



Idiopathic scrotal calcinosis: a case report of a rare condition

İdiopatik skrotal kalsinozis: nadir görülen bir olgunun sunumu

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Abstract

Scrotal calcinosis is a rarely seen benign disease in urological practice. It was first described by Lewinsky in 1883. The etiology is considered to be idiopathic and it is not known exactly. Scrotal calcinosis is usually asymptomatic. Patients live with their disease for a long time until they start to mind their appearances. Scrotal skin lesions can be solitary or multiple and usually are not associated with hormonal or metabolic abnormalities. Histologically, scrotal calcinosis is characterized by the presence of calcium deposits in the dermis, often surrounded by a granulomatous reaction. In this case report, we present a rare scrotal calcinosis case of a 28-year-old man who presented with cosmetic symptoms causing scrotal nodules with no history of metabolic, systemic, neoplastic, or autoimmune diseases.

Keywords: Idiopathic Calcinosis; Scrotum.

Öz

Skrotal kalsinozis üroloji pratiğinde nadir olarak görülen benign bir hastalıktır. İlk olarak Lewinsky tarafından 1883 yılında tanımlanmıştır. Etiyolojisi tam olarak bilinmemekte ve idiopatik olduğu düşünülmektedir. Genellikle asemptomatik seyretmektedir. Hastalar uzun seneler bu hastalıkla yaşarlar ve kozmetik kaygıları dışında doktora başvurmazlar. Skrotal cilt lezyonları tek ya da multiple sayıda olabilir ve genellikle herhangi bir hormonal ve metabolik anormallikle ilişkili değildir. Skrotal kalsinozis dermiste kalsiyum depolanması ve etrafında oluşan granülatöz reaksiyon ile karakterizedir. Bu olgu sunumunda, herhangi bir metabolik, sistemik, neoplastik ve otoimmün hastalığı bulunmayan ve skrotal nodülün yol açtığı kozmetik şikâyetle başvuran 28 yaşında erkek hastada nadir görülen skrotal kalsinozis olgusu sunuldu.

Anahtar Kelimeler: İdiopatik Kalsinozis; Skrotum.

Received/Başvuru: 19.12.2015
Accepted/Kabul: 05.01.2016

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For citing/Atıf için

Ediz C, İhvan AN, Karakol P, Hayit H. Idiopathic scrotal calcinosis: a case report of a rare condition. J Turgut Ozal Med Cent 2016;23(3):313-5.

INTRODUCTION

Scrotal calcinosis is a benign disease with unknown etiology and occurs on the scrotum surface with progressive nodule development (1). It was first identified in 1883 by Lewinsky (2). Although it is known idiopathically, some metabolic and systemic diseases have also been blamed in its pathogenesis (3).

CASE REPORT

A twenty-eight-year-old patient was admitted to our hospital due to painless nodules on the scrotal skin that had started 1 year ago. The patient was not exposed to any scrotal trauma and there was no history of metabolic, systemic, autoimmune, or neoplastic symptoms.

In the physical examination, we observed several palpable, mildly tough, slightly raised lesions on the scrotal skin the largest of which was 1 cm. There was no redness or ulceration on the scrotum surface. The patient did not show any additional signs in the systemic examination.

The laboratory analysis of complete blood count and biochemical tests were normal.

The patient was scheduled for excisional biopsy for diagnostic and therapeutic purposes. The lesion on the scrotum surface was excised in full-thickness with affected scrotal wall under local anaesthesia (Figure 1). The scrotal skin was sutured primarily. Having encountered no complications, the patient was discharged on the same day. The histopathological examination of the excised material revealed 3 regular skin subcutaneous tissues the largest of which had a macroscopical size of 1,7x1,3x1 on the outer face of the skin. There were multiple cysts in the samples. Although the content of the cysts was similar to that of sebaceous materials, it had a viscous, stiffer formation. The microscopic examination showed extensive amorphous calcification areas, foreign body-type tissue reactions, and bleeding foci in the spaces the epithelium of which could not be observed (Figures 2 and 3). The histopathological evaluation was found to be consistent with idiopathic scrotal calcinosis.



Figure 1. The lesions (around 1 cm in size) slightly raised from the scrotal surface were removed with excisional biopsy. The inside macroscopic image of the lesions showed areas of calcification.

