

# IDIOPATHIC SCROTAL CALCINOSIS WITH POLYPOID APPEARANCE

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## ABSTRACT

Idiopathic scrotal calcinosis is characterized by the presence of multiple firm nodules of scrotal skin. The nodular calcifications are typically found in the second decade of life. The lesions are seen as asymptomatic, round, firm papules. A 53-year-old man was admitted with painless, firm nodules within the scrotum. The lesions had begun to appear at the age of 23 years and some of them had become polypoid progressively over time. There was no trauma or previous surgical treatment. The serum levels of calcium, phosphorus, calcitonin, and parathyroid hormone were within normal limits. The polypoid masses were surgically excised. Histological examination of the cysts revealed dystrophic calcification of their keratin contents but no epithelial lining. To the best of our knowledge, this is the second case of scrotal calcinosis with polypoid appearance in the literature.

**Key Words:** Calcinosis, Skin, Polypoid Cyst.

## POLİPOİD GÖRÜNÜMLÜ İDİOPATİK SKROTAL KALSİNOZİS ÖZ

İdiopatik skrotal kalsinozis, skrotum derisinde çok sayıda sert nodüllerin varlığıyla karakterizedir. Nodüler kalsifikasyonlar tipik olarak yaşamın 2. dekadında görülür. Bu lezyonlar asemptomatik, yuvarlak sert papüller durumundadır. Olgu 53 yaşında skrotumda ağrısız, sert nodüller ile başvurdu. Lezyonların 23 yaşında iken görülmeye başladığı ve bazılarının zamanla ilerleyerek polipoid forma dönüştüğü öğrenildi. Hastanın öyküsünde travma veya cerrahi tedavi yoktu. Serum kalsiyum, fosfor, kalsitonin ve paratiroid hormon seviyeleri normal sınırlardaydı. Kistlerin histopatolojik incelemesinde epitelle döşeli olmayan keratin içeriklerinin distrofik kalsifikasyonu görüldü.

Bilgilerimize göre bu olgu literatürde bildirilen polipoid görünümlü ikinci skrotal kalsinozis olgusudur.

**Anahtar Kelimeler:** Kalsinozis, Deri, Polipoid Kist.

## INTRODUCTION

Idiopathic calcinosis of the scrotum is a rare condition, and its pathogenesis remains unknown (1). Idiopathic calcinosis of the scrotum is characterized by multiple asymptomatic nodules in the scrotal skin 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.

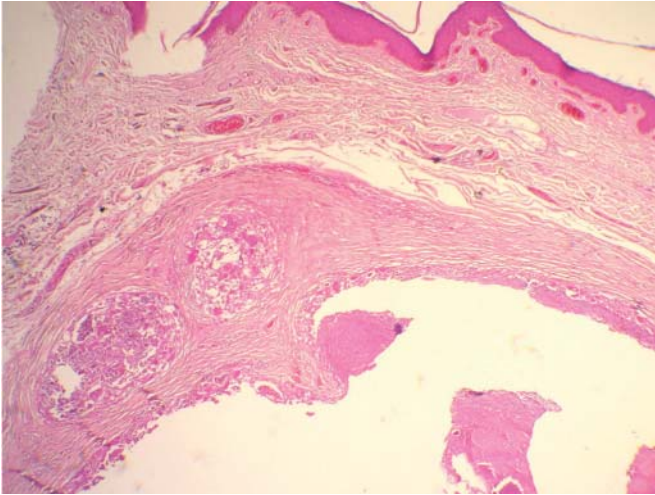
Microscopically, amorphous basophilic masses are seen in the corium, often associated with a prominent foreign body reaction. The pathogenesis is obscure, but the presence of a layer of squamous epithelium surrounding the calcium deposits in some cases suggests that this lesion may be the result of massive calcification of keratinous cysts (2).

## CASE REPORT

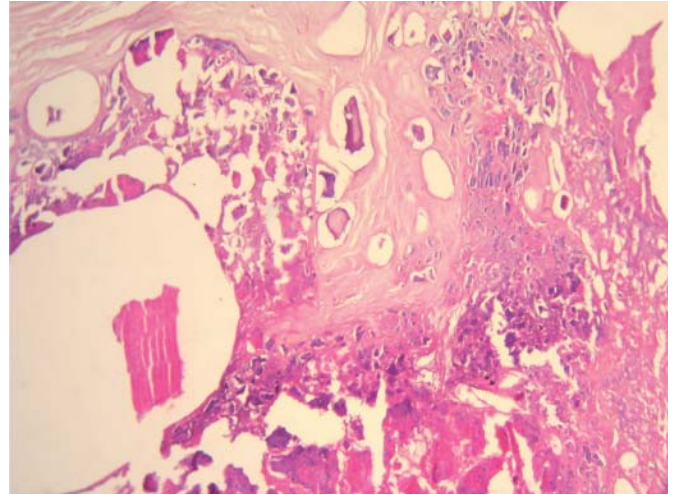
A 53-year-old man was admitted with painless, firm, widespread nodules within the scrotum. The lesions had begun to appear at the age 23 years and some of them had become polypoid progressively over time. There was no trauma or other history, and neither surgical nor medical treatment had been attempted before. Physical examination revealed localized polypoid cysts in addition to multiple small, firm nodules within the scrotal skin (Figure 1). The serum levels of calcium, phosphorus, calcitonin, and parathyroid hormone were within normal limits. The patient was treated with total surgical excision of the polypoid masses. Macroscopically the specimen showed yellowish polypoid masses containing small cysts. Histological examination of the cysts revealed dystrophic calcification. There was no clear-cut evidence about whether their contents of cysts were keratin and there was no epithelial lining in serial sections (Figures 2, 3). Substance of the cyst stained positive with von Kossa histochemically. No staining was determined with Keratin, LMW Ab-1 (Clone AE1, Neomarkers, USA, and 1/100-1/200 dilution) around the cyst.



