

Calcinosis Cutis Circumscripta Of Knee– A Rare Presentation

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What to Learn from this Article?

Medical and surgical treatments are the options to cure calcinosis cutis. Indications for removal include pain, infection, ulceration and functional impairment. Medical therapy though not very effective, surgical excision is the mainstay of the treatment.

Abstract

Introduction: Calcinosis circumscripta is a form of ectopic mineralization characterized by single or multiple cutaneous nodules containing calcium salts. Calcinosis cutis circumscripta is a very rare form of idiopathic calcinosis cutis arising in the second half of life. It typically involves the extremities and is associated with prior trauma and scleroderma. We dealt with a very rare form of calcinosis cutis circumscripta in a healthy patient, for whom surgical excision revealed to be an effective and successful treatment.

Case presentation: 33-year-old male presented to OPD with swelling over the right knee joint. Clinically the swelling was adhered to skin, bony hard, tender, and movements of right knee were painful. The patient was investigated and once fit was taken for surgery. The patient was treated surgically by excising the swelling.

Conclusion: Surgical excision is the mainstay of the treatment. Indications for surgical removal include pain, recurrent infection, ulceration, and functional impairment. Following excision, however, recurrence is common.

Keywords: Calcinosis cutis circumscripta, knee joint, rare

Introduction

Calcinosis cutis is an uncommon disorder caused by an abnormal deposit of calcium phosphate in the skin in various parts of the body [1]. Four main types of calcinosis cutis have been recognized according to etiology: dystrophic, metastatic, iatrogenic and idiopathic [2]. Very few cases of idiopathic calcinosis cutis have been reported in the literature [3].

Case Presentation

A 33-year-old male presented to OPD with swelling over the right knee joint [Fig. 1]. Clinically the swelling was adhered to skin, presence of hair follicles, bony hard, tender, and movements of right knee were painful. X-ray right knee joint showed a calcified mass over the anterior aspect of the knee joint [Fig. 2]. The patient was investigated and once fit was taken for surgery. The patient was treated surgically by excising the swelling. Complete excision [Fig. 3] was performed and the swelling was sent for histopathological examination. The

report showed it was calcinosis cutis circumscripta [Fig. 4]. The patient was given short hinge knee brace for 2 weeks till the sutures were removed. After 2 weeks, he was allowed full weight bearing on the affected limb. At 2 yrs follow-up, patient has functional range of movement and there is no recurrence of the swelling.

Discussion

Calcinosis cutis is a term used to describe a group of disorders in which aberrant calcium deposits form in the skin. Virchow initially described calcinosis cutis in 1855 [4].

This syndrome has been reported in both humans and animals. In humans, calcinosis circumscripta is described clinically as firm, white dermal papules, plaques, or nodules that can occur in the skin and subcutaneous tissues in hands and knees and may be associated with pressure points, tendon sheaths, and terminal phalanges.

Author's Photo Gallery



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Figure 1: clinical photograph

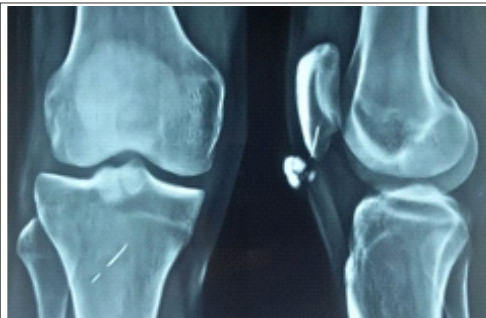


Figure 2: Pre-op Xray

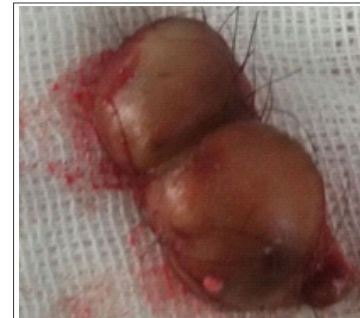


Figure 3: Excised swelling

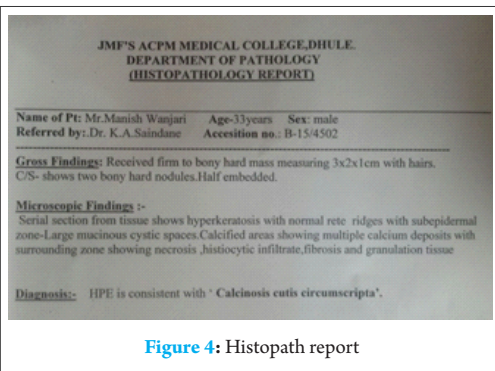


Figure 4: Histopath report

Calcinosis circumscripta in humans is more common in females than males and may be associated with various connective tissue disorders such as Reynaud's phenomenon, scleroderma, systemic lupus erythromatosus,

calcium deposits in areas of necrosis [6].

Medical therapy of calcinosis cutis is of limited and variable benefit. If secondary to any underlying disease the cause should be treated. Intralesional corticosteroids may be beneficial. However, patients with renal insufficiency may land up in magnesium or aluminum toxicity [7]. There have been variable beneficial effects with the use of the calcium-channel blocker diltiazem over a period of at least 5 years. The therapeutic effect of this is believed to be the antagonism of the calcium-sodium ion pump [4].

Complications of calcinosis cutis include pain, cosmetic disfigurement, ulceration, and mechanical compromise. The plaques or nodules may impinge on adjacent structures such as joints, resulting in restricted mobility, and nerves, resulting in pain or paresthesia. Destruction of synovial tissue also may result. Vascular occlusion may result in gangrene. Ulceration may be complicated by bacterial infection.

Conclusion

Surgical excision is the mainstay of the treatment. Indications for surgical removal include pain, recurrent infection, ulceration, and functional impairment. Following excision, however, recurrence is common.

Clinical Message

Medical and surgical treatments are the options to cure calcinosis cutis. Medical therapy is not very effective. Surgical excision is the mainstay of the treatment.

telangiectasia, CREST syndrome, and dermatomyositis. In addition, trauma, insect bites, metabolic calcification (e.g. renal failure), and inherited disorders (e.g., pseudoxanthoma elasticum, Werner's syndrome, and Ehlers-Danlos syndrome) may cause calcinosis circumscripta [5]. Investigations should be done to exclude any underlying pathology. Histological examination of the lesions reveals calcium deposits in the dermis on biopsy, which may or may not be surrounded by foreign-body giant cell reaction. Alternatively, massive calcium deposits may be located in the subcutaneous tissue. Small and medium-sized blood vessels may contain

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