

Adenomatoid tumor of epididymis: An unusual cause of scrotal swelling

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ABSTRACT

Adenomatoid tumor of the epididymis is a rare yet benign lesion, which is believed to take its origin from mesothelial cells. These are small in size, are incidentally detected on clinical examination, and are seldom associated with pain. These indolent tumors have no malignant potential, but can invade the testicular parenchyma, and thereby raising the suspicion of a malignant testicular lesion. Here, we present a case of a 36-year-old male with a left hemi-scrotum swelling for 2 months, which was non-progressive and it was not associated with pain. On palpation, there was a hard, solitary swelling overlying the left testis, which was suspicious of malignancy. The patient then underwent a testicular sparing excision of the left epididymal mass. It is critical to identify such lesions preoperatively to avoid unnecessary orchidectomy and stress to the patient.

Keywords: Adenomatoid, Epididymis, Testicular tumor.

The adenomatoid tumor is a rare yet benign lesion that can be seen in both men and women alike. They are found most commonly within the genitalia and are thought to arise mainly from the mesothelial cells. However, these go unnoticed for long as they remain asymptomatic, and are usually detected incidentally on the scrotal examination. They are usually small to palpate, often measuring less than 2 cm in the maximum diameter. It is found in 55% cases of benign lesions of the epididymis, followed closely in the incidence by leiomyomas and cystadenomas (papillary) [1].

The majority of the patients presenting with a scrotal swelling with a final diagnosis of adenomatoid tumor of the epididymis are between 20-50 years. These lesions are usually unilateral in occurrence and are more frequently palpable on the left side. There are distinct histological types: tubular, adenomatoid and plexiform [2].

Although these are benign tumors, they have the propensity to invade the testicular parenchyma, and hence, they present as a testicular mass. Usually, intra-scrotal masses are considered to be malignant, making this a unique benign occurrence within the scrotum. It is important to be aware of such unique benign lesions within the epididymis extending to testis so as to preemptively plan Testicular sparing procedures and avoid unnecessary and radical surgeries.

CASE REPORT

A 36-year-old male presented to the Urology outpatient department with complaints of swelling over the left hemi-scrotum for 2 months. The swelling was noted to be small in size, non-

progressive and not associated with pain or fever, and it wasn't preceded by trauma. The patient doesn't give any associated history of fever, lower urinary tract symptoms or haematuria. For the above-mentioned complaints, he had sought counsel from a local doctor, and he was referred here for further management. The patient had no associated co-morbidities or family history suggestive of malignancies of the testis.

On general examination, the patient had a pulse rate of 82 beats/min, blood pressure of 110/70 mm Hg and respiratory rate of 14/minute. On local examination, scrotum appeared normal, with no obvious fullness in the left hemi-scrotum. On palpation, there was a lump palpable in the postero-superior aspect of the left testis, felt separately from it, measuring approximately 2 x 2 cm and was hard in consistency. Clinically, it was suggestive of a malignant lesion of the left epididymis (Fig. 1). The per-abdomen examination was normal, and no mass was palpable. Respiratory

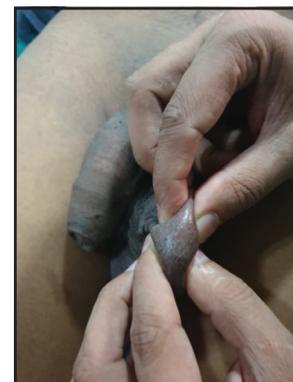


Figure 1: Swelling in the left testis was hard in consistency.

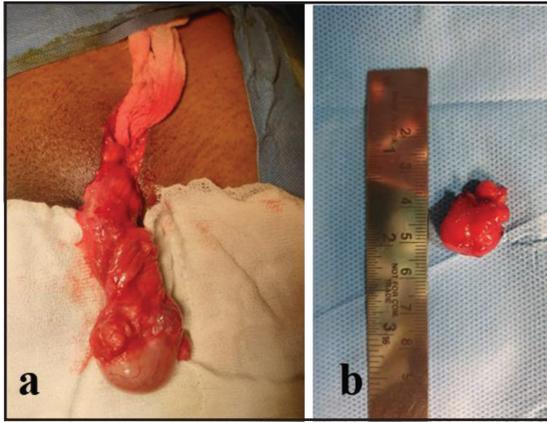


Figure 2: (a) Hard swelling in the left epididymis; (b) swelling from the epididymis excised in toto.

system examination was normal, with no neurological deficits or murmurs on cardiovascular system examination.

