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Scrotal Calcinosis: A New Observation and Review of the Literature

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Abstract **Case Report**

Scrotal calcinosis is a rare condition of still highly debated etiology, manifested by the appearance of scrotal nodules. Although benign, this pathology can have a significant impact on patients' quality of life. We report on our experience in the management of a case of scrotal calcinosis in a young patient treated by surgical excision, and after a review of the literature, we discuss the ethiopathogenic, clinical and anatomopathological aspects of this rare pathology.

Keywords: Scrotal calcinosis, histology, pathophysiology.

INTRODUCTION

Scrotal calcinosis is a rare condition [1], first described in 1883 by LEWINSKI [2], and characterized by the presence of calcified nodules of the scrotal skin [3, 4]. The condition can significantly impair the patient's quality of sexual life, with the embarrassment caused by the scrotal location of unsightly lesions. Treatment of scrotal calcinosis is often cosmetic, consisting of excision of the affected scrotal portion or, more rarely, removal of isolated nodules when they are not extensive. Based on an observation and a review of the literature, we present the clinical, etiopathogenic, anatomopathological and therapeutic aspects of this pathology.

CASE REPORT

In this case, a 55-year-old man, father of 4, was seen in consultation for scrotal nodules that had appeared 20 years previously, interfering with sexual activity, but the patient reported that he felt no pain and the lesions were not pruritic (Figure 1). We noted no history of scrotal trauma or other associated defects. Clinical examination revealed bursae dotted with nodules 0.8 cm to 2 cm in diameter, firm in consistency, mobile in relation to the deep plane, confluent, non-inflammatory and whitish in appearance at their center, the general condition was well preserved. The testicles and epididymides were normal. The rest of the examination was unremarkable. The phosphocalcic profile was normal, as was the workup of the field, which included blood glucose and retroviral serology. The patient was living with the psychosis of a neoplastic pathology and was also requesting surgical treatment for aesthetic reasons. After informed consent, we proceeded with a wide excision of the lesions, histological analysis of which concluded in scrotal calcinosis (Figure 2). Complete healing was achieved by day 30, with a satisfactory aesthetic appearance.

