

# Idiopathic Calcinosis Cutis of Scrotum: A Rare Case Report

Dr. Amandeep Saharan<sup>1</sup>, Dr. Satish Dalal<sup>2</sup>, Dr. Mahavir Singh<sup>3</sup>, Dr. Chisel Bhatia<sup>4</sup>, Dr. Nisha Marwah<sup>5</sup>

<sup>14</sup>Junior Resident, Dept. of Surgery, PGIMS, Rohtak

<sup>2</sup>Professor, Dept. of Surgery, PGIMS, Rohtak

<sup>3</sup>Asst. Professor, Dept. of Surgery, PGIMS, Rohtak

<sup>5</sup>Professor, Dept. of Pathology, PGIMS, Rohtak

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## ABSTRACT

**Idiopathic scrotal calcinosis is an uncommon benign disorder of the scrotal skin characterized by multiple calcified intradermal nodules. In most cases there are no associated symptoms and is sometimes misdiagnosed as multiple sebaceous cysts of scrotum. Here we describe a case of a 30 years old male who presented with long standing multiple hard nodules on the scrotum. A clinical diagnosis of multiple sebaceous cysts of scrotum was made. Wide excision of the lesion was done and Histopathological examination revealed Calcinosis Cutis.**

**Keywords: Scrotum, Calcinosis cutis, sebaceous cyst**

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## INTRODUCTION

Idiopathic scrotal calcinosis is an uncommon benign disorder of the scrotal skin characterized by multiple calcified intradermal nodules that begin in childhood or adolescence and tend to increase in size and number. Occasionally, they break through the skin and discharge a chalky content.<sup>1</sup> It is considered to be a metabolic disorder but the serum calcium remains normal in all patients<sup>2</sup>. This disease was first described by Lewinsky as a subtype of calcinosis cutis.<sup>3</sup> The pathogenesis of scrotal calcinosis is controversial. Histopathologically, scrotal calcinosis is characterized by calcium deposits in the dermis surrounded by a foreign body granulomatous reaction. Despite the controversial origin of the disease, surgical excision is the treatment of choice with excellent results.

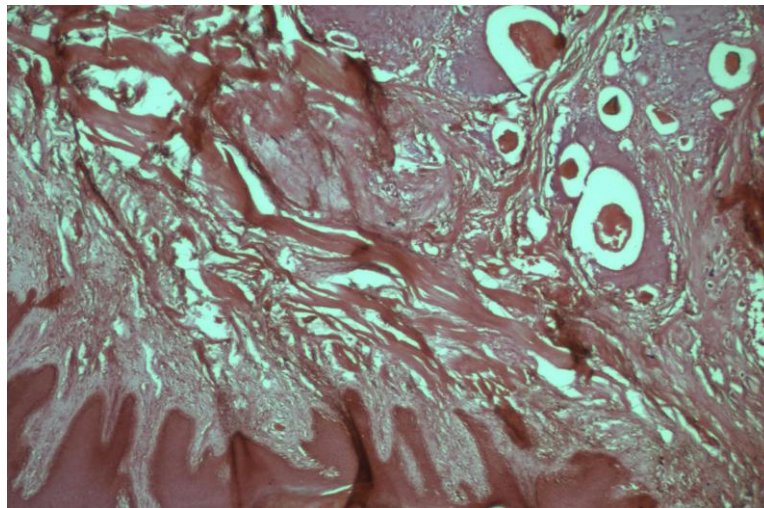
## CASE REPORT

A 30 years old, male presented to the outpatient department with complaint of multiple painless nodular lesions on the scrotum for the past 15 years. It started as 3-4 small soft nodules, which gradually increased in size and number and slowly coalesced to form a large firm to hard multinodular swelling. Patient remained largely asymptomatic except for occasional itching. There was no history of metabolic, systemic, neoplastic or autoimmune disease. There was no history of scrotal trauma or any infective disease of the scrotum. He was not a known diabetic, and not on any immunosuppressive drugs. There were no features suggestive of hypercalcemia. On Physical examination, review of systems was normal. Scrotal examination revealed multiple firm, painless subcutaneous nodules involving the ventral aspect of scrotum, sparing the other parts of scrotum and penis (fig.1). The lesion was non tender. Serum calcium and phosphate were within normal limits. Wide excision of the lesion was done under Local Anesthesia. Post op period was uneventful with no evidence of recurrence on follow up.

