Adenomatoid Tumor of the Tunica Vaginalis Testis
A Special Maneuver in Diagnosis by Ultrasonography

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Scrotal neoplasms can be divided into those that are intratesticular and extratesticular in origin. Intratesticular neoplasms are more prevalent than extratesticular neoplasms. Ultrasonography is the method of choice for imaging scrotal pathologic entities. However, detection and differentiation of an extratesticular neoplasm are more sophisticated than for intratesticular neoplasms. It is also not always possible to differentiate an extratesticular mass originating from the paratesticular tissues from an intratesticular mass. If the lesion is confined to the epididymis, the differentiation can easily be made. However, if the lesion is originating from the tunics of the testis, the differentiation can be troublesome.

We report a case of an adenomatoid tumor in the lamina parietalis of the tunica vaginalis (LPTV) testis. This report is unique that it describes a maneuver that helped us differentiate the mass as being extratesticular in location.

Case Report

A 45-year-old man had a 1-month history of a right scrotal mass. The patient denied any trauma or surgery to the scrotum. The patient's medical history was unremarkable. On palpation of the right testis, a nodular small mass on the anterior surface of the testis was detected. The left testis was normal on palpation.

Ultrasonography showed a homogeneous hypoechoic solid mass on the anterior surface adjacent to the middle portion of the right testis. The mass was 5 × 7 mm in size. A hyperechoic line was seen between the mass and the testis, probably representing the scrotal tunics. During the real-time examination, a maneuver was performed to show the association of the mass with the testis. The patient was placed in a semirecumbent position during the examination. While the radiologist examined the mass and the testis on a sagittal view with the ultrasonic probe in one hand, he pushed the testis downward with a
finger of the other hand. It was shown that the testis was displaced downward, whereas the mass remained at its original location and did not move (Fig. 1). This maneuver suggested that the origin of the mass was the LPTV testis. During sonographic examination, no fluid was shown between the layers of the tunica vaginalis.

The patient underwent surgery, which confirmed the mass originating from the LPTV testis. The lesion was resected, and the specimen was submitted for pathologic examination, which revealed an adenomatoid tumor of the LPTV testis. The postoperative course was uneventful. No evidence of local recurrence was found 1 year after the surgery.

Discussion

Normally, the testis is surrounded by a fibrous capsule, the tunica albuginea, and by a closed invaginated sac, the tunica vaginalis. The tunica vaginalis has 2 leaflets, which are the lamina visceralis and lamina parietalis. Sonographic differentiation of the tunica albuginea and lamina visceralis of the tunica vaginalis is impossible. A lesion found at the periphery of the testis could belong either to the testis or to these tunics. A lesion arising from the tunica albuginea or lamina visceralis of the tunica vaginalis is impossible to differentiate on US. However, a lesion arising from the LPTV could be differentiated from the tunica albuginea and lamina visceralis of the tunica vaginalis provided that there is sufficient fluid accumulation separating the layers of the tunica vaginalis. This is the case in malignant mesotheliomas. Malignant mesotheliomas are usually characterized by hydrocele and multiple small nodular masses attached to the parietal or visceral vaginal layer or both. The presence of fluid usually helps in locating the multiple nodular masses, so that they are accurately diagnosed as belonging to the lamina parietalis or visceralis of the tunica vaginalis.

In our case, the diagnosis was an adenomatoid tumor of the LPTV. Adenomatoid tumors were first described in 1945 by Golden and Ash. They account for approximately 30% of all paratesticular tumors and are most frequently seen in the epididymis, located especially at its lower pole and with equal frequency on both sides. They are well-recognized neoplasms generally considered to be of mesothelial origin. The tumor is usually a well-circumscribed, firm, white-to-tan nodule. An adenomatoid tumor can be effectively treated by local excision. To our knowledge, there have not been any reports of recurrent adenomatoid tumors on follow-up in the literature.

Adenomatoid tumors of the scrotum have a variety of sonographic appearances depending on the site of involvement. They usually appear as isoechoic or hypoechoic intrascrotal masses within the epididymis. When the epididymis is involved, it is easily identified as extratesticular. When the LPTV is involved, they cannot be differentiated from peripheral testicular tumors in the absence of fluid collection. In our case, the maneuver we described accurately showed that the tumor originated from the LPTV testis.

Figure 1. A, Homogeneous hypoechoic solid mass shown on the anterior surface of the testis. Also note the hyperechoic line (arrow) between the mass and the testis corresponding to scrotal tunics. RT indicates right testis. B, Association of the mass and the testis during the maneuver. The mass remained at its original location, whereas the testis was displaced downward. Arrows indicate the examiner’s finger.
In conclusion, the differentiation of an extratesticular mass from an intratesticular mass is sometimes difficult. The above-mentioned maneuver should be taken into account whenever a questionable extratesticular mass is found.

References


