Urology Case Reports 50 (2023) 102486

Contents lists available at ScienceDirect

Urology Case Reports

journal homepage: www.elsevier.com/locate/eucr

Oncology

Adenomatoid tumor in a young male case report

Dalal Alhusainan *, Saleh Bubishate, Ahmed Alharmi, Ahmed Elabd, Mustafa Almahmid

Urology Unit, Surgical Department, AlAdan Hospital, Kuwait

ARTICLE INFO

Keywords:
Adenomatoid tumor
Para-testicular tumors
Epididymis

ABSTRACT

Adenomatoid tumors are benign para-testicular tumors and account for about 30% of all paratesticular neoplasms in males. The most common presentation is scrotal swelling between the third and fifth decades. We reported an epididymal adenomatoid tumor in a 28-year-old patient.

1. Introduction

Paratesticular tumors are rare and account for about 5% of all intrascrotal tumors.[1] Adenomatoid tumors are benign tumors; although it is more common in male adnexa, it can be found in both male and female genital tracts. It represents 30% of all paratesticular neoplasms in males. It is mainly of mesothelial origin, which commonly involves the tail of the epididymis.[2] These tumors are often incidental findings usually seen in patients between the third and fifth decades.[3] A histopathological examination of the tumor after surgical excision is fundamental for a definitive diagnosis, as it is very difficult to differentiate it clinically or radiologically from other testicular tumors. This case is reported as a result of its rarity in a 28 year old patient.

2. Case presentation

A 28-year-old male presented to Urology Department in Jun 2022 complaining of a left testicular swelling noticed two weeks before his presentation, associated with dysuria and pain that is increasing in severity over the past two weeks. The patient had no significant medical history nor had he a surgical or trauma history. On clinical examination, a small painful rounded mass was found within the left hemiscrotum in the tail of the epididymis. The rest of the physical examination was unremarkable. Labs at the time of presentation were normal. Values of the specific tumor markers including BHCG, LDH, and alpha feto-protein were all within the normal range. Ultrasound scrotum reported the presence of a well-defined rounded para-testicular heterogeneous mass at the tail of the epididymis measuring about 1.6 × 1.5 cm. Doppler ultrasound showed no internal vascularity (Fig. 1).

Left scrotal exploration was done, and a small mass measuring about 1.6cm was found located on the tail of the left epididymis. The mass was excised and sent for histopathology. The patient tolerated the procedure and was discharged the next day. He was followed up in the clinic after two weeks to review the histopathology report, which revealed epididymal adenomatoid tumor. Histopathological examination of the tumor revealed a well-circumscribed compressed tubules and cords lined by cuboidal cells with eosinophilic vacuolated cytoplasm, surrounded by fibrous, hyalinized, and muscular stroma with lymphoid cells and occasional follicles. No evidence of atypia. Tumor cells are positive for PanCK, Calretinin, D240, and WT-1, which confirms the mesothelial origin of the tumor (Fig. 2).

3. Discussion

Adenomatoid tumor is a rare benign mesothelial tumor, which is responsible for 30% of all para-testicular masses.[1,2] Most cases of adenomatoid tumors are found incidentally.[3] Adenomatoid tumor is described as a small firm asymptomatic mass in the scrotal region.[2] Scrotal pain is not a common presenting symptom. However, in our case, the patient presented with two weeks history of scrotal pain, which is increasing in severity. The presence of severe pain would make testicular torsion a strong differential diagnosis in our case, which was excluded by physical examination and scrotal ultrasound.

The median age of presentation of adenomatoid tumor is 36 years old. One case was reported to be found in a 16-year-old male.[3] In our case, the patient presented at the age of 28-year-old with a painful, approximately 2cm left scrotal mass.

Ultrasonography is considered the imaging of choice in the case of testicular masses, as it is non-invasive with high sensitivity and accuracy that can reach up to 100% in confirming the anatomical location of the mass.[3] It has a major role in preoperative diagnosis. However, the presence of local invasion or unclear margins of the mass must be further

* Corresponding author.
E-mail address: d.husainan@outlook.com (D. Alhusainan).

https://doi.org/10.1016/j.eucr.2023.102486
Received 18 May 2023; Received in revised form 22 June 2023; Accepted 25 June 2023
Available online 29 June 2023

