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IP Journal of Diagnostic Pathology and Oncology

Journal homepage: https://www.jdpo.org/

Case Report

Scrotal calcinosis- A rare condition diagnosed on FNAC

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ARTICLE INFO

Article history:
Received 25-06-2023
Accepted 12-08-2023
Available online 28-08-2023

Keywords:
Scrotal calcinosis
FNAC
Histopathology

ABSTRACT

Scrotal calcinosis is a rare condition characterised by single or multiple hard, painless nodules in the scrotal skin. It is uncommon and subtype of calcinosis cutis. It appears mainly in men aged 20-40 years of age as hard, yellowish nodules varying in size (1 mm to several centimetres). They are usually asymptomatic; however, may be complicated with heaviness, itching or discharge. FNAC (Fine needle aspiration cytology) can prove to be a useful tool for diagnosis of this rare disorder. A diagnosis by FNAC may at times be comforting for the patient and the treating Doctor and can help avoid unnecessary surgery. Reports on this issue are sparse and thus we are reporting uncommon condition of scrotal calcinosis diagnosed on FNAC rarely used to diagnose this condition.

1. Introduction

Accumulation of insoluble calcium salt crystals in the skin and subcutaneous tissue leads to formation of localised hard nodules and is termed as calcinosis cutis. The deposition of insoluble calcium salts in the skin is known as calcinosis cutis. Metastatic, dystrophic, idiopathic and subepidermal nodule are four subtypes of calcinosis cutis. Metastatic calcification results from elevated serum levels of calcium or phosphorus. The latter three subtypes are associated with normal serum calcium levels. Dystrophic calcinosis cutis is the most common. Dystrophic calcinosis is calcification associated with infection, inflammatory processes, cutaneous neoplasms or connective tissue diseases and it is most frequently seen in association with underlying autoimmune connective tissue disease. Idiopathic calcinosis cutis is cutaneous calcification of unknown cause with normal serum calcium. Subepidermal calcified nodule, tumoral calcinosis and scrotal calcinosis (idiopathic calcinosis of the scrotum) are idiopathic forms of calcification. Iatrogenic and traumatic calcinosis are also described, which are associated with medical procedures.[1] Idiopathic calcinosis cutis of scrotum (ICCS) is a rare entity and was first described in the year 1883 by Lewinski.[2] Here we report a case of scrotal calcinosis in a 51 year old male patient.

2. Case Report

A 51 year old male visited the surgery department of our hospital with complain of a single lesion on the scrotum which was gradually increasing in size. The condition was asymptomatic with complain of occasional itching. There was no history of pain, trauma, discharge or ulceration. He did not have any systemic illness and no family history. On physical examination, single brownish nodule measuring 1.5cm X 1cm on the scrotum was noticed. (Figure 1) The surrounding area was normal on palpation. The nodule was hard and non-tender. The diagnosis of Epidermal Inclusion cyst was made clinically and advised FNAC. On FNAC,

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https://doi.org/10.18231/j.jdpo.2023.044

it was difficult to insert the needle into the lesion as the lesion was very firm. Smears made from FNAC were stained with Giemsa stain and showed amorphous material and calcium crystals. (Figures 2, 3 and 4) Considering the clinical and cytological smears findings correlation diagnosis of Calcinosis cutis was made on FNAC. Other laboratory examination, Serum Calcium, phosphorus, uric acid, alkaline phosphatase and lipid profile were found to be in normal limits. Based on clinical features and laboratory report a diagnosis of idiopathic calcinosis cutis was made. He was advised for an excision biopsy and the sample was sent for histopathology. The cut section showed solid white homogenous areas.(Figures 5 and 6) Histopathology examination revealed skin lined by keratinised stratified squamous epithelium with underlying dermis having areas of fibrosis and calcification with occasional multinucleate giant cells.(Figure 7) Confirmatory diagnosis of calcinosis cutis was given on histopathology.

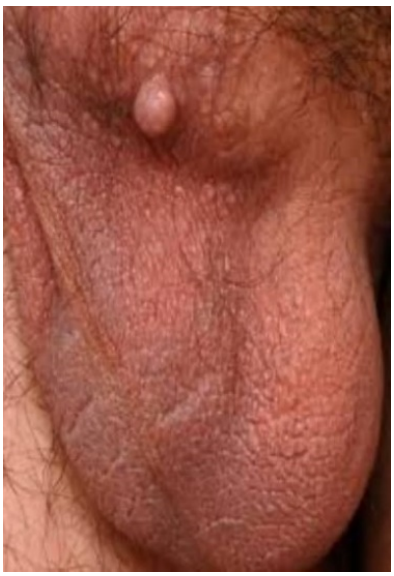

Fig. 1: Lump onscrotum

3. Discussion

Idiopathic scrotal calcinosis is a benign, asymptomatic condition presenting as a slow growing yellowish nodule, single to multiple and of varying size. The first case was described by Lewinski and reviewed by Shapiro et al. in 1970.[3] A lesion presenting as nodule in the scrotum has various differential diagnosis including steatocystoma multiforme, angiokeratoma, fibromata, epidermal cyst and lipomata.[4] However except for epidermal cyst rest can be ruled out clinically. The exact etiology is not known however it may be a possibility that the underlying cause of the disease is calcification of epidermal cyst.[5,6] As it is idiopathic, the presence of calcification anywhere else must be ruled out. A thorough biochemical profile help

