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Case Report

Unusual case of tumoral calcinosis mimicking infective etiology

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ABSTRACT:
45 year old patient presented to our institute with the history of pain in the right lower limb, swelling in the lateral aspect of the right thigh region and difficulty in getting up from a squatting position for last 4 months .He is also a known smoker for the past 15 years. No other co-morbidities are seen associated with this patient.

Keywords: Tumoral calcinosis, Tuberculosis, Milk-alkali syndrome, Dermatomyositis

Clinical History

45 year old patient presented to our institute with the history of pain in the right lower limb, swelling in the lateral aspect of the right thigh region and difficulty in getting up from a squatting position for last 4 months .He is also a known smoker for the past 15 years. No other co-morbidities are seen associated with this patient.

Biochemical and Imaging features

The blood biochemistry and hematological parameters were normal except for elevated phosphate levels (5.9mg /dl) and an elevated ESR (60). TB PCR was negative. His HCV/ HIV and HBsAg status were also found to be negative.

The initial MRI was done showed a large heterogeneous intensity collection and edema around the right hip joint with the possibility of an infective etiology (cold abscess). Patient was started on anti-tubercular regimen empirically and drainage was advised. Following which incision and drainage was done from the lateral aspect of the right thigh, and approximately 100ml of white cheesy material was drained and sent for culture sensitivity. Culture sensitivity and TB PCR sent from the sample were found to be negative.

Following this a repeat MRI was done and showed a large heterogeneous intensity mass measuring approximately 17.0cms (cc) x 13.0cms (tr) x 15cms (ap) ,appearing hypo-intense on both T1w and T2w images in the periarticular region of right hip. Few hyperintense cystic foci on T2W images are also noted within the lesion. The lesion is seen to cause infiltration of the gluteal and quadratus femoris muscles on the right side.

CT sections were taken which showed extensive chunky calcifications within the heterogenous intensity mass. So the possibility of tumoral calcinosis was considered and advised histopathological examination. An excision biopsy was done and confirmed diagnosing these lesions as having tumoral calcinosis.

Fig 1: Radiograph of the hip (AP) shows extensive soft tissue calcifications around the right hip. No underlying bone destruction or cortical erosions of the right hip is noted

Fig 2: CT axial image shows extensive calcifications in the periarticular region of the right hip

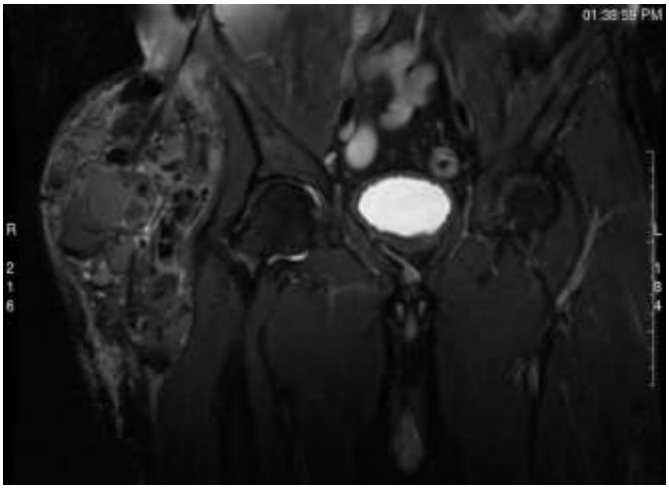

Fig 3: Coronal T2 Fat saturated image shows heterogenous intensity mass in the anterolateral aspect of the right hip

