the ventral, providing better protection from the sun.[5] Genetic and hormonal influences have also been suggested.[5] The PDL and generalized cutaneous hyperemia in our patient could possibly be due to the progesterone therapy received during early pregnancy. We could not come across a description of type B pigmentary demarcation line in the Indian literature.

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# Tumoral calcinosis

Sir,

Calcinosis cutis is a group of disorders characterized by deposition of calcium salts in the skin. There are four forms of calcinosis cutis: metastatic, dystrophic, idiopathic, and intraepidermal calcified nodule.[1] Tumoral calcinosis (TC) is regarded as a special form of idiopathic calcinosis cutis. It is characterized by large periarticular deposits of calcium resembling neoplasms and is found commonly around hip, shoulder, and elbow joints. TC usually presents with multiple lesions and affects adolescents and young adults. Men are affected more commonly than women. About two-thirds of the affected individuals are non-whites and siblings are affected in half of the cases [2] Very few cases have been reported in the Indian literature.[3],[4],[5] We report a middle-aged woman with a solitary lesion of TC for the rarity of this condition.

A 50-year-old housewife presented with a painless, bony hard mass in the gluteal region around the right hip joint. It started as a small mobile nodule and gradually increased in size to become a large mass of about 8 cm within a period of one and half years. The central part of the overlying skin of the lesion eroded, with discharge of a chalky white material. There was no history of a similar condition among the relatives and the patient could not recall episodes of trauma or injection over the affected area, excessive milk or antacid intake, or any local or systemic illness prior to the development of the lesion. Physical examination revealed a firm, non-tender, irregular nodule, about 8 cm in diameter, over the lateral aspect of the right gluteal region. The central protruded part of the lesion was whitish in color. The mobility of the right hip joint was unaffected. The systemic examination was normal.

The patient's serum calcium, phosphate, uric acid, alkaline phosphatase, creatinine and blood urea nitrogen levels were within normal limits. Complete hemogram showed no abnormality. Antinuclear antibody and rheumatoid factor were negative. Skiagram of the right hip joint showed irregularly round to oval, radio-dense, juxta-articular calcification. The adjacent joint and the contiguous bones were unaffected. Fine needle aspiration cytology showed amorphous granular material with occasional histiocytes. The excised mass was whitish in color with an incomplete fibrous covering. Milky fluid came out during sectioning. The cut surface showed collections of gritty chalky white material. Histopathological preparation showed deeply basophilic amorphous granular material of varying size consistent with calcium deposits surrounded by dense fibrous tissue. Histiocytes were seen occasionally. The lesion did not recur during a one year follow-up after excision.

TC commonly affects the periarticular regions of the hip, shoulder, and elbow; it may rarely affect distal locations like the hands and feet.[3]-[7] Massive

calcification may sometimes cause gross deformity and disabilities requiring extensive surgical intervention.[7] Discharge of calcium salts from the lesions may result from ulceration or transepidermal elimination,[8] as in the present case. TC mostly affects young, non-white adults males, although occurrence in infants and the very old individuals has been reported rarely. Diagnosis of TC is made by its typical clinical findings and can be confirmed by radiology, fine needle aspiration cytology (which reveals amorphous chalky material),[9] and histopathology (which shows calcium deposition with a surrounding foreign-body reaction).[1]

The pathogenesis of TC obscure in most cases. Familial affection and association with diseases like chronic renal failure, primary hyperparathyroidism, hypervitaminosis D, milk-alkali syndrome, and massive osteolysis are reported in many cases.[6] These cases point to the role of an underlying disorder of phosphate and calcium homeostasis. Many cases, like the present one, however, are not associated with any detectable biochemical abnormality.[2],[4],[6] Thus, TC, is a morphologic diagnosis encompassing a heterogeneous group of disorders sharing the common feature of a tumor-like subcutaneous deposit of calcium salts.

A pathogenesis-based classification of TC has been formulated,[6] subdividing this entity into three types: (1) primary normo-phosphatemic tumoral calcinosis (NPTC), (2) primary hyperphosphatemic tumoral calcinosis, and (3) secondary tumoral calcinosis, characterized by the presence of underlying disorders. The present case fits into the primary normo-phosphatemic subtype which is characterized by a lack of familial occurrence, high prevalence in tropical or subtropical regions of the world, solitary calcification, frequent history of antecedent trauma, no evidence of underlying disorders, and rare recurrence after complete surgical removal. These features suggest a pathogenetic role for a localized soft tissue alteration, since the patients exhibit solitary calcification and no abnormalities in mineral homeostasis. Specific etiologic mechanisms may include an aberrant tissue response to local trauma.[6] Complete surgical removal is the treatment of choice. When this cannot be undertaken, the use of partial surgical resection and concomitant dietary therapy with oral aluminum hydroxide and low calcium, low phosphate diet may be effective. The prognosis of primary NPTC is better than that of the other subtypes. In classical NPTC, the onset is usually before the second decade. However, in the present case the onset was in the fifth decade, and there was no antecedent history of trauma.

The present case highlights the fact that tumoral calcinosis, though uncommon, should come in the differential diagnosis of a subcutaneous hard lump in the vicinity of a joint. Family history, history of trauma or injection, tropical or subtropical residence, number and location of calcium deposits, serum calcium and phosphate level, and autoimmune screening are to be evaluated for the appropriate classification of a case. This sub-typing is closely related to the prognosis and to the response to treatment.

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