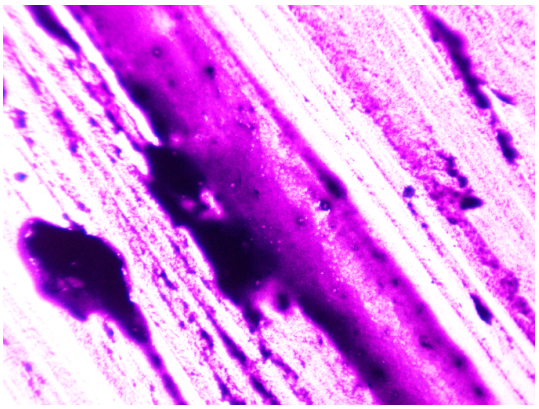

Fig. 2: Giemsa stained FNAC Smears showing amorphous material (10x)

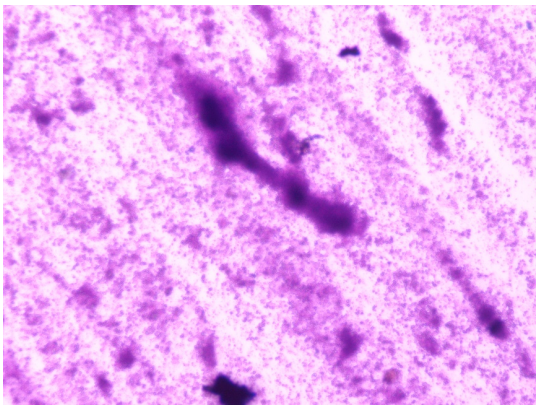

Fig. 3: Giemsa stained FNAC Smears showing amorphous material (40x)

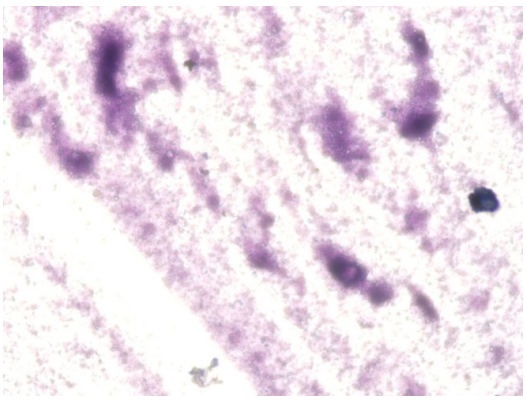

Fig. 4: Giemsa stained FNAC Smears showing calcification

Fig. 5: 5 Gross specimen measuring1.5 cm X 1 cm.

Fig. 6: Cut section showing calcification

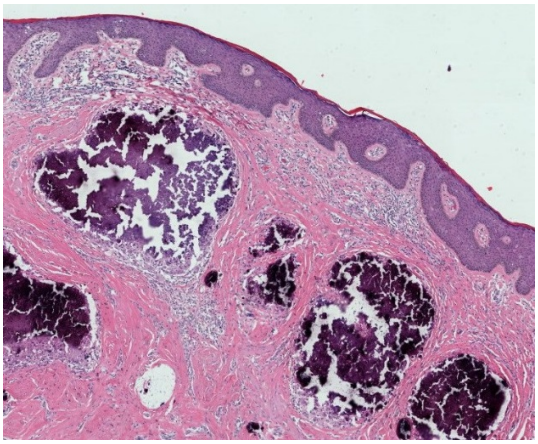

Fig. 7: H & E stained section showing calcification and giant cell reaction.

to understand the cause. If it is idiopathic, the laboratory investigations must be within normal limits.[7] Fine needle aspiration cytology was helpful to make the diagnosis. Chakrabarti I & Sharma SR have described the rare entity of idiopathic scrotal calcinosis in scrotal skin that can be reliably diagnosed by aspiration cytology, which can help avoid unnecessary surgery in less extensive and uncomplicated cases.[8] Shivkumar et al[9]reported the first case of idiopathic scrotal calcinosis on aspiration cytology. Sherwani et al[10]and Dombale et al[11]also described cytological features of scrotal calcinosis. In all these studies, the findings were similar as in our case. The treatment is done only for cosmetic reason as the condition is benign and asymptomatic. Therefore, surgical excision is considered as the treatment of choice in these patients.

4. Conclusion

We have described the rare entity of idiopathic scrotal calcinosis in scrotal skin that can be reliably diagnosed by Fine needle aspiration cytology, which can help avoid unnecessary surgery for histopathological confirmation in less extensive and uncomplicated cases.

5. Conflict of Interest

None.

6. Source of Funding

None.

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Cite this article: Banga V, Jain S, Gupta A, Gupta S. Scrotal calcinosis-A rare condition diagnosed on FNAC. *IP J Diagn Pathol Oncol* 2023;8(3):185-188.