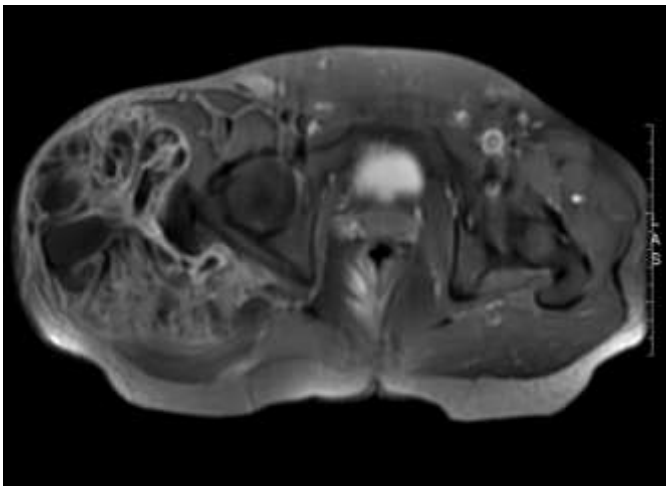

Fig 4 a

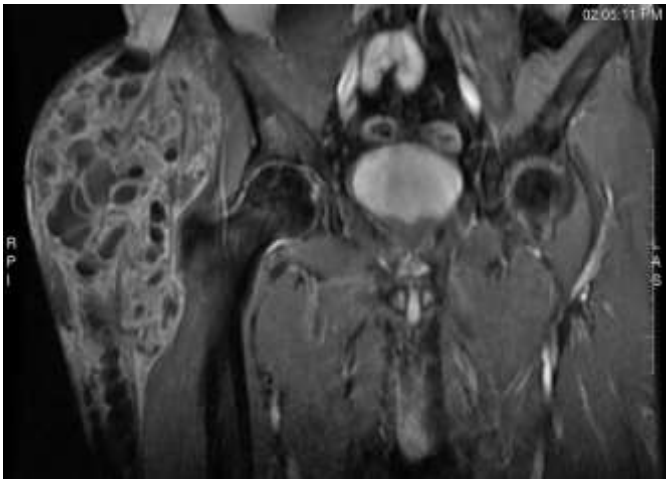

Fig 4b

Fig 4 (a&b): Axial and coronal post contrast T1 images show heterogenous peripheral post contrast enhancement of the soft tissue mass

Discussion:

Tumoral calcinosis is manifested by painless, and heterogenous masses . The etiology is classified into primary and secondary causes. In primary type, the cause is idiopathic. The disease is secondary to scleroderma, renalosteodystrophy, dermatomyositis, heterotopic ossification and milk-alkali syndrome(1,2).

These lesions were characterized by lobular, densely calcified masses confined to the soft tissue, generally at the extensor surface of the joint in the anatomic distribution of a bursa (3,4). The most common locations in the descending order are the hip, elbow, shoulder, foot, and wrist.

Clinically they are usually painless, but sometime presents with pain and tenderness. Involvement of large joints is very typical, although the knee is rarely involved. The underlying bone is normal. At microscopic examinations ,these lesions show epithelioid elements and multinucleated giant cells surrounding calcium granules (5).

Tumoral calcinosis has variable appearance on radiographs: amorphous, cystic, and multilobulated calcification located in a periarticular distribution. The cystic appearance with fluid-fluid levels is caused by calcium layering and commonly termed the sedimentation sign. Erosion or osseous destruction by adjacent soft-tissue masses is usually absent, another distinguishing finding of tumoral calcinosis(6,7).

MR imaging with T2-weighted sequences generally shows heterogenously high signal intensity even though there is a large amount of calcification. Two patterns are generally observed: (a) a diffusely, hypointense signal pattern or (b) a bright, nodular pattern with alternating areas of high signal intensity and signal void. T1-weighted sequences usually show inhomogeneous lesions with predominantly hypointense in appearance . Recently few cases with cerebral and peripheral aneurysms have also been identified in patients with tumoral calcinosis(8).

Conclusion:-

Tumoral calcinosis is a frequently misdiagnosed disorder.Radiologist should be aware of the concept regarding this entity before diagnosing these lesions as having infective etiology .Timely diagnosis will fasten the management and prevent further complications.

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