the physician to be aware of this interesting entity in order to make a differential diagnosis from other inflammatory processes and to adopt the proper surgical approach.

Keywords: Testis, Orchidectomy, Radical, Adenomatoid tumor, Benign, Malignant

INTRODUCTION

Adenomatoid tumor of the male genital tract is a non - hormone dependent tumor of mesothelial origin.[1] It is a type of paratesticular tumor. Usually less than 5% intrascrotal masses are paratesticular tumors. Among paratesticular tumors, adenomatoid accounts for 30% and the others include papillary cystadenoma, leiomyoma, fibroma, lipoma, etc.[2]

These tumors usually arises in the epididymis, and approximately 14% of paratesticular adenomatoid tumors arise from the testicular tunica.[1]

Most adenomatoid tumors of epididymis are asymptomatic and are found accidentally by the patient or by the physician on physical examination, as a non-painful intrascrotal mass.

To the best of our knowledge, fewer cases have been reported in the literature. Since most intrascrotal masses are malignant tumors, we present this rare but benign intrascrotal tumor. It is imperative that all surgeons should be aware of this rare disease to avoid unnecessary extensive surgical resection.

CASE REPORT

40 years old male patient came to our OPD with complaints of left hemiscrotal swelling since 6 months duration. No associated condition of trauma, fever or pain. On physical examination, there was 3 × 2 cms well defined hard swelling palpable in the lower pole of left hemiscrotum. Left testis was palpable separately from the swelling. No obvious intratesticular mass was found. No evidence of intra-abdominal lump or left supraclavicular lymphadenopathy.

Serum tumor markers including alpha-fetoprotein, beta-human chorionic gonadotropin and lactate dehydrogenase were all within normal limits. USG inguino scrotum was suggestive of heterogenous hypoechoiec lesion of left testis likely neoplastic etiology. CECT abdomen and pelvis were size of well defined isodense lesion of size 23

× 18 mm outside left testis, mostly epididymal inflammatory etiology.

The patient subsequently underwent exploration through left inguinal incision. Intraoperatively, there was an evidence of 3 × 2 cm swelling with well-defined margins adhered to the lower pole of the testis appeared to be arising from the tail of epididymis.

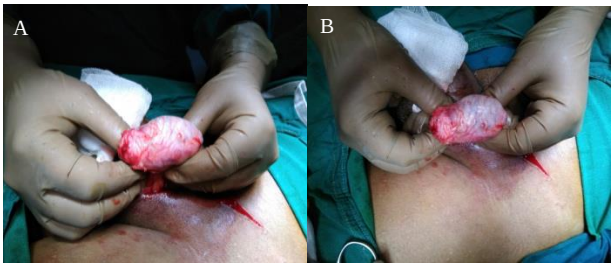

Figure 1 (A and B): Intraoperative image showing the tumor adhered to lower pole of the testis.

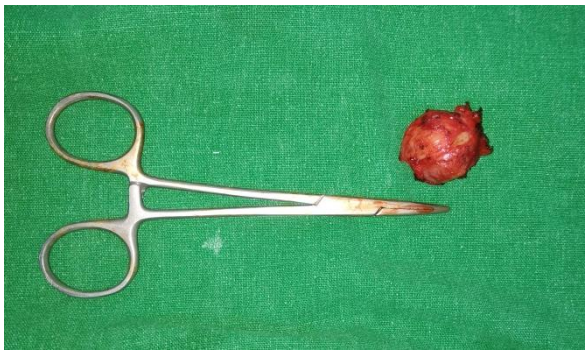

Figure 2: Excised specimen of adenomatoid tumor preserving the testis.

After meticulous dissection, the swelling was excised in toto from the epididymis and testis, without any damage to the surrounding structures and sent for histopathological examination (HPE). Hence, orchidectomy was deferred. HPE was suggestive of adenomatoid tumor of epididymis. Immunohistochemical evaluation was positive for calretinin, which documented the diagnosis of adenomatoid tumor and its mesothelial origin. After 6 months follow up, patient is asymptomatic and fine.

