# Idiopathic scrotal calcinosis; a rare scrotal tumour: A Case Report and Review of Literature

***Yusuf SM** *MBBS, MSC, FWACP*. *** Uloko AE** *BM BCh, FMCP* ***Sani MU** *MBBS, FWACP* ***Mijinyawa SM** *MBBS, FWACP,* **** Mohammed AZ** *BM BCh, FMCPath*

[*] *Department of Medicine, Aminu Kano Teaching Hospital Kano, Nigeria, **Department of Pathology, Aminu Kano Teaching Hospital Kano, Nigeria*

## *Abstract*

*Idiopathic scrotal calcinosis is a rare benign disease characterized by multiple, asymptomatic and painless nodules on the scrotum. We herein report this rare disease in a Nigerian adult male and briefly review the relevant literature.*

***Key words:*** *Calcinosis, scrotum, Nigerian adult male, painless nodules.*

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## Introduction

Idiopathic scrotal calcinosis (ISC) is a rare benign condition which presents with multiple painless nodules on the scrotal skin wall. The exact cause and nature of ISC have remained elusive. Although various theories regarding the aetiology and pathogenesis of this condition have been proposed, none has been widely accepted.[1] Documented cases of scrotal calcinosis in Nigeria are lacking, hence the need to present this case. We aim to present this case because of its rarity and rather controversial pathogenesis.

## Case Report

A 28-year-old man was referred to the dermatology clinic with 3 year history of painless multiple bumps over both sides of the scrotum. The scrotal tumours had increased in number and size since their first appearance. The patient stated that he did not experience itching, pain or discharge. His past medical history was unremarkable.

Physical examination revealed non-tender, hard and easily palpable skin-coloured papules and nodules ranging in size from a pinhead to several centimetres in diameter and moveable beneath the skin surface (Figures 1). The testicles were normal in volume, shape and consistency. Blood chemistry including serum electrolytes, urea, creatinine, calcium, phosphate, uric acid and alkaline phosphatase and parathyroid hormone levels were within normal limits.

The patient was counseled and referred to surgery department for possible treatment.

Histologic examination of an excised nodule stained with hematoxyline and eosin showed a thin layer of epidermis overlying a dermal lesion made of multiple cystic spaces of varying sizes. These spaces were distended by large amorphous granular basophilic material consistent with ISC (Figures 2).

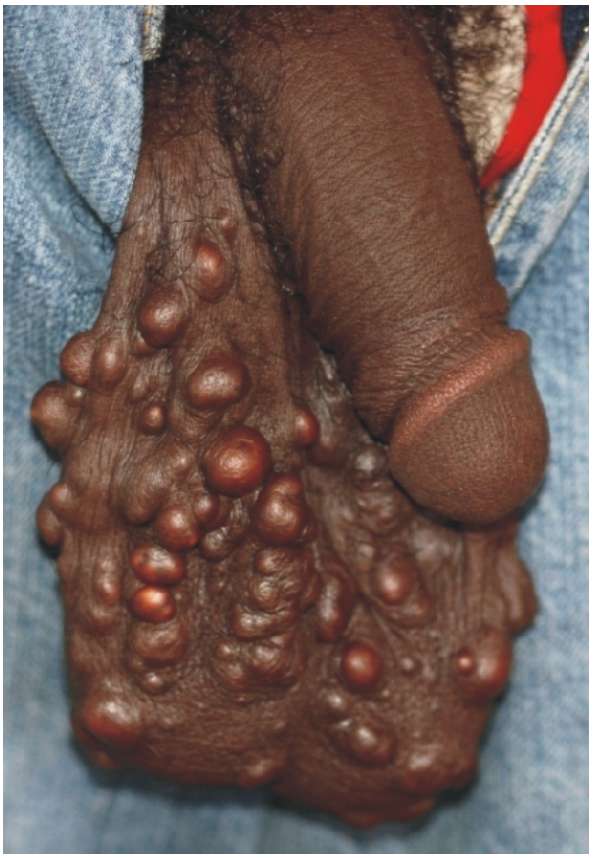

**Figure 1.** Skin-coloured to yellow papules or nodules ranging in size from a pinhead to several centimeters in diameter