**Figure 1:** Scrotal nodules, excision biopsy material.



**Figure 2:** Calcium deposits in hyalinized dermis, H&E, X20.



**Figure 3:** Calcium deposits, H&E, X40.

## DISCUSSION

Cutaneous calcium deposits appear in several different forms. These include metastatic calcification, dystrophic calcification, idiopathic calcification, subepidermal calcified nodules, and calciphylaxis. Idiopathic calcinosis cutis has no known cause and develops in the scrotal skin as small nodules. Histopathologically, the calcium deposits are amorphous, basophilic, extracellular, and dermal. A foreign body reaction consists of multinucleated giant cells and sometimes inflammatory cells surround the calcium deposits. The calcium ranges in quantity from small granules to massive deposits. Von Kossa, Alizarin red specifically stains the calcium moiety (3,4).

The pathogenesis is obscure, but the presence in some cases of a layer of squamous epithelium surrounding the calcium deposits suggests that this lesion may be the result of massive calcification of keratinous cysts (2). Some cysts showed rupture of their epithelial walls associated with the presence of keratin fibers, granulomatous inflammation, and calcium granules in the surrounding dermis (5). Some authors state that many cases classified as idiopathic calcinosis of the scrotum may be in reality late stages of a dystrophic calcification. They suggest that serial cuts in the histopathology examination of every lesion of SC should be performed in order to establish the existence or not of any epithelial remnant (6,7). Our case showed calcium deposits in the dermis and did not have epithelial lining. Although its etiology is unknown, the literature reviewed supported the view that the mast cell accumulation and its degranulation are related to idiopathic calcinosis of the scrotum (8).

A differential diagnosis should be made with calcifying fibrous pseudotumor and extraoral cutaneous verruciform xanthoma of polypoid appearance in the scrotum. Cutaneous verruciform xanthoma comprised aggregates of foam cells in the submucosal stroma or papillary dermis in association with verrucous hyperplasia. The typical pathologic findings of calcifying fibrous pseudotumor are those of a densely collagenized fibrous tumor with psammomatous and dystrophic calcification accompanied by lymphoplasmocytic infiltrate (9,10).

To the best of our knowledge, our case is the second case of scrotal calcinosis with polypoid appearance in the literature (11). Additionally, the calcium deposits did not contain epithelial lining.

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## REFERENCES

1. Saad AG, Zaatari GS, Scrotal calcinosis: is it idiopathic? *Urology*. 2001; 57: 365.
2. Rosai J Male Reproductive System, In: Rosai and Ackerman's Surgical Pathology, Ninth Ed, Vol: 1, Philadelphia, Mosby 2004; p: 1313
3. Mills SE, Nonneoplastic Diseases of the Skin In: Sternberg's Diagnostic Surgical Pathology, Fourth Ed, Vol: 1, Philadelphia, by Lippincott Williams & Wilkins 2004; pp: 39- 40
4. <http://www.bweems.com/idioscrcal.html> Scrotal calcinosis
5. <http://www.archderm.ama-assn.org/cgi/content/abstract/118/12/985> Swinehart JM, Golitz LE. Scrotal calcinosis. Dystrophic calcification of epidermoid cysts
6. Moskovitz B, Bolkier M, Ginesin Y, Levin DR, Bassan L. Idiopathic calcinosis of scrotum. *Eur Urol* 1987; 13: 130-131.
7. Soldre CT, Azulay DR, Carneiro S, Azulay DR. [Calcinosis of the scrotum] *Med Cutan Ibero Lat Am* 1986; 14: 275-280.
8. Kumagai K, Amemiya H, Muramatsu H, Kariba T, Matsuse K, Toyoshima A, Yazaki T, Waku M, Okada N. Idiopathic calcinosis of the scrotum: a case report *Hinyokika Kyo* 1987; 33:1289-1291.
9. Fetsch JF, Montgomery EA, Meis JM. Calcifying fibrous pseudotumor *Am J Surg Pathol* 1993; 17(5): 502-508.
10. Moshin SK, Lee MW, Amin MB, Stoler MH, Eyzaguirre E, Ma CK, Zarbo RJ. Cutaneous verruciform xanthoma: a report of five cases investigating the etiology and nature of xanthomatous cells. *Am J Surg Pathol* 1998; 22(4): 479-487.
11. Polk P, McCutchen WT, Phillips JG, Biggs PJ. Polypoid scrotal calcinosis: an uncommon variant of scrotal calcinosis. *South Med J* 1996; 89(9): 896-897.