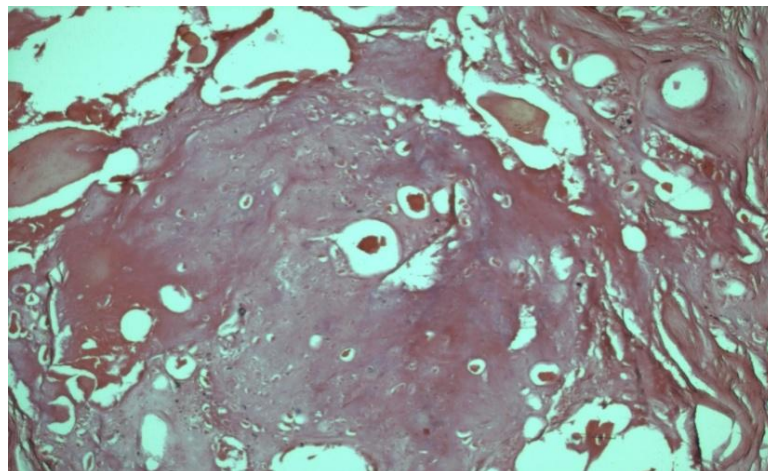
Histopathological examination showed stratified squamous epithelium lined tissue revealing fibrocollagen tissue and few calcified areas suggestive of calcinosis cutis (fig.2, fig.3).



**Fig 1: Showing multiple nodular lesions on the scrotum**



**Fig. 2: Photomicrograph showing stratified squamous epithelium lined tissue revealing fibrocollagen tissue and few calcified areas (H & E, 200x)**



**Fig. 3: Photomicrograph showing calcified lesions and congested fibrocollagen tissue (H & E, 400x)**

## DISCUSSION

The deposition of calcium in the skin, sub-cutaneous tissue, muscles and the visceral organs is known as calcinosis. This condition commonly occurs in the skin, where it is known as calcinosis cutis or cutaneous calcification. Calcinosis cutis has been divided into four major types on the basis of the original causes of the symptoms, as dystrophic, metastatic, idiopathic and iatrogenic. Idiopathic calcinosis cutis occurs in the absence of a tissue injury or a systemic metabolic effect. No causative factor has been identified and the calcification is most commonly localized to one general area. Idiopathic calcification of the normal skin has been described in the scrotum, penis, vulva and the breast.<sup>4</sup>

Idiopathic scrotal calcinosis is a rare scrotal disorder characterized by painless multiple nodular lesions on the scrotal skin. It is a metabolic disorder which usually occurs in the third decade of life though patients commonly present years or decades after the onset of disease. Clinically, it consists of hard, yellowish nodules within the dermis of scrotal skin. Nodules vary in size (from one mm to several centimeters) and number (solitary or multiple). The nodules are usually asymptomatic and patients seek medical advice mainly for cosmetic reasons. However, in some cases, there might be some heaviness, itching or discharge from the calcified masses.<sup>5</sup>

There is a lot of controversy regarding the pathogenesis of the disease. The calcification of pre-existent epidermal cysts is suggested by many authors as a possible pathogenesis.<sup>2,7</sup> Calcification of epidermal cysts occurs after an inflammatory reaction that triggers a degenerative process and eventually leads to the resorption of the cyst walls and the loss of their epithelial lining. However, some researchers found that dystrophic calcifications of the dartos muscle was the basis of scrotal calcinosis.<sup>8</sup>

The pathogenesis may be unclear but there is only one line of treatment for this disease i.e. wide excision of the lesion. Since the nodules are localized to the dermis, the excision is limited to the skin of the affected area. To prevent recurrence, excision must include the whole lesion. Subtotal excision of the scrotal wall can be performed in massive involvements. Primary closure is generally possible but local flaps of non-scrotal skin can be used. Surgical results are satisfactory and relapses are not observed.<sup>9</sup>

## CONCLUSION

Idiopathic scrotal calcinosis is uncommon but should be kept in the differential diagnosis of multiple sebaceous cysts of scrotum. It is amenable to surgical excision while in some patients scrotal reconstruction may be necessary.

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