

Idiopathic scrotal calcinosis. Ultrasonographic findings

Calcinosis escrotal idiopática. Hallazgos ultrasonográficos

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https://doi.org/10.53903/01212095.220

Key words (MeSH)
Calcinosis
Cutis calcinosis
Ultrasonography, Doppler

Palabras clave (DeCS)
Calcinosis
Calcinosis cutis
Ultrasonografía Doppler

Summary

Idiopathic scrotal cutis calcinosis is a benign rare condition characterized by the presence of single or multiple calcified yellowish nodules in the scrotum, which vary widely in size. In most cases they are asymptomatic, but symptoms such as pruritus, heaviness or discharge from the lesions have been reported. There is no association with calcium or phosphorus metabolism. Management is conservative and its diagnosis is mainly clinical, but characteristic images can be identified by ultrasound.

Resumen

La calcinosis cutis escrotal idiopática es una condición benigna, poco frecuente, que se caracteriza por la presencia de nódulos amarillentos calcificados únicos o múltiples en el escroto, que varían ampliamente en tamaño. La mayoría de los casos son asintomáticos, pero se han descrito síntomas como prurito, pesadez o secreción de las lesiones. No hay asociación con el metabolismo del calcio o el fósforo. El manejo es conservador y su diagnóstico es principalmente clínico, pero pueden identificarse imágenes características mediante ultrasonido.

Introduction

Idiopathic scrotal calcinosis is a rare benign condition characterized by the presence of single or multiple yellowish calcified scrotal dermal nodules, varying in size from 1 mm to several centimeters. So far there is no proven triggering cause, especially there is no evidence of association with alterations or imbalances of calcium or phosphorus metabolism. Its incidence remains unknown, but it mainly affects men between 20 and 40 years of age.

This condition has a good prognosis and no risk of malignancy (1). Generally, affected patients are asymptomatic, but in some cases associated symptoms such as pruritus, heaviness and discharge from the lesions have been described (1, 2). The diagnosis is mainly clinical; however, when it is necessary to rule out differential diagnoses, ultrasound study may be useful.

The characteristic ultrasonographic findings (3) are: hyperechogenic scrotal dermal nodules with posterior acoustic shadow, avascular on color Doppler evaluation and may present scintillation artifact. In simple radiography they are observed as nodular opacities with calcium density, projected in the scrotal shadow (3); in computerized axial tomography (CAT) they can be evidenced as calcified scrotal nodules, hyperdense, in the scrotal thickness (4).

Treatment can be conservative or surgical, for esthetic reasons (1, 4). The latter consists of resection of the lesions, which is usually complete because the great laxity of the scrotal tissue allows primary closure (4). There is a study that proposes the use of CO_2 laser ablative treatment, the results of which have been favorable in terms of esthetics, safety and speed of the procedure (5, 6). The risk of recurrence is still debated. Some authors document a high recurrence rate, while others report complete resolution rates (4).

Case

We present the case of a 25-year-old man with a history of idiopathic scrotal calcinosis diagnosed during adolescence, characterized by multiple well-circumscribed, non-painful scrotal nodules that progressively increased in number and size.

He consulted for testicular pain of two days of evolution. With clinical suspicion of orchiepididymitis, a testicular Doppler ultrasound was performed. The examination showed normal location, size and morphology of both testicles, which presented multiple punctate calcifications, without vascularization alterations in Doppler-color mode (Figure 1). An increase in volume and hyperemia of the right epididymis (Figure 2a) and the ipsilateral spermatic cord were evidenced, compa-

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tible with epididymitis. The left epididymis was unaltered (Figure 2b). As a secondary finding and concordant with the history provided by the patient, the multiple solid, hyperechogenic, avascular scrotal nodules with posterior acoustic shadow (figures 3a, 3b and 4) and color Doppler scintillation artifact (figure 4), measuring up to 8 mm, were recorded.

The diagnosis of right epididymitis was made and the diagnosis of idiopathic scrotal calcinosis was confirmed.

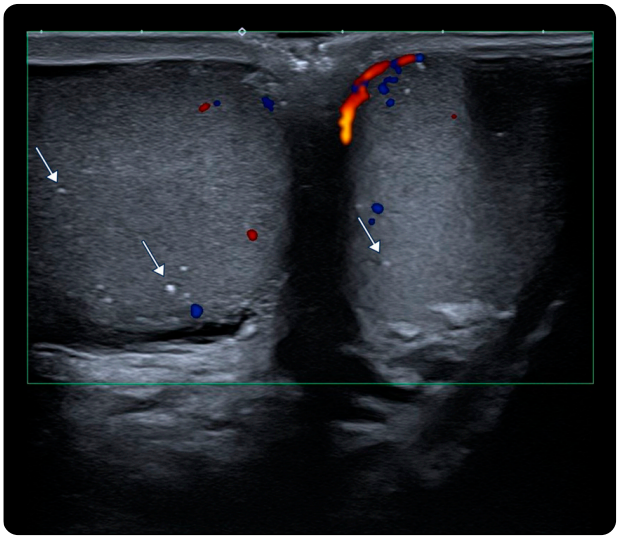


Figure 1. Testicles. Localization, size and morphology preserved, with multiple punctate calcifications (white arrow), without vascular alterations in color Doppler mode.

