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Idiopathic Scrotal Calcinosis – A Case Report

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Abstract :*Scrotal calcinosis is an uncommon benign condition of scrotal skin. It is characterized by single or multiple hard calcified intradermal nodules over the skin. Etiology is controversial and calcinosis occur despite normal calcium and phosphate metabolism. Differential diagnosis include epidermal cyst, pilar cyst or sebaceous cysts. Here we present a case of 40 year old male patient who presented with multiple hard swellings over the scrotum without any serum calcium or phosphate abnormalities. After excision and on Histopathological studies it showed large irregular calcium deposits with giant cells in between confirming the diagnosis ofcalcinosis cutis or scrotal calcinosis. Excision and Biopsy remains the gold standard treatment for scrotal calcinosis.*

Keywords: *Calcinosis cutis, idiopathic, Scrotal Calcinosis, Excision*

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I. Introduction

Calcinosis cutis or tumoralcalcinosis is a rare benign condition of skin which involves deposition of calcium in subcutaneous layer. It is common in peri-articular region. Virchow was first to describe calicnosis cutis in the year 1885. They are broadly classified into four types – Dystrophic, Metastatic, iatrogenic and idiopathic. Calcinosis cutis of scrotum is a relatively rare entity, it is also referred to as scrotal calcinosis. Lewinski was first to describe the term 'scrotal calcinosis' in 1883. When present over scrotumVery few cases of scrotal calcinosis have been described in literature and majority of are idiopathic. Differential diagnosis includes sebaceous cysts, pilar cysts or epidermal cysts. Even though the origin and etiology is still unclear, surgical excision remains treatment of choice followed by a detailed histopathological examination.

II. Case Report

A 40 year old male came to our surgical out patient department with complaints of multiple swelling over scrotum which are causing inconvenience since last 10 years. No history of pain, trauma and discharge associated with the swellings. On examinationmultiple hard swellings with multiple yellow white nodules over the lesion covering more thanhalf of the scrotum were found. Routine surgical profile, serum calcium and phosphate levels were found to be normal. Provisional diagnosis of Scrotal calcinosis was made. Surgical excision of all the nodules was done along with primary closure of scrotum was performed and the specimen was sent for histopathological examination. On HPE, large irregular deposits of calcium in collagenous fibrous stoma favouring diagnosis of calcinosis cutis of scrotum. Scar healing was satisfactory and uneventful.

Fig 1. Pre-operative picture

Fig 2. Gross picture of the specimen

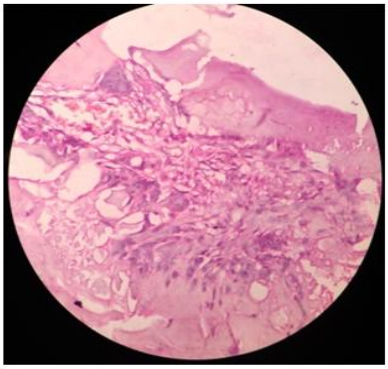

Fig 3.HPE showing large calcium deposits

III. Discussion

Abnormal deposition of calcium compounds within the skin is called as calcinosis cutis or tumoralcalcinosis. They are common around peri-articular regions such has shoulder, hip and elbow. However, few cases of calcinosis cutis are described in rare locations like breast, vulva and scrotum. Calcinosis cutis of scrotum or scrotal calcinosis consist of single or multiple nodules within the dermis of the scrotal skin varying which develops slowly over many years[2]. It occurs mainly in age group of 20 to 40 years. In majority of cases of scrotal calcinosis, the nodules are multiple in number, hard and yellowish or with various sizes from several mm to cm.[3]

Calcinosis can be broadly categorised into three major types – Metastatic, Dystrophics and Idiopathic. In metastatic form, calcinosis is due to abnormally high serum calcium and phosphate levels. In Dystrophic form, calcinosis is due to local reactions such as inflammation..etc. Idiopathic type includes the conditions which cannot be included in either of them. The role of epidermal cyts were proposed in pathogeneis of scrotal calcinosis. Epidermal cysts after undergoing inflammatory reaction leads to loss of either partial or total cyst wall which further leads to calcification of content of the cyst. Finally after the resorption of cyst wall and keratinous contents only the calcified deposits are left behind leading to the formation of hard nodules. [4,5]

Scrotal calcinosis is a benign condition and patients are usually asymptomatic. Few might have complaints of heaviness in scrotum, discharge, itching and very rarely pain.[2] Differential diagnosis include pilar cysts, epidermal inclusion cyst, sebaceous cyst, steatocystoma, cutaneous horn (actinic keratosis), and other benign tumors, such as lipoma, fibroma, angiokeratoma, and lymphangiomacircumscriptum.[6] Hence diagnosis most of the times is based on hitstological findings. On cut section calcium depostis are found within the dermis or below subcutaneous tissue.Calcium deposition may be confirmed on Von Kossa and alizarin red stains. Calcinosis is characterized by a central mass of amorphous or granular calcified material surrounded by hyalinized fibrous tissue separating several cavities. The fibrous tissue is bordered by a granulomatous and chronic inflammatory infiltrate. There may be prominent small psammoma-like bodies or calcospherites.[7]

There is no role of medical management in treatment of scrotal calcinosis unless there is underlying pathology. In cases of idiopathic scrotal calcinosis, Surgical excision remains the treatment of choice. A partial scrotectomy, subtotal scrotectomy or total scrotectomy can be done based on the extent of involvement. Wherever possible, a tension free primary closure can be done. In case where primary closure is not possible, scrotal reconstruction can be done with help of skin grafting. Recurrence rate is very low and when present, it is due to inadequate clearance of microscopic calcification.[8]

IV. Conclusion

Idiopathic scrotal calcinosis is a rare benign condition of scrotum whose pathogenesis and etiology is still unclear. Differential diagnosis include sebaceous cysts, epidermal inclusion cysts, pilarcysts..etc. A definitive diagnosis can be made with help of histological examination. Complete Surgical excision remains the treatment of choice. Most of the times recurrence is due to left over microscopic calcification

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