

## UNIQUE CASE OF DYSTROPHIC TYPE CALCINOSIS CUTIS (SECONDARY TO TRAUMA)

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### ABSTRACT

Calcinosis cutis is the collection of disorders in which there is abnormal deposition of calcium in the skin. Etiologically there are three types including dystrophic, metastatic and iatrogenic. In these, the basic pathology is deposition of calcium compounds in the skin due to various systemic and local factors. Mostly it is asymptomatic but sometimes it can lead to carpal tunnel syndrome, pressure effects and vascular calcification with resultant ischemia and necrosis of distal organs. The most common type is dystrophic which is basically a response to injury, infection, inflammation, venous stasis and connective tissue disorders. Serum calcium and phosphate levels are normal in such cases. Calcium deposition occurs in the skin after months and years after injury. We report a 35 years old female with dystrophic calcification of hands secondary to trauma.

**Key Words:** Calcinosis cutis, Dystrophic calcification

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### CASE REPORT

A 35 years old female housewife from Buner admitted in our unit on 15-9-2015 and discharged on 19-9-2015. She recalls a fall on out stretched hand while climbing a hilly slope. Initially she sustained superficial injury to the back of the ear (erosions) with minor ooze and few abrasions on the fingers. She sought treatment from local doctor and improved. During ensuing weeks to months she noticed increased sweating on left side of the face, scalp and arm and particular sensitivity to cold weather (pins & needles to sharp stabbing pains on exposure to cold air). Over next few months her condition gradually improved. The finger abrasions also healed with topical antibiotic application. Six months after the fall the patient noticed erythema developing in the thumb, index, middle, and little fingers of left hand sparing the ring finger. No swelling, pain, joint stiffness, or any associated constitutional symptoms were present.

Following weeks to months she noticed small nodular asymptomatic thickenings/deposits starting from the little finger and soon involving the rest of the fingers of the left hand. The fingers started to look deformed and she would only experience pain when she would press them. Out of curiosity she used to prick the nodules with a needle: yellow-white crystalline material exuded on pricking. Nodules would soon reform. Initially there was no restriction of movements but as the

deposits grew larger and numerous, mobility restriction occurred. On dermatological and systemic examination the patient was healthy looking young female with palpable, yellowish white nodules in pulp of left thumb, index and middle finger and entire length of little finger, no joint swelling, tenderness, crepitus and stiffness, however reduced joint mobility due to bulbous nature of the lesions. All other joints were normal on examination. Rest of systemic examination was normal. Blood investigations including CBC, ESR, LFTS, RFTS, S. Electrolytes, TFTS, PTH level, ANA and CPK were all normal. S. calcium was 2.4 mmol/L, phosphate 3.8mmol/L and vit D level was 40 ng/ml. On hands X rays, radio-opaque opacities (calcium deposits) were present in the pulp spaces of left thumb, index, middle and little finger.

### DISCUSSION

Calcinosis cutis is a group of disorders in which there is abnormal calcium accumulation in the skin. Etiologically it is divided in to three types in which the most common form is dystrophic one<sup>1-4</sup>. Dystrophic calcification occurs whenever there is damage to the tissues with the resultant abnormal accumulation in the skin. connective tissue disorders, acne, infection, inflammations, chronic venous stasis, cutaneous neoplasm and trauma are the main etiologies of this condition<sup>2-4</sup>. This can be localized (calcinosis circumscripta) or generalized (calcinosis universalis). In spite of calcification serum calcium and phosphate levels are normal. Radiological

**Figure 1: Calcinosis cutis involving hands**

investigations like X rays, CT scan and bone scintigraphy are used in order to define the extent of tissues involvement. Biopsy of the cutaneous lesion is gold standard for diagnosis<sup>3</sup>. On histology granules and deposits of calcium are seen in the dermis often with a surrounding foreign-body giant cell reaction. Calcium deposits may also be found in subcutaneous tissue<sup>4-8</sup>. Medical therapy has very limited role in the treatment of calcinosis cutis but drugs like corticosteroids, probenecid, colchicine, sodium etidronate, diphosphonates, diltiazem, and magnesium and aluminium antacids can be used in order to relieve the symptoms<sup>9,10</sup>. Indications of surgical treatment are: 1) painful lesions 2) ulceration and recurrent infections and 3) loss of function. surgical treatment is double sword; on one side it treats the condition but on the other side it gives further trauma to the tissues which leads to progression of disease so it is wise to excise a small site before going ahead with a large excision. Recurrence is common after excision. Depending on the underlying cause, a multidisciplinary team of physicians including nephrologist, rheumatologist, and haematologist may be needed to manage the condition<sup>3</sup>.

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