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Case Report

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Scrotal Calcinosis Managed at Zinvie Hospital in Benin: Review of the Literature

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Abstract

Background: Scrotal calcinosis is a rare idiopathic pathology. The aim of our study was to describe the etiopathogenic and therapeutic aspects of scrotal calcinosis. Case Report: This was a 38-year-old patient who consulted us for painless nodules of the scrotum that had been evolving for 15 years and who was seeking treatment for aesthetic reasons. Clinical and paraclinical examination led to the diagnosis of scrotal calcinosis. A scrotal excision, including all lesions, and a scrotal plasty were performed. The diagnosis of scrotal calcinosis was confirmed by histopathological examination of the surgical specimen. Postoperative follow-up was straightforward after 18 months. Conclusion: Scrotal calcinosis is a rare and benign condition. The etiology remains unclear, and treatment is limited to surgical excision of the nodules, which also restores the aesthetics of the bursa. However, the risk of recurrence is not zero.

Keywords: Scrotal calcinosis, Surgical treatment, Excision.

INTRODUCTION

Calcinosis scrotalis is a rare, benign condition characterized by the development of firm, whitish, progressively confluent nodules in the penoscrotal region [1]. It was first reported around two centuries ago by Lewinski [2]. The etiopathogenesis of calcinosis scrotalis has yet to be fully elucidated [3]. It progresses slowly but progressively.

Over the years, the increasing development of nodules may involve the entire scrotum and extend to the penile region. Ultrasound and soft-tissue X-rays reveal calcifications of the skin. The scrotal location of unsightly lesions can significantly impair the patient's quality of sexual life. Treatment of scrotal calcinosis involves excision of the affected scrotal portion, or more rarely, removal of isolated nodules when they are not extensive [4]. Excision of the tumour not only contributes to healing, but also to diagnostic confirmation when objective histological analysis confirms the presence of calcification in the scrotal skin.

The authors report a rare case with histopathological diagnostic certainty in the Urology Department of "La Croix" Hospital, Zinvié, Benin.

CASE REPORT

A 38-year-old patient with no pathological history was seen in consultation for painless nodules of the scrotum that had appeared 15 years previously. The patient reported no pain and the lesions were not pruritic. Examination revealed multiple nodular lesions ranging in size from 4 mm to 17 mm, extending over a large surface area of the scrotum [Fig.1] in addition, the scrotal skin was attached to the penis, and there was no ulceration. Phosphocalcic tests were normal, as were blood glucose and retroviral serology. The patient was not taking any immunosuppressive therapy. The patient requested surgical treatment for aesthetic reasons [Fig.2,3].

We performed a wide excision of the lesion, removing all nodules, followed by a scrotal plasty with no external tissue. Histological examination of the excised specimen revealed foci of calcification [Fig.4].

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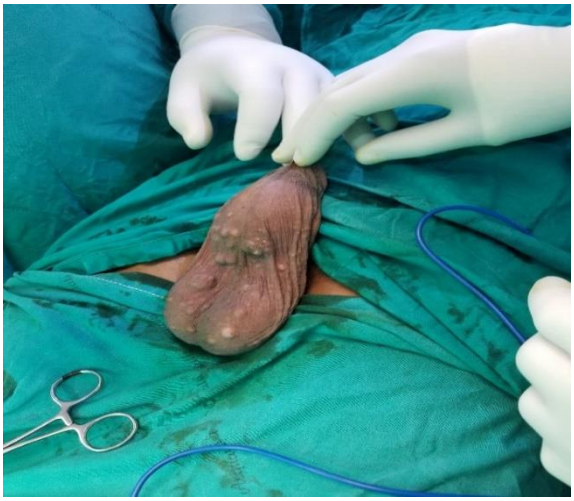