*Correspondence to Dr. Shehu Mohammed Yusuf shehumy@yahoo.com, +2348036526837*

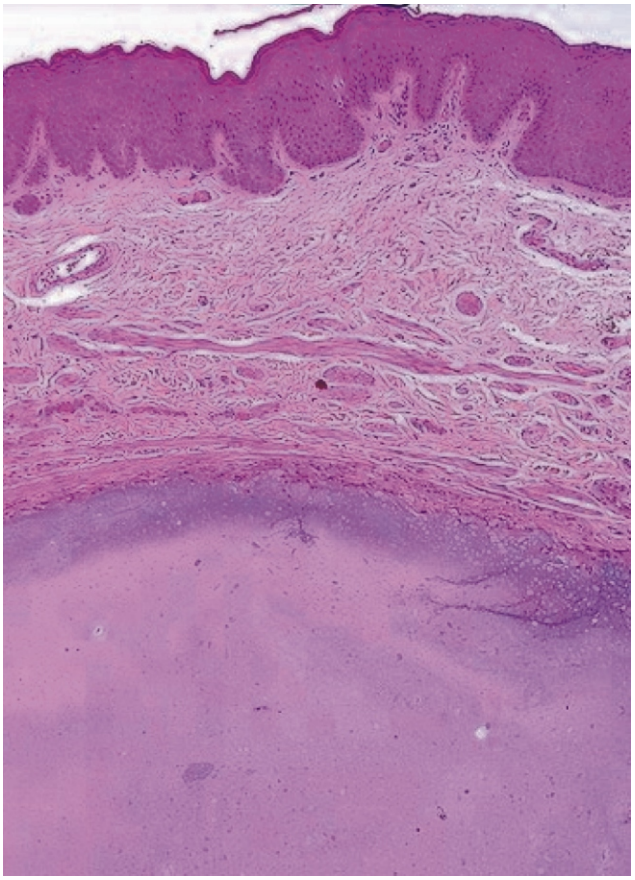

**Figure 2.** Histologic section of a nodule from scrotal skin shows a large circumscribed area of amorphous granular basophilic material in the dermis (Hematoxyline-Eosin, ×40)

## Discussion

Idiopathic scrotal calcinosis (ISC) was first described by Lewinski in 1883, and the disorder was named by Shapiro *et al* in 1970.[2] It is a benign and usually asymptomatic disorder characterized by marble-like, solitary or multiple, polypoidal, firm, and easily palpable nodules. In some cases, symptoms such as heaviness and itching of the scrotum, secondary infection, and discharge from the calcified masses may be reported.[3] Most patients present between the ages of 20 and 40. The youngest and the oldest reported patients were a 9-year-old and an 85-year-old respectively.[3]

The exact pathogenesis of the disease is not known. It might be idiopathic or due to dystrophic calcification of preexisting epidermal cysts.[4,5] Although, some cases can be considered truly idiopathic, because of the absence of epithelial or glandular structure found in the pathology.[5] ISC might result from inflammation of epidermal cysts, followed by dystrophic calcification within the keratin of the cyst or dermis adjacent to a ruptured cell wall.[5] The finding of degeneration and necrosis of dartos muscle, suggested minor trauma as an initiation stimulus of ISC. [5,6] There is, However, similar to findings in this report, there is no convincing evidence of biochemical alteration, endocrine/metabolic or systemic disorder in ISC.[1] And there are no anomalies of calcium and phosphate metabolism found except for an increase in alkaline phosphatase level.[7]

Surgical excision and histopathologic examination remain the only way to confirm the diagnosis of ISC. Histology reveals focal dermal collections of deeply basophilic material on hematoxylin and eosin stain, which stains black with the von Kossa stain for calcium, and red with Alizarin stain for calcium. An X-ray of the scrotum reveals numerous radio-opaque shadows of varying sizes.[8,9]

Treatment of ISC is largely cosmetic, surgical excision is currently the only optimal way to remove nodules, although there had been reports of recurrence following surgery.[10] Concomitant use of local steroids and vitamin A after surgical excision may however prevent probable recurrence.[11,12] A novel pinch-and-punch excision technique for removing scrotal calcinosis was recently described.[13] In cases of massive calcinosis or when most of the scrotum is involved, a subtotal excision or total scrotal skin removal and grafting may be necessary.[1]
[4]

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