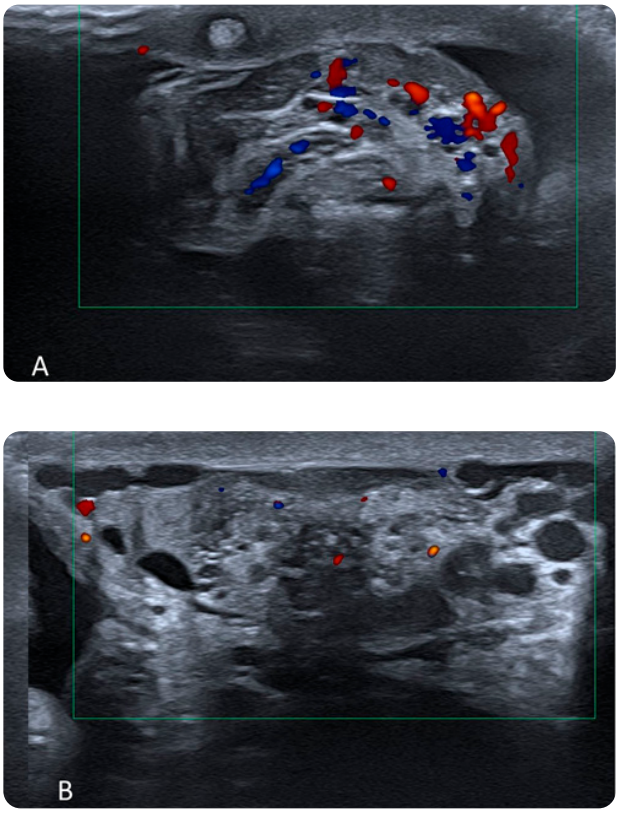


Figure 2. a) Increased volume and hyperemia of the right epididymis. b) Left epididymis with normal characteristics.

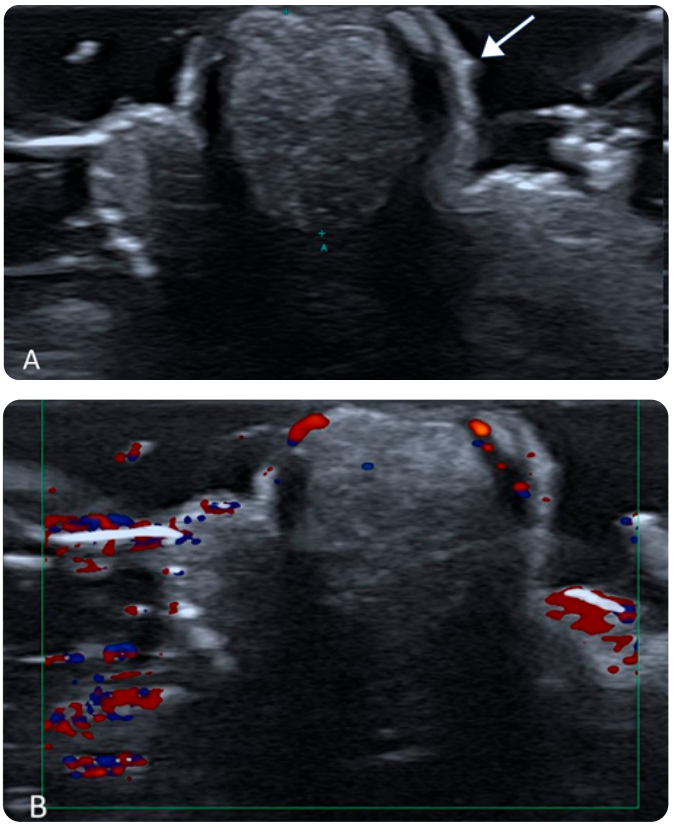


Figure 3. a) Cross-sectional grayscale image of the scrotum showing a solid hyperechogenic nodule (white arrow), with posterior acoustic shadow. b) Cross-sectional image of the same nodule, avascular in color Doppler mode.

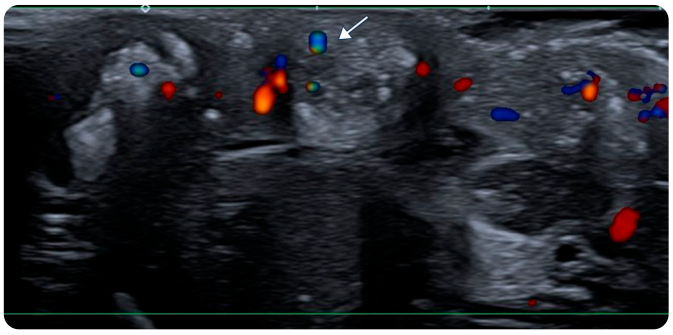


Figure 4. Longitudinal color Doppler mode image of the scrotum showing multiple non-vascular hyperechoic solid nodules, with acoustic shadow and scintillation artifact (white arrow).

Discussion

Although there are no specific ultrasonographic features to make the diagnosis of idiopathic scrotal calcinosis, it is important to keep this entity in mind when evaluating the findings, the possible differential diagnoses and how these are recognized. Among the differential diagnoses of extratesticular scrotal calcifications (7) are:

- Scrotal pearls: echogenic images, usually isolated,
- Scrotal calculi: echogenic scrotal images associated with hydrocele.
- Calcification of the tunica vaginalis: linear hyperechogenic image with posterior acoustic shadow.

- Epididymal calcification: echogenic image in or adjacent to the epididymis, usually associated with chronic epididymitis.

The main difference with the patient's pathology is the specific location of the lesions. In idiopathic scrotal calcinosis the lesions are located in the dermis and not deeper to it, as it occurs with the other differential diagnoses. Additionally, and not less important to mention, other associated imaging findings and clinical history can be determinant at the moment of making the definitive diagnosis.

Conclusion

Idiopathic scrotal calcinosis is a rare benign entity, with no malignant potential, that is diagnosed primarily clinically; however, there are characteristic ultrasonographic findings that can distinguish them from multiple differential diagnoses and can be helpful when studying nonspecific testicular pain in patients with the disease.

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Received for evaluation: September 10, 2022
Accepted for publication: October 14, 2022