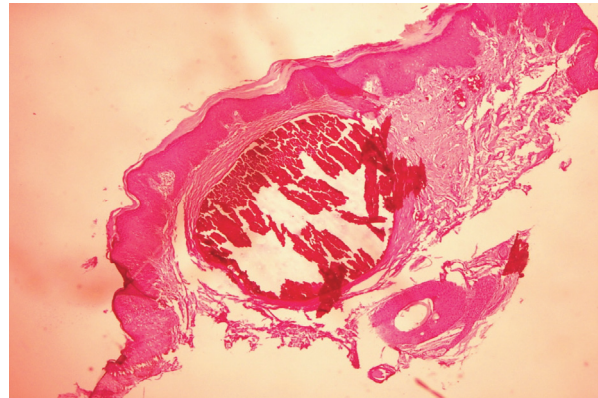


Figure 2. H&E x 40; areas of calcification under the epithelium.

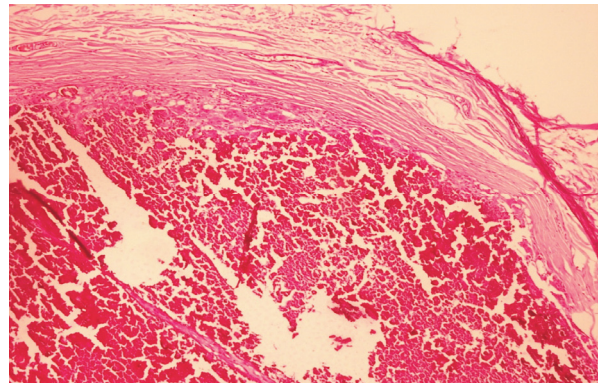


Figure 3. H&E x 100; areas of calcification and foreign body-type giant cells.

DISCUSSION

Scrotal calcinosis diagnosis was first reported in 1883 by Lewinski. Although rarely seen in the practice of urology, it is most frequently encountered in the 3rd and 4th decades of life (4). Scrotal calcinosis is often asymptomatic while it may, though rarely, bring about symptoms such as pain, swelling, itching and leakage with single or multiple scrotal swellings. Our case had asymptomatic isolated scrotal lesions that had lead to cosmetic problems in the genital area at an early age. As these lesions usually remain asymptomatic with slow progression, the time elapsed between diagnosis and treatment may take a couple of years (5).

There are four different types of calcium deposition on the skin: metastatic, dystrophic (dermatomyositis, scleroderma, chronic inflammation, trauma), sub-epidermal calcified nodule (facial and limb lesions), and idiopathic calcinosis (isolated scrotal skin lesions) (6). The formation of scrotal calcinosis may include calcium accumulation along with resorption of the cyst wall and depletion in the epithelial tissue followed by an inflammatory reaction and a degenerative process (7). Some researchers argue that degeneration of the dartos muscular layer accompanied by the accumulation of calcium may also be included in the pathogenesis (8). In

our case, there was no metastasis status or comorbid disorder characterized by dystrophic destruction. Serum calcium and phosphate levels were within normal limits. In such lesions in the skin, sebaceous cysts, metastatic nodules, and fibromas should be primarily considered for differential diagnosis. Fine-needle aspiration cytology may be used in the differential diagnosis as well (8). Because the most common treatment of scrotal lesions is the excision of lesion today, patients should first be considered for excision biopsy followed by histopathological evaluation. Although the macroscopic image of our patient resembled sebaceous cysts, areas of calcification and the absence of cystic epithelium have helped us in ruling out sebaceous cyst option. We did not observe any malignant epithelial structures that could suggest metastasis or any formation with mesenchymal origin, either. Our patient was diagnosed with "idiopathic scrotal calcinosis" due to spread areas of calcification and foreign body skin reaction.

As a result, idiopathic scrotal calcinosis should be kept in mind while evaluating patients with single or multiple protuberant, hard skin lesions on the surface of scrotum. Because lesions superficially settle on the scrotal surface and the scrotal surface can be repaired primarily after the removal of the lesion in most cases, the complete excision of the lesion and histopathological assessment should be planned before cytological sampling.

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