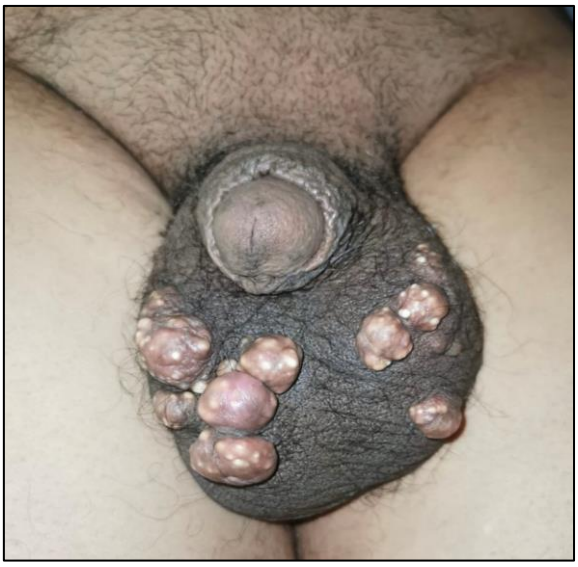

Figure 1: Scrotal calcinosis: intraoperative appearance

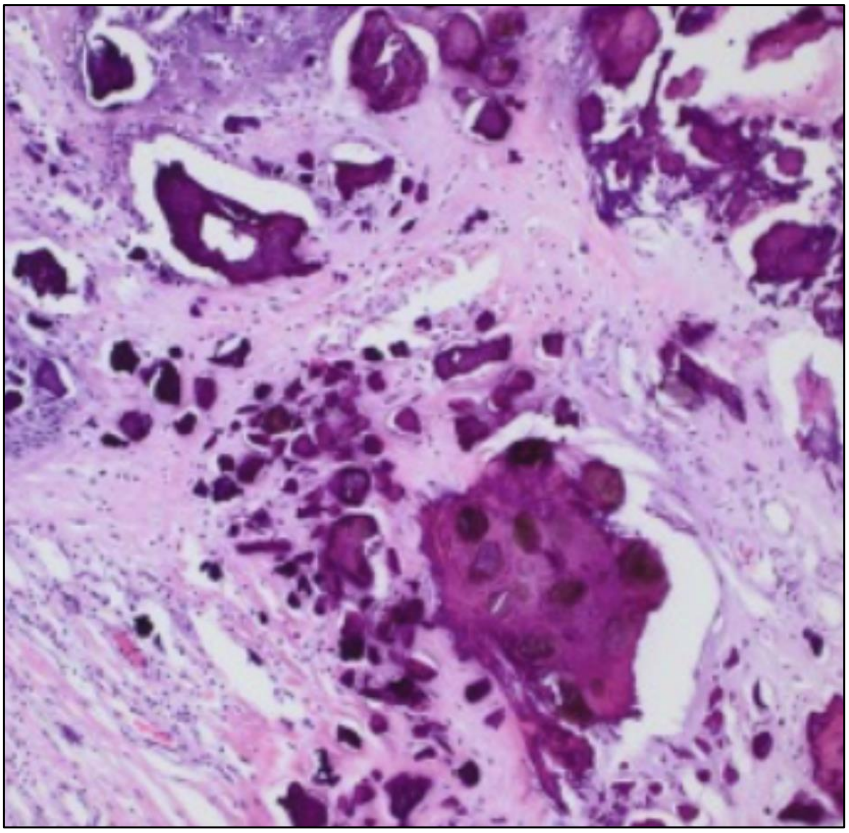

Figure 2: Calcinosis of the scrotum: anatomopathological aspect

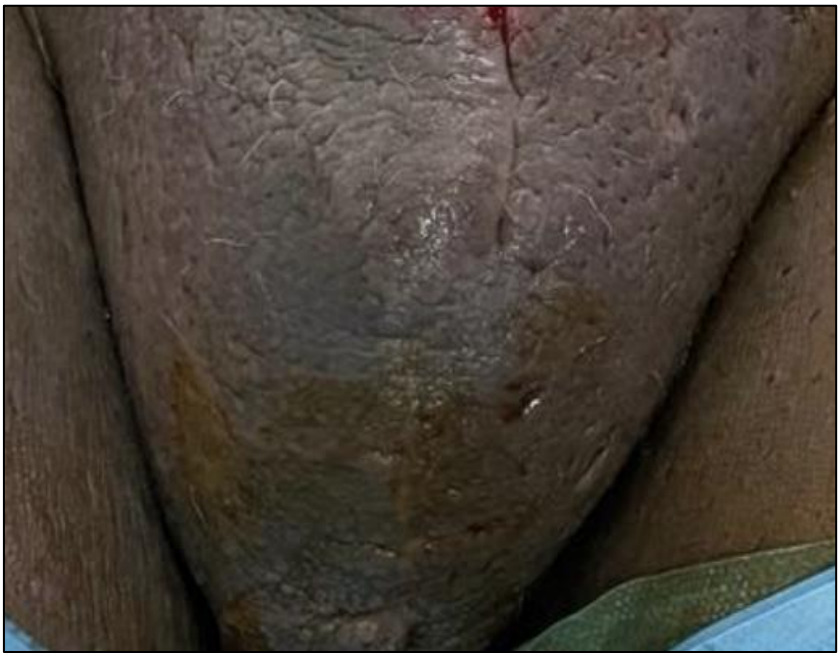

Figure 3: Calcinosis of the scrotum: post-operative appearance

DISCUSSION

First described in 1883 by LEWINSKI [2]. Scrotal calcinosis is a rare and benign condition [3, 5]. All the cases described to date have been classified as benign, and the aim of treatment is to remove nodular lesions and prevent recurrence. Apart from superinfection, no serious complications or degeneration have been reported. This condition is insidious, and patients often consult us after several years of evolution, as was the case in our observation. The latency and painless nature of the lesions explain this late request for treatment. The old terms "metastatic" or "dystrophic" calcinosis are obsolete, as their meaning is confusing. Lesions appear as papules, nodules or plaques, hard to palpate, yellowish-white in color and sometimes painful.

Transepidermal expulsion of chalky, friable material is possible. Ultrasound and soft-tissue X-rays visualize calcified foci. The etiopathogenesis of this disease has been discussed in several publications, and multiple theories have been proposed to explain it [3, 4, 6]. Since the work of SWINEHEART [7], who had demonstrated an epithelial coating surrounding the calcifications, the theory that scrotal calcinosis was due to calcification of epidermoid cysts was increasingly accepted. This theory was confirmed by SAAD [8], who published 3 cases, one of which had several epidermoid cysts, some of which progressed to calcinosis. According to this author, rupture of the epithelial lining initially surrounding the epidermoid cyst produces a foreign-body-like inflammation followed by calcific dystrophy, resulting in scrotal calcinosis. This theory had also been confirmed by several studies [5, 7, 9]. In the case of FASSI [3], the patient presented with scrotal calcinosis, the histological features of which were very typical, but there was no epithelial lining surrounding the calcifications or concomitant epidermoid cyst to confirm the epidermoid cyst-scrotal calcinosis parentage. However, the hypothesis of calcific dystrophy of epidermoid cysts could not be ruled out, as the lesions had been evolving for 21 years and could have undergone calcific dystrophy. In our patient, no epidermal cysts were found, but foci of dystrophic calcification surrounded by fibro-conjunctive tissue. Treatment consists of surgical removal of the tumor. The aim is both diagnostic and therapeutic, as the volume of this tumor can make it very unsightly, as was the case with our patient. Correction of phosphocalcic anomalies is almost impossible with restrictive diets alone. Diphosphonates at a dose of 10 mg/kg/day or aluminium hydroxide at a dose of 2 g/day sometimes improve large idiopathic calcinosis or calcinosis due to connectivitis. Systemic corticosteroids or perilesional injections are sometimes used, but failures are frequent.

CONCLUSIONS

Scrotal calcinosis is a rare, benign condition whose etiopathogenesis remains controversial. Numerous theories have been proposed, but no single hypothesis has been able to encompass all the cases described in the literature. Histology confirms the diagnosis, and surgical excision of the lesions is often performed for diagnostic and therapeutic purposes.

Conflicts of Interest: The authors do not declare any conflict of interest.

Contribution of the authors

The authors participated equally. All authors have read and approved the final version of the manuscript.

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