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Adenomatoid tumor of epididymis-A case report

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ABSTRACT

Adenomatoid tumors are rare benign mesothelial neoplasm involving the Para testicular region, mostly the tail of the epididymis. However, it may occur in some other parts of the genitourinary system. A definitive diagnosis of the tumor is very important because it is very difficult to differentiate it clinically and radiologically from the other intrascrotal tumors. Herein, we report a case of adenomatoid tumor of the epididymis in a 60-year old male patient, with its clinical data and review of the literature.

1. Introduction

Para testicular tumors are rare and account for about 5% of all intrascrotal tumors. 70–80% of all these tumors are benign and 30% of these occur in the epididymis. In males, it may also occur in testis, spermatic cord, and some other genital regions. In females, it usually occurs in the uterus, fallopian tubes, ovary, and Para ovarian tissues. Mostly, these tumors are asymptomatic, benign in nature and present as a small mass in the genital area. Histopathological examination after surgical excision is necessary to confirm the diagnosis, because this area may have some other pathological tumors.

2. Case presentation

A 60-year-old patient, presented in our department with a peanut size mass on the right side of his scrotum, for 1 year. There was no pain and other symptoms of the genitourinary system. All his physical examinations were normal and he did not have any significant past medical history. On clinical examination, a round, non-tender mass was present on the right side, within the scrotum in the tail of epididymis. It was separated from the right testis, and was smooth and firm inconsistency. The scrotal skin, spermatic cords, the left testis, and all other genital parts were completely normal without any enlarged lymph nodes. No history of trauma was reported. Ultrasonography of the mass revealed a well-defined Hypoechoic lesion which was about 2.0 × 1.9cm in size on the tail of the right epididymis. Minimal internal vascularity was demonstrated on the color Doppler. The ultrasound images are shown in Fig. 1. Laboratory investigation including PPD was negative, Alpha-Fetoprotein (AFP), Beta hexachlorocyclohexane (BetaHCH) and Lactic Acid Dehydrogenase (LDH) were all within the normal limit.

During surgery, a 2.0cm round mass was found on the tail of the right-side epididymis as shown in Fig. 2(A) and was resected completely. The mass was round, encapsulated, with the surfaces not very smooth and the boundaries were clear as shown in Fig. 2(B). The cut surfaces of the tumor showed solid and greyish-white nodules as shown in Fig. 2(C). Histopathological examination of the tumor showed that the cells were arranged in cords and tubules, separated by fibro-connective tissue and lined by cuboidal to flattened epithelium, with large cytoplasmic vacuoles. The intervening stroma showed abundant fibrous tissue and smooth muscles. Masson trichrome stain shows the presence of fibrous tissue and smooth muscles in intervening stroma. Immunohistochemical positivity for mesothelial markers **HMB1**(Mouse anti-human antigen mesothelial cell) and **Calretinin** confirm the mesothelial origin of the tumor and thus diagnosed it as an adenomatoid tumor of the epididymis. Fig. 3 showed the histopathological features of the tumor. One-year Post-operative follow up showed no recurrence.

3. Discussion

The epididymal epithelial tumor is a subtype of the para testicular tumor with the adenomatoid tumors being the most common, followed by the papillary cystadenoma and leiomyoma. These tumors usually arise in the epididymis and approximately 14% of the Para testicular adenomatoid tumors arise from testicular tunica.[1] The adenomatoid tumor is the most common neoplasm of the epididymis and was described by Golden et al., in 1945 as a small firm asymptomatic mass in

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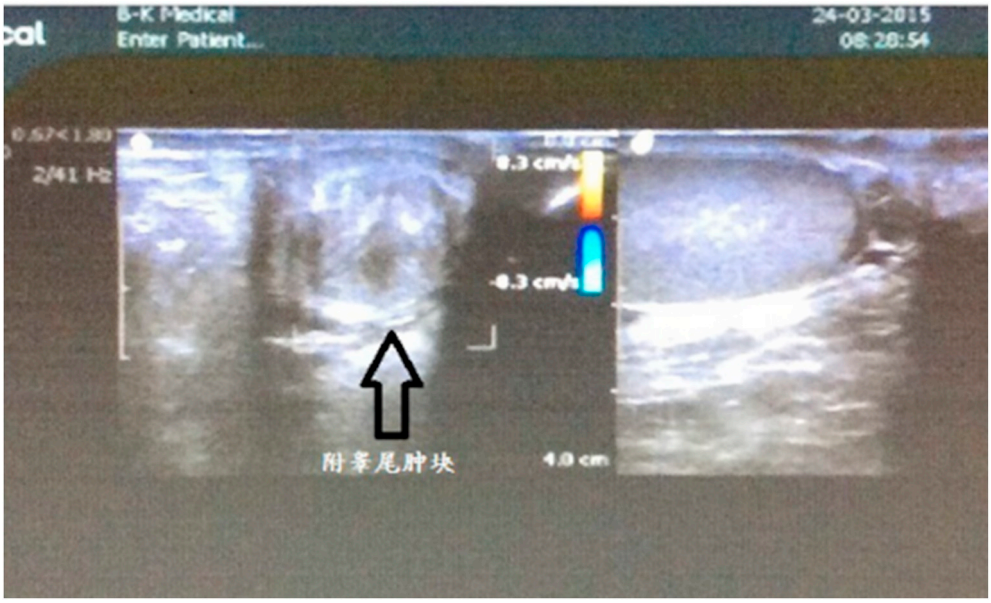

