CLINICAL CASE

Partial agenesis of the tunica albuginea

F. Ugarte-y Romanoa,* y A. González-Serranob

a Urologic Surgery, Hospital Ángeles del Pedregal, Mexico City, Mexico
b General Surgery Speciality Residency, Centro Médico Nacional Siglo XXI, Mexico City, Mexico

KEYWORDS
Agenesis; Absence; Tunica albuginea; Testis; Mexico.

Abstract The absence of the testicular tunica albuginea has not been reported on in the literature. The aim of this article was to describe the first known case of this phenomenon and to establish recommendations for its diagnostic and therapeutic approach. The case is presented of a patient that underwent intraoperative wedge biopsy as a result of the abnormal appearance of the testis seen at hydrocelectomy and whose pathology study reported the absence of the tunica albuginea. Testicular development disorders are a possible explanation for this phenomenon, making "agenesis" an acceptable term for describing it. When an abnormal macroscopic aspect of the testis is observed intraoperatively, a histologic confirmation study is recommended in order to establish adequate treatment and prevent unjustified management.

PALABRAS CLAVE
Agenesia; Ausencia; Túnica albuginea; Testículo; México.

Agenesia parcial de la túnica albuginea

Resumen La ausencia de la túnica albuginea testicular no ha sido reportada en la literatura. El objetivo de este trabajo es describir el primer caso conocido de este fenómeno, y establecer recomendaciones para su abordaje diagnóstico y terapéutico. Se presenta el caso de un paciente con reporte de patología de ausencia de túnica albuginea, tras la realización de una biopsia en cuña transoperatoria, justificada por la apariencia anormal del testículo al ser sometido a una hidrocelectomía. La posible explicación a este fenómeno son trastornos del desarrollo testicular, por lo que el término "agenesia" podría ser utilizado para describirlo. Ante la existencia de un aspecto macroscópico anormal del testículo durante el transoperatorio, se recomienda realizar un estudio de confirmación histológica para establecer el tratamiento adecuado y evitar tratamientos injustificados.

* Corresponding author at: Hospital Ángeles del Pedregal. Camino a Santa Teresa N° 1055, Cons. 827, Colonia Héroes de Padierna, Delegación Magdalena Contreras, C.P. 10700, México D.F., México. Tel.: 5652 2005. Email: fugarter@prodigy.net.mx (F. Ugarte-y Romano).
Introduction

Agenesis of the tunica albuginea is a clinical entity that, until now, has not been reported in the literature.

The case is presented herein of a patient whose pathology report stated absence of the tunica albuginea after an intraoperative wedge biopsy was taken due to the abnormal appearance of the testis during hydrocelectomy. The consequent conclusion was partial agenesis of that anatomic structure.

The clinical relevance of this case is the effect of the intraoperative decision of the urologist to perform a local excision for intraoperative study to determine that there was no malignancy, given the abnormal macroscopic aspect of this type of testis, in order to rule out radical orchiectomy.

Case presentation

A man in the third decade of life was evaluated for presenting with pain and an increase in the scrotal volume of 3-month progression. A testicular ultrasound was done that reported the presence of hydrocele. It was managed conservatively through puncture of the hydrocele fluid on one occasion, but it presented again with an increase in the volume of the scrotal sac. Another ultrasound was done that confirmed the recurrence of the previous process and the patient was scheduled for hydrocelectomy.

The scrotal approach was decided upon and after incising the tunica vaginalis and exposing the testis, an abnormal testicular surface was revealed. It was characterized by patches of amber-colored tissue distributed throughout the testicular surface (fig. 1).

Due to the macroscopic aspect of the testis and the need to rule out malignancy, a wedge biopsy of the inferior pole of the testis was carried out (figs. 2 and 3).

No malignancy was reported in the intraoperative study, but the pathologic report revealed absence of the tunica albuginea.

Discussion

There are numerous pathologies of the tunica albuginea and they range from leiomyomas, fibrous pseudotumors, simple cysts, and complex cysts, to adenomatoid tumors.

On the other hand, agenesis of the tunica albuginea has not been reported in the literature.

Given that the form of presentation of tunica albuginea pathologies is usually distinct (the majority present as paratesticular tumors and not as tumors dependent on the testicular parenchyma), the diagnostic and therapeutic attitude in this case was also distinct.

In some of the cases reviewed, tumor excision, orchiectomy, and fine-needle aspiration biopsy have been resorted to. The latter procedure has been controversial at times due to the potential risk for dissemination in the case of a malignant tumor pathology, even though it has been stated that the majority of tumors that are dependent on the tunica albuginea are usually benign.

Upon dealing with an unknown clinical entity and the abnormal appearance of the testis, we decided to carry out a partial excision of the inferior pole of the testis, to establish a histologic diagnosis and a therapeutic attitude congruent with those findings, in an effort to avoid either performing an unjustified radical orchiectomy or not carrying one out in the case of a malignant tumor pathology.

Because there are no reported cases of the absence of tunica albuginea and the specific cause of the phenomenon is not known, the probable explanation for this clinical situation is some type of testicular development anomaly.

The changes in the testicular surface are explained by the absence of the tunica albuginea in the amber-colored regions that show the color of the testicular parenchyma. There was a certain conservation of the testicular silhouette due to the fact that the absence of the tunica albuginea was partial and because of the presence of the visceral layer of the tunica vaginalis that is intimately connected to the tunica albuginea.

Conclusions

The absence of the tunica albuginea has not been previously reported. The possible explanation for this phenomenon is a testicular development disorder. This clinical entity is not known, but when the macroscopic aspect of the testis is observed to be abnormal during the operation, it is recommended to carry out a confirmation histologic study so that adequate treatment can be established and unjustified treatment avoided.

Conflict of interest

The authors declare that there is no conflict of interest.

Financial disclosure

No financial support was received in relation to this article.
References