

# Idiopathic scrotal calcinosis

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### ABSTRACT

يعد كلس الصفن المجهول السبب من أمراض الصفن الحميدة. كما أن سماته المميزة تشمل على أعراض غير مؤلمة، غير حاككة وعقد الأدمة الكلسية المجسوسة الشبه لينة. نستعرض في هذا التقرير حالة مريض يبلغ من العمر 42 عام يعاني من عقد جلدية صفتية متكلسة عديدة وبدون أعراض لمدة 10 أعوام. أُجري تخدير الفقري وتم استئصال جلد الصفن المصاب وإزالة العقد. هدفنا في هذا التقرير شرح أسباب المرض، والتشخيص، وأنماط علاج هذا المرض النادر.

Idiopathic scrotal calcinosis is a rare scrotal benign disease. Its distinct features are painless, non-pruritic, semi-soft palpable calcific transdermal nodules. We report a 42-year-old-man with asymptomatic multiple calcified scrotal skin nodules for 10 years. Under spinal anesthesia, the affected scrotal skin was excised and the nodules removed. We aim to explain the etiology, pathophysiology, diagnosis, and treatment modalities of this rare disease.

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This disease was first described by Lewinsky in 1883<sup>1</sup> as a subtype of calcinosis cutis. The pathogenesis of scrotal calcinosis is still controversial. This rare benign condition typically begins in adolescence or early adulthood. Although these lesions are usually asymptomatic, some patients report itching and pain. Laboratory findings usually show that there are no increases in serum levels of calcium, phosphate, oxalate, uric acid, parathyroid hormone, and any other

electrolytes, which can calcify. Nodules tend to increase in number and size, and may contain white, chalky material. Surgical indications include prevention of symptoms, and preservation of the cosmetic situation.<sup>2,3</sup> We aim to explain the etiology, pathophysiology, diagnosis, and treatment modalities of this rare disease.

**Case Report.** A 42-year-old man presented with scrotal lesions for 10 years. He complained of avoiding a sexual relationship due to embarrassment of his scrotal lesions. He had no history of diabetes mellitus, autoimmune, metabolic, and neoplastic disease. On physical examination, his body was of normal appearance and healthy. The scrotal lesions were painless, and had gradually increased in size and number over 10 years. The largest nodule measured approximately 8mm x 7mm (Figure 1). The lesions were not ulcerated or tender. Serum calcium, phosphate, and albumin levels were normal. Diabetes and retroviral screening were negative. Histologic examination showed scrotal intradermal nodules containing amorphous and homogenous substances consistent with calcium deposits. The postoperative findings are shown in Figure 2. He was followed up 18 months postoperatively, with no evidence of recurrence.

**Discussion.** Idiopathic scrotal calcinosis (ISC) is a benign scrotal lesion that commonly occurs between the third and fourth decades of life. It can affect both the adult and pediatric age groups, with an age range between 9-85 years reported in the literature.<sup>4</sup> These lesions are usually firm and asymptomatic, although itching or pain, episodes of infection, and chalky white exudative material have all been reported.<sup>5</sup> It can effect the patients quality of life. Many theories on the pathogenesis of ISC have been proposed. Some investigators suggest that ISC is truly a late presentation of epidermal inclusion cysts that have undergone

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**Figure 1** - Multinodular lesions of scrotal skin.



**Figure 2** - Postoperative eighteenth months control view of the scrotum.

dystrophic calcification.<sup>6</sup> Ito and colleagues<sup>7</sup> proposed that scrotal calcinosis originates from eccrine epithelial cysts and the pathogenic mechanism seems to be the excessive discharge and accumulation of material debris in the lumina. Recently, it has been suggested that the lesions are the result of dartos muscle necrosis and degeneration with resulting dystrophic calcification of the dartos muscle.<sup>8</sup> Despite its rarity, unknown etiology, and benign behavior, the risk of recurrence is controversial. Some clinicians believe that all patients with ISC should undergo surgical intervention, while others disagree with surgical excision given the high probability of ISC recurrence.<sup>9</sup>

In conclusion, although the pathogenesis and origin of ISC are unclear and remain controversial, currently, surgery is the only treatment choice that cures not only the aesthetic problem, but also enables confirmation of diagnosis of scrotal calcinosis on histologic evaluation.

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