Fig. 1. Color Doppler ultrasonography. (For interpretation of the references to color in this figure legend, the reader is referred to the Web version of this article.)

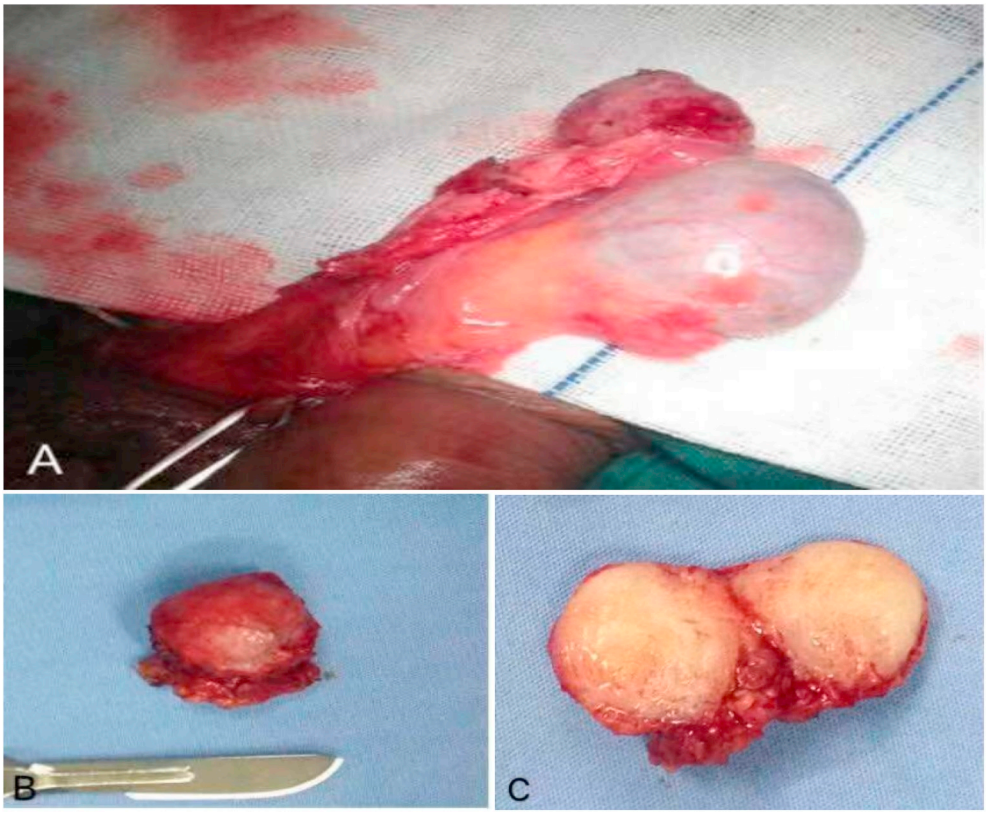

Fig. 2. A. Mass explored during the surgery, B. Resected Tumor, C. Cut-Section of the resected mass.

the scrotal region, without any pain and tenderness.[2] In addition to the epididymis, it can also occur in spermatic cord, prostate, and ejaculatory ducts in males. In females, it occurs in the uterus, fallopian tube, and ovary. The cause of involvement of adenomatoid tumor in the genital area is still unknown, but it may also involve adrenals, lymph nodes, pancreas, mediastinum, and pleura.[3]

Adenomatoid tumors can be seen in all age groups ranges from 18 to 80 years but are most common in 30–40 years age group. The tumor is often located in the tail of the epididymis, round or oval in shape and smooth in appearance. Usually, the tumors are small in size with the average size being 2cm in diameters, but few of them can also grow up to 12cm. They are typically unilateral and occur more frequently on the left side. In our case, the tumor was about 2cm in diameter and was located in the tail of the right-side epididymis. The origin of the adenomatoid tumor is not clear, previously it was assumed that the origin could be mesothelial, mesospheric, Mullerian and endothelial, But the electronic