The patient was then evaluated further with ultrasound (USG) of the scrotum, which showed the bulky tail of the left epididymis with a small rounded hypoechoic lesion with internal vascularity suggestive of infective epididymitis, with a differential diagnosis of adenoma of the left epididymis. To rule out the testicular malignancy, tumor markers (AFP, Beta HCG, and LDH) were done which was found to be within normal limits. Fine needle aspiration cytology (FNAC) of the lesion was suggestive of adenomatoid tumor of the left epididymis.

The patient underwent excision of the left epididymal mass lesion via an inguinal approach under spinal anesthesia. Intraoperatively, it was noted that there was a 2.5 x 2.5 cm mass at the tail end of the epididymis, which was separate from the left Vas Deferens (Fig. 2). The mass was excised in toto, and an end to end anastomosis was fashioned for the tubules. Post-operatively, the patient made an uneventful recovery.

Grossly, the specimen was a pale brown with a congested outer surface. The cross-section showed a well-circumscribed grey white lesion measuring 1 x 1 cm. Microscopy of the specimen showed epithelial elements arranged in cords, clusters and occasional tubules, and the cells having intracellular vacuoles with a signet ring appearance. These above-mentioned features confirmed the diagnosis of adenomatoid tumor of the left epididymis. The patient made an uneventful postoperative recovery and has been on regular follow-up with no evidence of recurrence noted.

DISCUSSION

Adenomatoid tumors are common paratesticular tumors, usually involving the epididymis in males. However, it is a rare benign lesion that mimics a testicular or paratesticular malignancy, representing less than 5% of all intrascrotal masses [2]. Apart from the epididymis, adenomatoid tumors can be found in the spermatic cord, ejaculatory duct, prostate and rarely in the parenchyma of the testis [3,4]. In females, it is found to affect uterus and ovary equally [5,6]. Most of the patients are within the age of 30-50 years, but it can rarely be seen in the pediatric population [7].

The youngest age of the patient reported with an adenomatoid tumor of the epididymis is that a 16-year-old male; the earliest presentation in other locations is as low as 12 years [7].

The origin of these tumors is believed to be mesothelial in nature; can also be Mullerian, Mesonephric or Endothelial as well. However, immunohistochemistry has confirmed that adenomatoid tumors are mostly mesothelial in origin [8,9]. These are usually incidentally detected on palpation, with a firm to hard consistency, making it difficult to clinically differentiate it from malignant lesions of the epididymis. They have an indolent course, and very rarely invade the testicular parenchyma to present as a testicular mass. Very rarely, these benign lesions are associated with pain. There can be several differential diagnoses such as lipoma, sarcoma, metastatic tumor, granuloma, and hematoma of the spermatic cord etc.

USG is still preferred as the diagnostic imaging modality of choice in such cases, which in our case was helpful in suspecting adenomatoid tumor. If ultrasound is inconclusive, then MRI of the testis and scrotum can be performed. The diagnosis can also be confirmed by FNAC, like in our case, or intraoperative biopsy [9].

On gross appearance, this is a firm, greyish white lesion, usually smaller than 2 cm in its largest dimension. On microscopy, the epithelial elements can be arranged as cords, nests or tubules, and are surrounded by a loosely arranged collagenous stroma. Occasionally, the cytoplasm of the epithelial cells contains vacuoles, sometimes occupying the entire cytoplasm, giving it the appearance of a signet ring [10]. This can often be confused for a signet ring tumor, which is malignant in nature. In the periphery, lymphocyte aggregate can be seen, which was consistent with the microscopic findings in our case as well [11].

In the past, orchidectomy was performed routinely for such lesions due to the clinical suspicion of malignancy. However, now with the support of intraoperative biopsy, we can perform testicular sparing partial or complete epididymectomy. These tumors have no malignant potential and demonstrate a very low recurrence rate [11].

CONCLUSION

Adenomatoid tumor of the epididymis is a rare yet benign tumor that mimics a primary epididymal or testicular malignancy. This is often confirmed by a USG of the scrotum; rarely MRI may be required especially to look for surrounding soft tissue involvement. By correct identification, we can conservatively manage such patients with a limited excision or epididymectomy, obviating the need for an orchidectomy.

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