DISCUSSION

Adenomatoid tumors are the most common type of paratesticular tumors, which is almost 30% of all paratesticular tumors. The other tumors including papillary cystadenoma (11%) and leiomyoma (9%) are also common benign tumors of epididymis.[3] Adenomatoid tumors were first reported in 1945 by Golden and Ash.[4] This tumor is usually found in the head of the epididymis. The spermatic cord, prostate, and ejaculatory ducts can also be affected.[5,6] It can also affect the uterus, fallopian tubes and ovaries in females.[7] Other than the genital organs mentioned above, adenomatoid tumors have also been found in the adrenal gland.[8] It can rarely involve the testis, presenting as an intratesticular mass.[6]

Adenomatoid tumors are usually incidental findings. Rarely, it can present as posttraumatic acute scrotum. Differential diagnosis includes all possible testicular and paratesticular masses as well as other scrotal abnormalities such as lipoma, sarcoma, metastatic tumor, granuloma, and hematoma of the spermatic cord.[9]

There are many theories about the histological origins of adenomatoid tumors. Among all, the most accepted theory is mesothelial origin.

Adenomatoid tumors mostly affect patients between 30–50 years old, but neoplasm has been reported in patients at extreme ages (18 or 80 years).The usual presentation is a hard intrascrotal masses, where the majority of intrascrotal mass grew very slowly and persisted asymptomatically. Very few epididymal adenomatoid tumors are accompanied by pain.

Ultrasonography is the investigation of choice for diagnosing scrotal pathology preoperatively. The sonographic appearance of adenomatoid tumors of epididymis are usually a hyperechoic and homogeneous characteristics.[10] If ultrasonography does not give adequate information to differentiate the type of tumor, then magnetic resonance imaging (MRI) is important for establishing the diagnosis before surgery.

Macroscopically, adenomatoid tumors are usually circumscribed, firm, smooth, single, gray-white mass. Microscopically, the tumor cells are cuboidal, flat, or ovoid cells with round nuclei and abundant dense cytoplsm. A typical feature is the presence of vacuoles inside epithelial cells. Another common presentation of these lesions is lymphoid aggregates, which are often localized at the periphery of the tumor.

The immunohistochemical profile is positive for mesothelial associated markers like, calretinin+, WT1+ and CK5/6+. Among these, calretinin has the most accurate sensitivity for identifying mesothelial cell tumors, and its expression in malignant tumors is very rare. The immunohistochemical positivity of adenomatoid tumors can also be very useful for differentiating other neoplasms that are easily confused with adenomatoid tumors, namely, yolk sac tumor (negative for WT1 and calretinin), leydig cell tumor (negative for WT1), and metastatic carcinoma.[11] In addition, negative tests for epithelial markers, such as factors VIII or CD34, can exclude the tumors of vascular origin.

Adenomatoid tumors have never been associated with malignant behavior. No cases of malignant tranformation, metastasis, or relapse after removal have been reported.

Treatment involves surgical removal of the tumor, and to prevent unnecessary orchidectomy, thus preserving fertility and testosterone production. But due to fear of handling a malignant tumor, most surgeons end up doing an orchidectomy. Enucleation or epididymectomy can also be considered while an intraoperative biopsy confirms its benign nature. Intraoperative frozen sections are challenging for the pathologist to rule out malignancy. However, in the literature, rare cases have been treated with conservative testicular-sparing surgery.

CONCLUSION

Epididymal adenomatoid tumors are rare and benign tumor. Adenomatoid tumor of the epididymis is a distinctive clinical identity with much differential diagnosis and hard to distinguish. Surgeons should keep this less common diagnosis in mind before surgery. Intraoperative frozen sections can be considered if testicular tumor profiles or ultrasonography results all indicate that the tumor is not malignant. Complete excision of tumor is curative as there are no cases of malignant transformation, metastasis, or relapse after removal has been reported. Hence, Clinical examination with adequate biochemical and radiological investigations can prevent unnecessary Orchidectomy in case of adenomatoid tumor.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Tonape T, Athavale V, Balasubramanian SK, Khandalkar S, Ghatnekar A, Koduru S. Intraoperative decision preventing orchidectomy. Int Surg J 2019;6:3386-8.