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Intratesticular adenomatoid tumor: A case report and review of the literature

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Abstract Adenomatoid tumors (ATs) are rare benign neoplasms that typically occur in the male and female genital tract. In men, the most common site of ATs is the epididymis and other paratesticular locations (tunica albuginea, spermatic cord, and ejaculatory ducts). However, intratesticular AT is exceedingly rare and may mimic a malignant neoplasm.

We report a case of an AT occurring in a 27-year-old man with no prior medical, urologic or trauma history, who presented with right-sided scrotal pain of a few days' duration. Physical examination showed no skin change in the scrotum, a normal-sized, nontender left testis and an enlarged, tender right testis. Ultrasound images of the scrotum showed an eccentric, predominantly hypoechoic vascular mass in the posterior aspect of the right testis measuring 2.2 × 2.1 × 2.1 cm. Tumor markers were within normal limits. His workup was negative for metastatic disease. A right radical orchiectomy was performed. Histological examination and immunohistochemical stains confirmed the diagnosis of adenomatoid tumor confined to the right testis.

We report this rare, benign neoplasm of mesothelial origin that more often occurs in a paratesticular location, but rarely has been shown to involve the testicular parenchyma.

1. Introduction

Adenomatoid tumors (ATs) are rare benign neoplasms that typically occur in the male and female genital tract, but have been reported from a variety of extragenital sites such as the adrenal gland, heart, pleura, liver, pancreas, mesentery and omentum, retroperitoneum and lymph node [1]. In men, the most common sites of ATs are the epididymis [2] and other paratesticular locations (spermatic cord, tunica albuginea and ejaculatory ducts) [3]. Despite their rarity, ATs represent the most common paratesticular neoplasms, accounting for about 30% of all such tumors. Some larger primarily paratesticular (epididymal or tunica albuginea) tumors may show infiltration into the testis and intratesticular growth [4], sometimes forming larger intratesticular nodules. However, ATs with complete intratesticular (intraparenchymal) growth are exceedingly rare, with only six well-documented cases previously reported in the world literature [5–10].

We herein report a case of intratesticular adenomatoid tumor occurring in a 27-year-old man, clinically suspected to represent a malignant testicular neoplasm and review the literature on the subject.

2. Case presentation

A 27-year-old male previously healthy nonsmoker with no significant prior medical history, presented to the

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emergency room with right-sided scrotal pain of a few days' duration. The pain was worse with walking and movement. His general physical examination was within normal limits; no skin changes were present on the scrotum. His left testis was normal in size and non-tender, but the right testis was enlarged and tender. There was no lymphadenopathy.

Ultrasound imaging of the scrotum showed an enlarged right testis measuring 4.6 × 2.9 × 3.2 cm. with an eccentric, heterogeneously echoic, but predominantly hypoechoic vascular mass measuring 2.2 × 2.1 × 2.1 cm. The mass was located in the posterior aspect of the right testis, slightly deforming its posterior contour, and showed a rim of hypervascularity. No definite calcifications were noted (Fig. 1). The left testis measured 3.9 × 2.0 × 2.6 cm and appeared normal. Vascularity in the right testicle was relatively increased when compared to the left. The epididymis was normal in appearance.

Abdominal and pelvic CT scan showed a 1.9 cm peripherally enhancing lesion within the enlarged right testis (Fig. 2), corresponding to the abnormality on the ultrasonographic evaluation. No lymphadenopathy or other abnormalities were seen in the abdominal or pelvic organs.

Testicular tumor markers (beta-HCG, AFP and LDH) were within normal limits. His workup was negative for metastatic disease. A malignant testicular tumor was clinically suspected. After discussion of his treatment options, the patient chose to undergo a right radical orchiectomy.

The surgical specimen consisted of the right testis, measuring 4.8 × 3 × 3.2 cm with attached spermatic cord. Upon bivalving the testis, a well-defined, ovoid, tan–white firm tumor with central hemorrhage and necrosis, measuring 2.3 × 2.2 × 2.1 cm was identified. The tumor was confined to the testis and grossly appeared to focally abut the tunica albuginea. The surrounding testicular parenchyma was grossly unremarkable, except for a rim of edematous and erythematous tissue surrounding the tumor (Fig. 3).

