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Pathology

IDIOPATHIC CALCINOSIS CUTIS :: SERIES OF 3 CASES REPORT

Dr Vandana Mishra*	Lecturer, Department of Pathology GSVM Medical College, Kanpur *Corresponding Author
Dr Anita Omhare	Assistant Professor, Department of Pathology GSVM Medical College, Kanpur
Dr Kanchan Srivastava	Associate Professor, Department of Pathology BRD Medical College, Gorakhpur

ABSTRACT Calcification of the skin occur in four main forms viz. dystrophic, metastatic, iatrogenic and idiopathic. Idiopathic calcinosis cutis of the skin is a rare phenomenon and occur in absence of known tissue injury, systemic metabolic effect. It is important to delineate it from other calcification disorders for further plain of management. Herein we present three consecutive cases within six months of different age group, sex and sites and discuss with probable pathogenic origin.

KEYWORDS : Calcinosis cutis, idiopathic, nodule, skin.

INTRODUCTION

Calcinosis cutis is a term to describe a group of disorder in the skin characterized by calcium deposit in the skin. Calcinosis cutis is of 4 types : dystrophic, idiopathic, metastatic and iatrogenic. Calcinosis cutis is calcification associated with infection, inflammatory process, cutaneous neoplasm or connective tissue diseases [1-3]. Idiopathic Calcinosis cutis is cutaneous calcification of unknown cause with normal calcium level. Subepidermal calcified nodule is a idiopathic form of calcification. Metastatic calcification results from elevated serum level of calcium or phosphorus. Iatrogenic Calcinosis cutis are those which are associated with medical procedures(1-3).

CASE REPORTS

All these cases visited to surgery department of L.L.R. Hospital with normal laboratory evaluations including serum calcium, phosphorus and alkaline phosphatase levels etc. X-ray findings in all these cases show radiopaque well defined area in skin. All these patients are managed by wide local excision and specimen sent to our department for histopathological examination.

Case 1: A 33 years old male with a history of small potato size, firm to hard, painless scalp swelling with 10 years duration, without other local or systemic illness. No history of trauma, no family history. Physical examination was unremarkable except the skin lesion. On gross examination a lobulated skin covered greyish white tissue piece of 3 x 2 cm in size, cut surface is greyish yellow with chalky white deposits. (In H & E stain x 10) reveal multiple large basophilic deposits in dermis with foreign body giant cell reaction. Diagnosis of idiopathic Calcinosis cutis was made.

Case 2 : A six years old female child with history of small hard nodule present on the upper part of back with 6 months duration, without history of trauma and systemic disorder. Physical examination was normal. A greyish white skin covered hard mass of 2 x 2 cm in size with chalkly white deposits in cut surface on gross examination. (H & E stain x 10). Showed basophilic small masses in the dermis and subcutaneous tissue with foreign body giant cell reaction and inflammatory cell infiltrate. Histological diagnosis was of tumoural calcinosis.

Case 3 : 60 years old female with history of firm to hard painless mass in pelvic region of 1 year duration without other local and systemic illness. The excised lesion measures 6 x 3 cm with chalky white areas. (H & E stain x 10) revaled large basophilic masses in firbocollagenous tissue with foreign body giant cell reaction. Diagnosis of tumoural calcinosis was made.

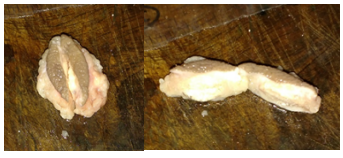
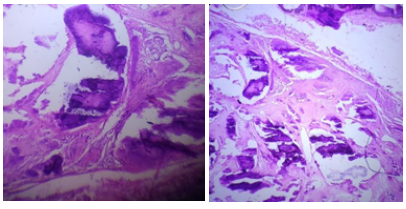
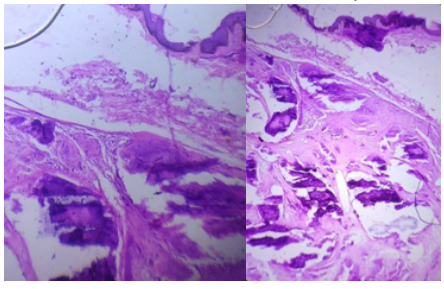


Fig. 1 :
a) excised tissue of potato size with chalky white areas



b) Microscopic picture showing homogenous large basophilic deposites in dermis with foreign body giant cell reaction.

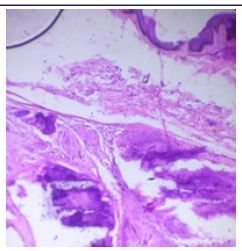
a)
Fig. 2
a) Skin covered mass of 2 x 2 cm in size with chalky white areas



b) Basophilic small mass in the dermis and subcutaneous tissue with inflammatory cell infiltrate

a)

Fig.3 :
a) Excised skin covered tissue with chalky white area



b) Microscopic picture revealed homogenous basophilic mass with foreign body giant cell reaction.

DISCUSSION

Calcinosis cutis is a term to describe a group of disorders with aberrant calcium deposits in the skin. Various types of Calcinosis cutis described previously (1-3). It is very important to diagnose exact type of calcinosis so that treatment can be accurately randored for effective management. In the above mentioned cases all the important investigations like serum calcium, phosphorus and serum alkaline phosphatese were within normal limit and there were no history of trauma/ injury/ constitutional symptoms. However, it was diagnosed as idiopathic Calcinosis cutis where etiology is not known and also its pathogenesis is not clearly understand. In all the cases of Calcinosis cutis insoluble components of calcium(Hydroxyapatite crystals or amorphous calcium phosphate) are deposited within the skin due to local or systemic factors (4). Calcified material form palpable nodules sometimes may induiemmite atrophy when deeper tissue are involved(5). The calcified material is basophilic but sometimes eosinophilic in H & E stains(6). Itrogenic and dystrophic calcinosis are those types which are associated with medical procedures.(7). Few rare types have been variably classified as dystrophic or idiopathic these include Calcinosis cutis circumscripta, Calcinosis cutis universalis, tumoural calcinosis(8). Calcinosis cutis with Raynaud's phenomina, oesophageal dysmotality, sclerodectily and telangiectasia is referred to as CREST syndrome (9-11). The calcium deposits are mostly PAS positive(12).

CONCLUSION

In our cases clinical and histological features were compatible with idiopathic Calcinosis cutis. We report series of rare cases of different age, sex and sites.

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