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IDIOPATHIC CALCINOSIS CUTIS OF LEFT LOWER BACK

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ABSTRACT

Calcinosis cutis is an uncommon disorder caused by an abnormal deposit of calcium phosphate in the skin in various parts of the body. Five types of calcinosis cutis have been recognized according to Etiology dystrophic calcification, metastatic calcification, iatrogenic calcification, idiopathic calcification and calciphylaxis. It is characterized by the deposition of insoluble calcium salts in the skin, subcutaneous tissue, superficial muscles, and tendon sheaths. This case report describes a 54-year-old female patient with numerous dark blue stained amorphous deposits of calcium within dermis and surrounding dermis shows fibroplasia and sparse mixed inflammatory infiltrate. With chief complaints of lesions over the left lower back which have been itching for the last 10 years. We intended to provide the best possible supportive care and treatment to expect good outcomes.

KEYWORDS: Calcinosis cutis, Calcium phosphate, Calciphylaxis, Subcutaneous tissue.

INTRODUCTION

Calcinosis cutis is a systemic deposition of insoluble calcium throughout skin and soft tissue. Deposition of calcium phosphate crystals accumulates within soft tissue creating subcutaneous nodules. The underlying aetiology, illness correlations, and serum calcium or phosphate levels of these classifications vary. Although the exact cause of calcinosis cutis remains unknown, multiple theories have been proposed by scholars to explain the disease's onset and progression.[1] Most nodules (65–83%) are found in the hands. In addition to location, the nodules can also vary in size, ranging from millimeters to centimeters. Calcinosis is categorized into five subtypes: idiopathic, iatrogenic, calciphylaxis, metastatic, and most common form, dystrophic. Dystrophic forms are most often associated with renal failure and autoimmune disorders, particularly systemic sclerosis.[2] Although calcinosis cutis is frequently identified clinically through physical examination and diagnosed clinically, imaging or laboratory tests, such as measuring serum calcium or phosphorus levels, should always be used to confirm the diagnosis. Various techniques may be employed to verify the diagnosis, contingent on the nodule's location. The most sensitive imaging method is ultrasound; however, MRI and CT offer greater quality images. Although it's a benign condition, calcium deposits can build up and frequently cause discomfort, decreased mobility, ulcerations, infections, and deformity.[3] We present a 54-year-old female who developed severe calcinosis cutis refractory to numerous treatments and ultimately required surgical management and pharmacological management to provide the good therapeutic outcome and recovery.

CASE PRESENTATION

A female patient of age 54 years was brought to surgical OP Department with chief complaints of lesions over left lower back for 10 years which was insidious on onset and gradually progressive in size and number with itching over lesions for 10 yrs. On examination it was found that multiple swellings of various sizes ranging from size 1X1 cm to 2X3 cm present over left lower back which are round, over skin some swelling have pus points which are white in colour. So Provisional diagnosis was found to be calcinosis cutis or mycetoma. Physician ordered investigations like Complete Blood Picture, Random blood sugar, Serum Creatinine, ECG, 2D echo and Biopsy. Patient was prepped for the biopsy procedure after attaining the written informed consent from the patient. Aseptic precautions were followed, and local anaesthesia 4mm punch biopsy taken from the nodule of size 2X2 cm present over left waist area and tissue was cut from base, haemostasis secured with lignocaine and adrenaline. Dressing done with soframycin cream. The report of biopsy shows numerous dark blue stained amorphous deposits of calcium within

the dermis. The deposits are seen as granular and amorphous chunks and are surrounded by a palisade of histiocytes some of which have phagocytosed the calcinus matter. Surrounding dermis shows fibroplasia and spare mixed inflammatory infiltrate. And skin scrapings for fungal culture were sent which shows presence of aspergillus niger species were isolated. So based on the biopsy and histopathology reports physician decided for excision of the calcinosis cutis over left hip. Also advised pre-op orders includes NBM from before night, inj. TT 0.5cc IM, inj. Xylocaine 0.1 cc, Tab. Alprax 0.5 mg, followed with consent for surgery and parts preparation.

Surgical Procedure

Aseptic precautions were done during surgery, patient was in right lateral position, skin was locally scrubbed and draped. Incision was given around swelling and was deepened to excise calcinosis cutis Haemostasias was achieved. The subcutaneous area was closed with vicryl 2.0 sutures. Wound wash given with Betadine and Hydrogen peroxide, Normal saline. Skin closed with ethilon 2.0; sterile dressing done. Post operative procedures uneventful. Patient shifted to post operative ward. Post op orders and treatment includes Normal diet, Inj. Monocef 1gm IV BD, Inj. Pantop 40mg IV BD, Inj. Dolokind aqua 2cc IV BD, Tab. Chymoral forte TID, Tab. Limcee OD, Tab. V.Total OD. On examination after surgery, it was noted that wound is healing and there is no presence of discharge from wound. Patient condition is stable and discharged. She was very satisfied as the pain subsided.

DISCUSSION

To date, there is no standardized approach to treating calcinosis cutis. Pharmacologic management ranges from antibiotics, immunosuppressants, bisphosphonates, and colchicine to intravenous immunoglobulins and other biologics. Nonpharmacologic treatment options may include shock therapy, CO2 lasers, or surgical excision. Compared with pharmacologic modalities surgical excision has shown the greatest efficacy with good improvement. The first-line treatment for idiopathic calcinosis is surgical excision.[4] Occasionally, it can be accompanied by itching, or the nodule might rupture and release chalky material. Nodule infection is not prevalent.[5] There are some similarities between the clinical presentations of tophaceous gout and calcinosis cutis. For instance, both conditions can manifest as hard, ulcerated lesions with chalky calcium extrusion. Hematoxylin and eosin stain, on the other hand, appears to show a calcinosis cutis lesion as basophilic. This is usually verified by von Kossa or alizarin red stains, which highlight calcium particularly.[6] As shown, discomfort, recurring infection, ulceration, functional impairment, and localized lesions are indications for surgical excision. When calcium salts are deposited without underlying tissue injury or aberrant calcium or phosphorus levels, it is known as idiopathic calcification. Scrotal calcinosis, subepidermal calcinosis, and familial tumoral calcinosis are the three forms. Adolescent individuals in good health may have familial tumoral calcinosis. Phosphate uptake in the kidney's proximal tubule is elevated. Calcification can occur subcutaneously or intramuscularly around key joints. Winder nodular calcinosis, also known as subepidermal calcified nodules, can manifest in infants from birth.[7]

CONCLUSION

Improving these patients' quality of life requires an early diagnosis and effective treatment of this incapacitating condition. It appears as a series of successive, differently sized and numbered nodules. Areas of calcification are shown by a histological assessment. Either idiopathic or dystrophic calcification of cysts is the cause. The preferred course of action is excision.

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