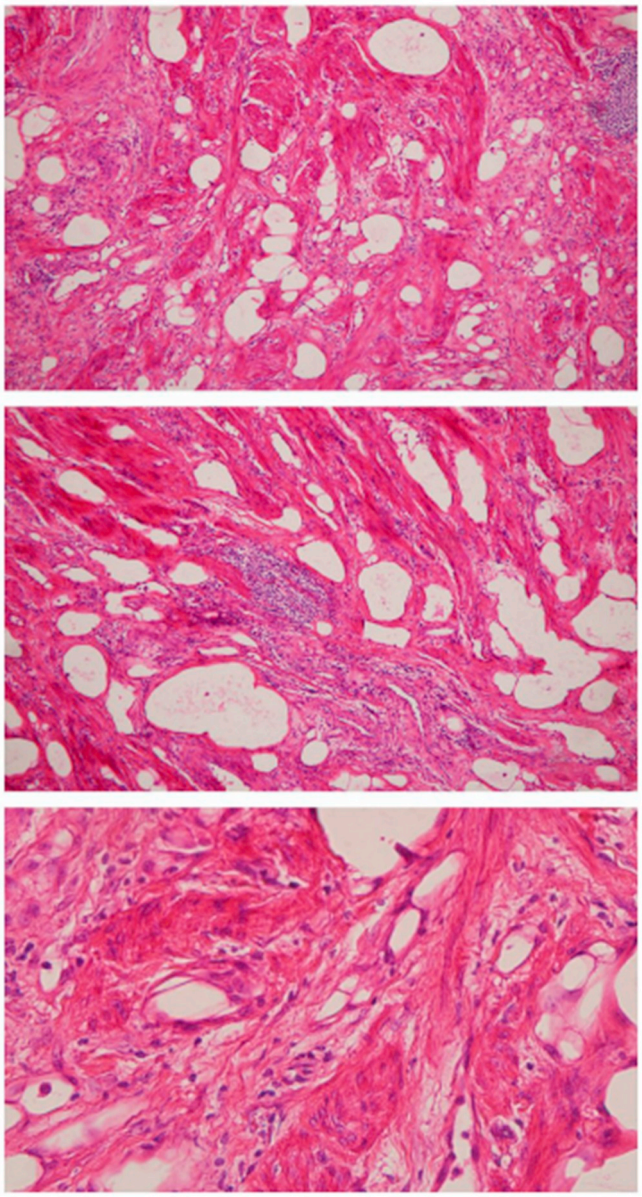

Fig. 3. Histopathology of the tumor (HE, × 200).

microscopic and Immunohistochemical studies support the mesothelial origin. **PAS** and **AB** Staining are positive and after digestion, Hyaluronic acid enzymes are negative which proves the presence of Hyaluronic acid.[4] Microscopically, adenomatoid tumors of epididymis show, epithelial-like cells forming solid cords, tubules and microcystic space with cuboidal or flattened epithelium. Vacuolated cytoplasm is the main feature of the cell. The stroma usually is fibrous and contain smooth muscle cells. Histomorphology and Immunohistochemical features (**Calretinin** and **HMB1**) also support the mesothelial origin. Clinically it may be found accidently during clinical examinations as a small solid intrascrotal mass without any symptoms, which may remain unremarkable and unchanged in size for years. Sometimes it may be painful and confused with the testicular torsion.

Ultrasonography is the investigation of choice because it is safe, easily available, cheap and with high sensitivity and specificity. Ultrasonography of the tumor showed well-circumscribed, uniformly hypoechoic mass which is mostly avascular but color Doppler may show minimal internal vascularity. The differential diagnosis includes fibrous pseudotumor of the epididymis, leiomyoma, papillary cystadenoma, extra testis and angiolipoma.[5] In our case, the ultrasound showed a small hypoechoic region at the end of the epididymis and color Doppler (CDFI) demonstrate a small amount of blood flow signals. Pre-operative FNAC is considered helpful in establishing the diagnosis but unfortunately, in our case, FNAC was not done. CT and MRI may also help in the diagnosis of adenomatoid tumors. Surgical excision is the best and only available treatment.

4. Conclusion

Adenomatoid tumor of the epididymis is a rare benign epididymal tumor, sometimes confused with testicular tumors, therefore an accurate preoperative diagnosis of the tumor is necessary to prevent unnecessary surgical intervention.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Conflicts of interest

None of the contributing authors has any conflict of interest.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.eucr.2019.101022.

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