CLINICAL CASE

Scrotal angiomyolipoma: a clinical case

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Abstract  A case of scrotal angiomyolipoma is presented herein. A 22-year-old man was evaluated due to left orchialgia. Physical examination showed an increase in scrotal volume dependent on the left side with apparent hydrocele and grade III varicocele, and the so-called “bag of worms” in the scrotum. During surgery a highly vascularized paratesticular mass was found that extended from the inguinal region along the entire tract of the spermatic cord to the perineal region. The mass was excised and the histopathologic study reported a tumor composed of adipose tissue, smooth muscle, and blood vessels, corresponding to scrotal angiomyolipoma. This benign tumor is rare and there are very few cases reported on at the scrotal level.

Keywords  Angiomyolipoma, Scrotal tumor; PEComa; Mexico.

PALABRAS CLAVE  Angiomiolipoma; Tumor escrotal; PEComa; México.
Introduction

Angiomyolipoma is a rare tumor (0.13% to 0.3% in the general population) that mainly involves the kidneys, presents in women over 50 years of age, and is particularly associated with tuberous sclerosis. Originally described by Fischer in 1911, Morgan gave it its present name in 1951.

Angiomyolipoma is a benign tumor consisting of thick-walled, aneurysmal blood vessels, smooth muscle, and adipose tissue. It was initially regarded as a form of hamartoma or choristoma, but today is considered to be a tumor derived from perivascular epithelioid cells (PEC), or PEComas. They include the angiomyolipoma, clear cell “sugar” tumor (CCST), and lymphangioleiomyomatosis (LAM), in addition to the clear cell myomelanocytic tumor (CCMMT). PEComas can affect the visceral organs including the kidney, lung, liver, nasal cavity, small and large intestine, prostate, and uterus, as well as the retroperitoneum, pelvis, pancreas, skin, testis, and scrotum.

Case presentation

A 22-year-old man was evaluated for left orchialgia and increased left scrotal volume of 2-year progression, and scrotal varicose veins. His past medical history was unremarkable. Physical examination revealed an increase in scrotal volume that was dependent on the left side, with apparent hydrocele and grade III varicocele. The scrotum had the so-called “bag of worms” aspect. An ultrasound (US) study showed data of orchiepididymitis, grade III left varicocele and associated hydrocele, and the right testis had no alterations. He was programmed for hydrocelectomy plus varicocelectomy, but in the intraoperative period the increase in volume was observed to be dependent on a para-testicular mass with great vascularity that extended from the inguinal region, all along the spermatic cord, to the perineal region. The mass was completely excised, obtaining adipose-type tissue with abundant adhered vessels; the tumor diameter was approximately 13 cm.

The histopathologic study reported a 12 x 8 x 7 cm scrotal lesion that weighed 224 g. Diagnosis was angiomyolipoma with chronic inflammation and organized vascular thrombosis (figs. 1-3).

Only a few cases of scrotal localization of this benign tumor derived from blood vessels, adipose tissue, and smooth muscle are referred to in the medical literature.

Discussion

The anatomic origin of scrotal tumors is extratesticular in the majority of cases. They arise from the spermatic cord and the epididymis and include different mesenchymal tumors. Many of the tumors within the scrotal sac are derived from paratesticular tissue. The paratesticular region is a complex anatomic area that includes the spermatic cord, the testicular tunica, epididymis, and vestigial remnants such as the appendix epididymis and the appendix testis: histogenetically, this area is composed of a variety of epithelial, mesothelial, and mesenchymal elements. Therefore, the neoplasms originating from this region form a heterogeneous group of tumors with distinct behavior patterns; on rare occasions they can have distant metastases. The proximity, and in some cases, the communication between the testicular and paratesticular structures results in a diversity of masses and lesions that resemble tumors and as a whole are a formidable diagnostic challenge due to their rareness and morphologic overlapping. Their main approach continues to be the classic histopathologic analysis with the prudent incorporation of contemporary immunohistochemical markers. Solid tumors of paratesticular tissue are rare, although they have a reported prevalence that varies from 3% to 16% of all the patients for whom scrotal US

Figure 1 Microscopic appreciation of a benign tumor composed of adipose tissue and mature smooth muscle, as well as abundant blood vessels (hematoxylin & eosin X10).

Figure 2 Blood vessels, adipose tissue, and mature smooth muscle at a higher magnification (hematoxylin & eosin X40).
studies are ordered. Even though scrotal US is the modality of choice for initial evaluation of pathologic scrotal alterations, given its wide availability, low cost, and high sensitivity for paratesticular disease detection, US findings are often not conclusive; in such cases MR can provide additional information necessary for modifying their management.18

In contrast to testicular tumors, these neoplasms affect patients of all ages, and they have an asymptomatic presentation as a non-fluctuating or firm mass of varying growth; it is not unusual for the patient to complain of a firm mass of rapid growth.

Conclusion

Angiomyolipoma is an uncommon, benign tumor that is rarely located in the scrotum. Its management should take into account the size of the tumor, the presence of symptoms and factors characteristic of the patient, particularly the risk for hemorrhage; the majority of symptomatic angiomyolipomas measure around 4 cm.

Even though US is usually an adequate study for evaluating the scrotal region and the testes, its findings can be inconclusive in the case of angiomyolipomas.

Histopathologic study regularly provides the definitive diagnosis and there should always be diagnostic suspicion when dealing with uncommon tumors such as angiomyolipoma, since tumor treatment and approach must be modified according to each case.

Conflict of interest

The authors declare that there is no conflict of interest.

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References