Figure 1: Multiple nodules occupying a large surface area

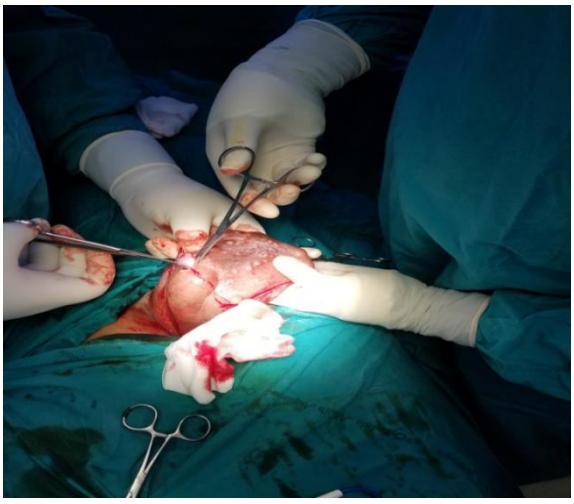

Figure 2: Removal of multiple nodules

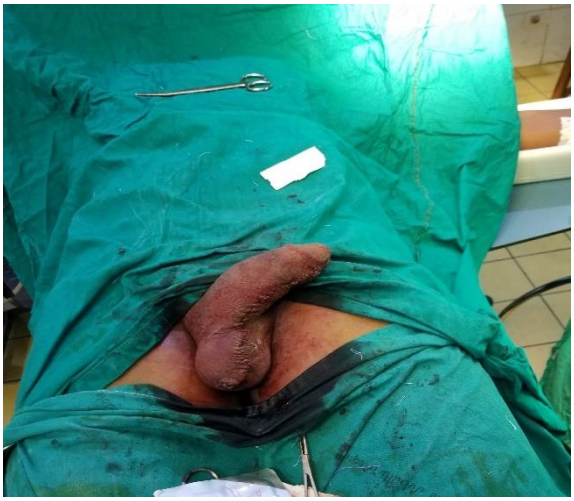

Figure 3: Final appearance following scrotal plasty

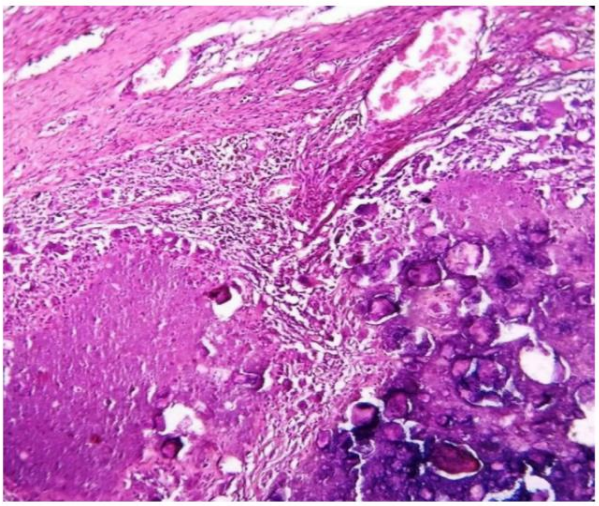

Figure 4: Scrotal calcinosis at histopahtology

DISCUSSION

First described in 1883 by Lewinski [2]. Scrotal calcinosis is a rare and benign pathology [5]. It often occurs in young patients. The etiology of calcinosis is still unknown, and several etiopathogenic hypotheses have been put forward. Wright et al [5] maintain that calcinosis lesions are purely idiopathic. Indeed, most patients reported had ages ranging from 20 to 50 years [4]. In our study, the patient was 38 years old.

Swineheart [6] demonstrated an epithelial coating surrounding the calcifications, theorizing that scrotal calcinosis was due to calcification of epidermoid cysts. This theory was confirmed by Saad [4], who published 3 cases, one of which had several epidermoid cysts, some of which developed into 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 has also been confirmed by several studies, including that of Paquet et al in 2010 [7]. Our patient presented with scrotal calcinosis, the histological features of which are very typical, but there was no epithelial coating surrounding the calcifications or concomitant squamous cyst to confirm the squamous cyst-scrotal calcinosis filiation. However, the hypothesis of calcific dystrophy of epidermoid cysts cannot be ruled out, as the lesions had been evolving for 15 years, and had had time to undergo calcific dystrophy.

Sometimes, calcinosis is described as the result of necrosis and degeneration of the Dartos with dystrophic calcification of this muscle [8]. Other authors, notably Salvarci et al in their clinical work, refer to sebaceous cysts and calcified steatocystomas [9]. No metabolic abnormality that might explain the calcified nodules was observed in our patient. The cause was therefore unknown. This condition is insidious, as patients often consult us after several years of evolution, as was the case in our observation.

The clinical symptomatology was summed up by the unsightly nature or fear of a probable malignant tumour of the scrotal skin, which compelled the patient to consult, as Paquet had pointed out [7].

Therapeutically, we excised the entire scrotum affected by the lesions, followed by a covering plasty of the genitalia. This procedure is widely recommended in the literature [10]. It has a dual therapeutic and diagnostic advantage. However, some authors do not recommend it, as they consider calcinosis to be a condition with a high potential for recurrence, and recommend abstention [11].

The results of surgery for scrotal calcinosis are generally satisfactory if excision is complete, as was the case in our patient. This favorable outcome is also linked to the elasticity of the scrotal skin, which allows

good remodeling after excision of even an extensive portion of the scrotum. However, recurrence after surgical excision is possible, although exceptional, and may be linked to incomplete removal of nodules, particularly micronodules, which can easily escape the surgeon's notice [10].

According to Khallouk et al [10], the only treatment that can be proposed for scrotal calcinosis is surgical excision. The absence of a precise etiology limits therapeutic possibilities other than surgery. In our series, the results were aesthetically satisfactory and no recurrence was noted during the follow-up period.

CONCLUSION

Scrotal calcinosis is a rare and benign condition. The etiology is still unclear, and treatment is limited to surgical excision of the nodules, which also restores the aesthetics of the bursa. However, the risk of recurrence is not zero.

Conflict of Interest

The authors declare no conflicts of interest.

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