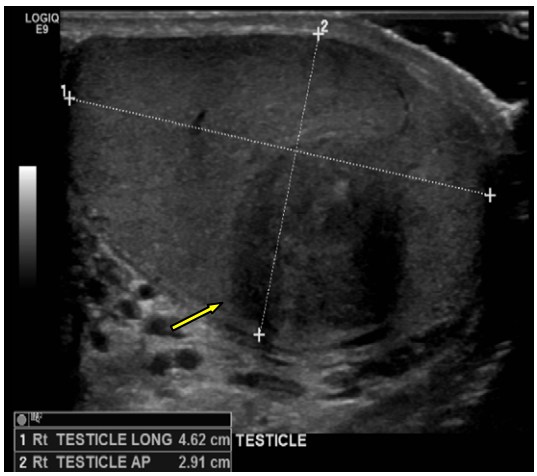

Fig. 1 The ultrasound showed an eccentric, heterogeneously echoic, but predominantly hypoechoic vascular mass in the posterior aspect of the right testicle, measuring 2.2 × 2.1 × 2.1 cm.

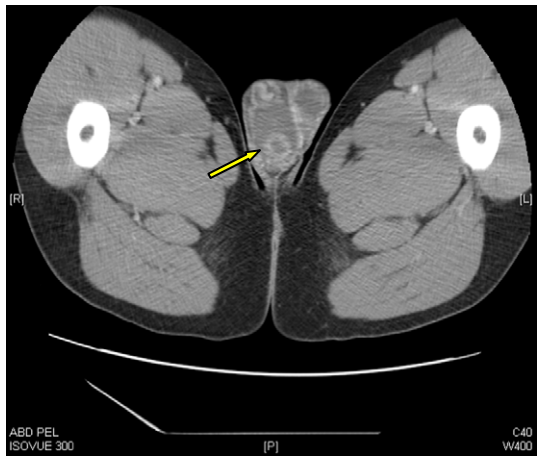

Fig. 2 Abdominal and pelvic CT scan showed a 1.9 cm peripherally enhancing lesion within the enlarged right testicle.

Although the tumor appeared grossly well circumscribed, microscopic examination showed that it was not encapsulated, and infiltrated into the testicular parenchyma, focally entrapping seminiferous tubules (Fig. 4A). Despite the gross impression of the tumor abutting the tunica albuginea, no histologic connection to the tunica could be demonstrated in the planes of the sections examined. Lymphoid aggregates were seen at the periphery of the tumor (Fig. 4B). The tumor was composed of two major elements; polygonal, cuboidal, flattened or vacuolated epithelioid cells arranged in tubular/glandular structures or solid cords, and a hypocellular fibrous stroma interspersed with occasional lymphocytes. The tumor cells were epithelioid, with mild cytologic atypia, and showed ample acidophilic finely granular or vacuolated

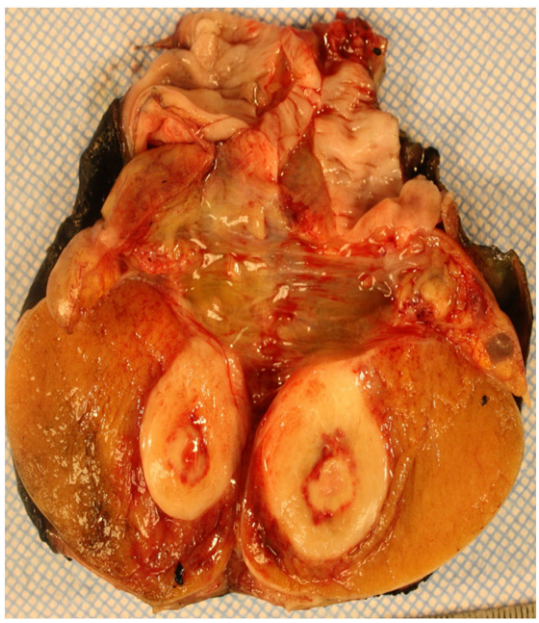

Fig. 3 Orchiectomy specimen: Cut surface of the test showed a well defined, ovoid tan–white tumor with central hemorrhage and necrosis grossly appearing to abut the tunica albuginea.