

CASE REPORT

CALCINOSIS CUTIS: A RARE CASE REPORT

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ABSTRACT: Calcinosis cutis is a condition of accumulation of calcium salts within the dermis. We are presenting a case of calcinosis cutis occurring in healthy individuals, with normal serum calcium and phosphorus levels.

KEYWORDS: Calcinosis cutis, Calcium in dermis, Idiopathic.

INTRODUCTION: Calcinosis cutis is characterized by deposition of calcium in the skin. Calcinosis cutis is of four types: dystrophic, idiopathic, metastatic and iatrogenic. Dystrophic calcinosis is calcification associated with infection, inflammatory processes, cutaneous neoplasm or connective tissue diseases. Idiopathic calcinosis cutis is cutaneous calcification of unknown cause with normal serum calcium. Sub epidermal calcified nodule and tumoral calcinosis are idiopathic forms of calcification. Metastatic calcification results from elevated serum levels of calcium or phosphorus. Iatrogenic and traumatic calcinosis are those types which are associated with medical procedures.

CASE REPORT: A 55yr old female patient has come with a complaint of swelling over lateral aspect of thigh right side since 8 months, gradually progressive in nature, no history of pain, no history of trauma in the past. On examination an irregular swelling of size 7×4 noted over right anterior superior iliac spine which is non-tender, hard and freely mobile. A provisional diagnosis of calcinosis cutis was made and the lesion was excised and sent for biopsy which on HPE showed large irregular deposits of calcium in a dense collagenous stroma identified by dense uniform basophilia in dermis.

DISCUSSION: Calcinosis cutis is a term used to describe a group of disorders in which calcium deposits form in the skin. Virchow initially described calcinosis cutis in 1855. Calcinosis cutis is classified into 4 major types according to aetiology: dystrophic, metastatic, iatrogenic, and idiopathic. A few rare types have been variably classified as dystrophic or idiopathic. These include calcinosis cutis circumscripta, calcinosis cutis universalis, tumoral calcinosis, and transplant-associated calcinosis cutis.¹ In all cases of calcinosis cutis; insoluble compounds of calcium are deposited within the skin due to local and or systemic factors. These calcium salts consist primarily of hydroxyapatite crystals or amorphous calcium phosphate. The pathogenesis of calcinosis cutis is not completely understood and a variety of factors allow for different clinical scenarios to occur.

Most lesions of calcinosis cutis develop gradually and are asymptomatic. However, the history and evolution of the lesions depend on the aetiology of the calcification. Patients with dystrophic calcification may provide a history of an underlying disease, a pre-existing dermal

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nodule (which represents a tumor), or an inciting traumatic event.^{2,3} Patients with metastatic calcification most frequently have a history of chronic renal failure. Cases of idiopathic calcinosis cutis usually are not associated with previous trauma or disease. Those who develop iatrogenic calcinosis cutis generally have a history of recent hospitalization. The clinical presentation of calcinosis cutis can vary according to the diagnosis and underlying process.

Tests of serum calcium, inorganic phosphate, alkaline phosphatase, and albumin levels may be helpful. Radiographic examination may demonstrate the extent of tissue calcification. Bone scintigraphy with radiolabeled phosphate compounds (technetium Tc 99m methylene diphosphonate [MDP]) is useful in evaluating nonvisceral soft tissue calcification; this test is more sensitive than plain radiography.^{4,5} CT allows for the identification of visceral and non-visceral calcification. CT is infrequently used in evaluating calcinosis cutis and primarily used in assessing tumoral calcinosis. MRI is of limited utility in evaluating calcified structures, but calcific deposits have characteristic patterns. The granulomatous foreign body reaction in tumoral calcinosis is evident.

On biopsy, granules and deposits of calcium are seen in the dermis, with or without a surrounding foreign-body giant cell reaction. Alternatively, massive calcium deposits may be located in the subcutaneous tissue. In areas of necrosis, calcium deposition is frequently found within the walls of small and medium-sized blood vessels. Calcium deposition may be confirmed on Von Kossa and alizarin red stains.

Medical therapy of calcinosis cutis is limited and of variable benefit. When identified, the underlying problem should be corrected. Indications for surgical removal includes pain, recurrent infection, ulceration, and functional impairment. Because surgical trauma may stimulate calcification, initially treat a test site before pursuing a large excision. Recurrence is common after excision.

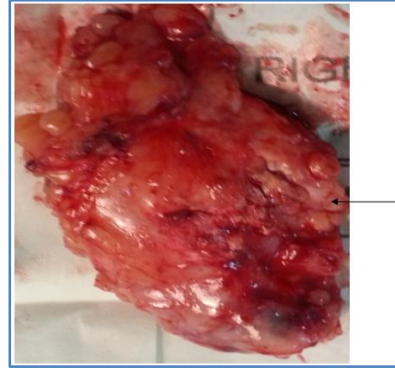
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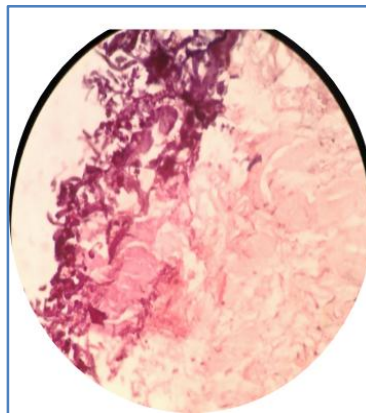
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Pre-operative picture



Excised specimen showing calcification



Histopathological picture showing calcification

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