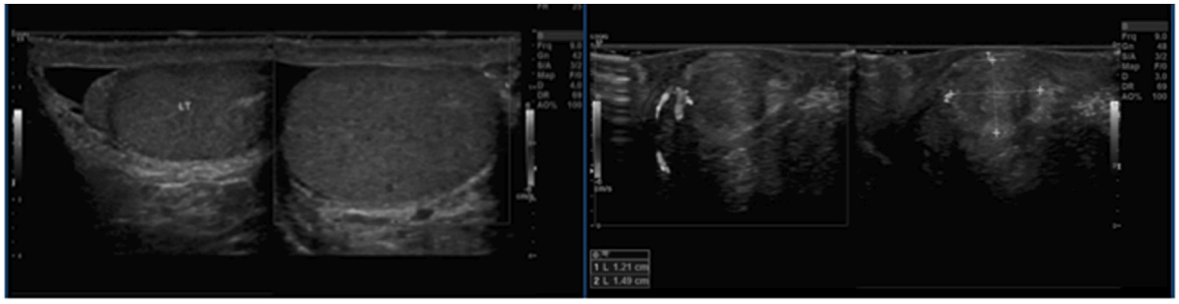

Fig. 1. Scrotal ultrasound showed a rounded heterogenous mass at the tail of the epididymis, measuring about 1.6 × 1.5 cm.

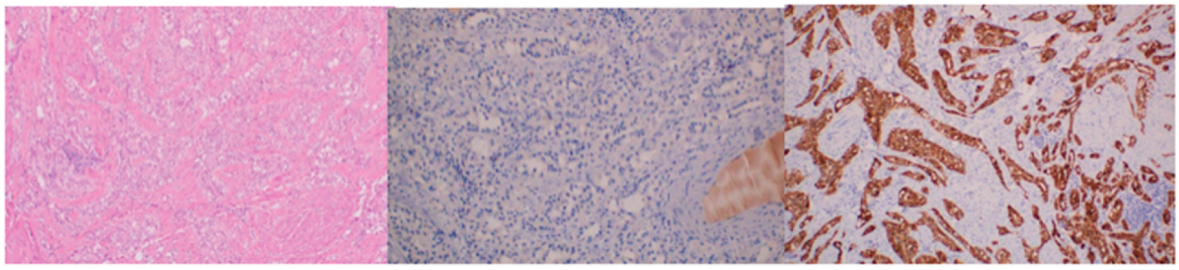

Fig. 2. Histopathological examination of the lesion showed compressed tubules and cords lined by cuboidal cells with eosinophilic vacuolated cytoplasm, surrounded by fibrous, hyalinized and muscular stroma with lymphoid cells and occasional follicles. No evidence of atypia. Tumor cells are positive for PanCK, Calretinin, D240, WT-1 which confirm the mesothelial origin of the tumor.

investigated with MRI, which is more accurate in these cases.[4] Scrotal ultrasound was performed for our patient, which showed a well-defined rounded para-testicular mass of heterogenous echogenicity, measuring about 1.6 × 1.5 cm. Doppler ultrasound showed no internal vascularity.

From an immunohistochemical point of view, adenomatoid tumor is positive for markers, such as CK (AE1/AE3) EMA, Cam 5.2, CK 5/6, CK7, calretinin, vimentin, WT1, and HBME-1. When markers such as AFP, LDH, CEA, and b-HCG, are negative, it is mandatory to exclude malignancy.[3] In our case, all these histopathological and laboratory markers confirmed the diagnosis of adenomatoid tumor.

4. Conclusion

Testicular Adenomatoid tumors are rare benign neoplasms, which need a thorough preoperative work-up and investigations to exclude the possibility of testicular malignancy and for the plan of proper management. The final diagnosis of adenomatoid tumor is made after a histopathological examination, that will reveal both adenomatoid and smooth muscle components. Finally, from literature review, lesions that are detected with ultrasound or MRI which suggest adenomatoid tumors can be followed up by further imaging rather than excision. However, this recommendation should be supported by absence of tumor markers and the opinion of expert oncologist.

Declaration of competing interest

None of the contributing authors has any conflict of interest.

Acknowledgment

We thank the patient and his family.

References

1. Cakiroglu B, et al. Leiomyoma of the epididymis treated with partial epididymectomy. *Urol Ann.* 2014;6(4):356. https://doi.org/10.4103/0974-7796.141005. Available at:.
2. Cazorla A, et al. Epididymal leiomyoadenomatoid tumor: a case report and review of literature. *Curr Urol.* 2014;7(4):195–198. https://doi.org/10.1159/000365675. Available at:.
3. Patoulias I, et al. Epididymal adenomatoid tumor: a very rare paratesticular tumor of childhood, 2016 *Case Rep Med.* 2016:1–4. https://doi.org/10.1155/2016/9539378. Available at:.
4. Rafailidis V, Huang DY, Sidhu PS. Paratesticular lesions: aetiology and appearances on ultrasound. *Andrology.* 2021;9(5):1383–1394. https://doi.org/10.1111/andr.13021. Available at:.