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Calcific myonecrosis: A late complication of trauma-A rare case report

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ABSTRACT

Introduction: Calcific myonecrosis is a rare post-traumatic complication which is characterized by replacement of the muscles of one or more compartments with central liquefaction necrosis along with a peripheral remote calcification. **Case History:** We report a case of calcific myonecrosis in a 70 year old male patient manifesting 20 years after trauma. The patient presented with slow growing, painless mass along the lateral aspect of left leg. Radiological examination and excisional biopsy confirmed the diagnosis. **Discussion:** Calcific myonecrosis is a rare and late complication of compartment syndrome or neurovascular injury and it affects predominantly the anterior compartment of leg. It typically manifests as a fusiform area of peripheral calcification and central liquefaction necrosis. **Conclusion**: Calcific myonecrosis is a rare post-traumatic complication. Accurate diagnosis is necessary to rule out malignant conditions which mimic similar clinical findings.

Key words: Calcific myonecrosis, Post-traumatic, Lower leg.

Introduction

Calcific myonecrosis is a rare pathological condition which reveals necrosis of a muscle in a limb compartment followed by peripheral calcification. The condition follows neurovascular injury[1,2].We present a rare case of calcific myonecrosis at lateral aspect of left leg which followed 20 years after local trauma

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Case History

70 years old male patient presented to surgery out patient department with slow growing mass on lateral aspect of left leg since 16 years. Patient gave history of local trauma 20 years back. Since the accident he noticed some weakness at the local site and 4 years later he noted a slow growing mass at the site of trauma. Clinical examination revealed 8x8cm firm to hard, bulging, non-tender mass in the lateral aspect of leg. Radiological examination was advised to see the connection with underlying bone. X-ray of Rt.Tibia and fibula (AP and and Lateral view)revealed a soft tissue swelling along the lateral aspect of fibula with calcification within it. The mass had no connection with the shaft of fibula. Vessel calcification was also noted along the lateral aspect of fibula. (Figure 1). Surgical excision of the mass was done and specimen was sent for histopathological examination. Pathological Examination:- A well circumscribed mass measuring 8x8x4 cm, covered with skin measuring 8x8cm, hard in consistency was received (Figure 2). Cut section showed peripheral rim of calcification with extensive areas of calcification and haemorrhage (Figure 3).

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Fig 1: X-ray of Rt.Tibia and fibula(AP and and Lateral view)showing a soft tissue swelling along the lateral aspect of fibula with calcification within it.

Fig 2: Photograph of gross specimen received for histopathological examination.

Fig 3: Photograph of cut section of the specimen showing thin rim of calcification with central necrotic material.

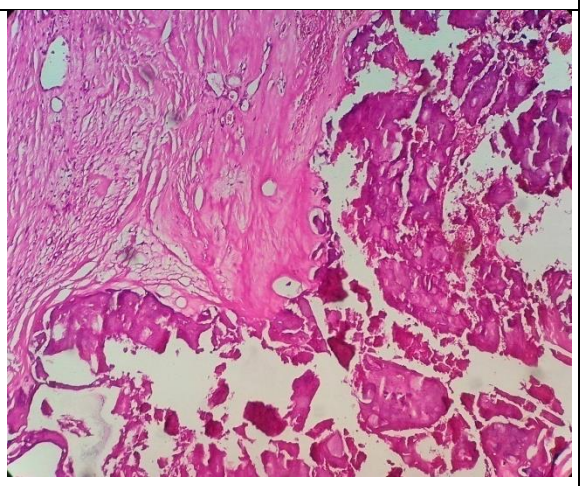

Fig 4: Photomicrograph showing area of calcification along with necrotic material. (H&E, 100x)

Microscopic examination of the excised mass revealed abundant cellular eosinophilic material admixed with necrosed muscle, fibrous tissue and peripheral calcification (Figure 4).

Discussion

Calcific myonecrosis is thought to be a rare and delayed complication of neurovascular injury or compartment syndrome. The lesion was first described in 1960 by Gallie and Thompson[1].The most frequent site being the lower limb and anterior compartment of the leg and the rare site being arm[3,4]. In the present case, lesion was on lateral aspect of lower limb. The lesion tends to progress slowly over a period of several years after trauma and presents in a wide range of age from 3rd decade to 7th decade[4,5]. Similar finding was noted in the present case. The clinical presentation is slowly growing mass with occasional tenderness, hence differential diagnosis on clinical examination includes soft tissue sarcoma and myositis ossificans, dermatomyositis, polymyositis, tumoral calcinosis and diabetic myonecrosis[6,7]. In the present case too, patient presented with complaint of slow growing mass. Radiological examination reveals well circumscribed linear mass with peripheral calcification and central liquefaction which can be located within a compartment or a particular muscle[2,8]. Similar radiological finding was noted in the present case. The radiological features help to differentiate the lesion from myositis ossificans which shows central trabeculation[9].Soft tissue sarcoma is more aggressive and reveals calcification throughout the mass. In the present case, patient presented at the age of 70 years with slow growing mass after remote trauma. Histopathological examination of the excised mass revealed abundant cellular eosionophilic material admixed with no viable muscle and fibrous tissue and peripheral calcification [10]. Similar findings were noted in present case. Treatment of choice in symptomatic condition is excision of mass combined with antibiotic therapy to avoid post operative infection [9]. In the present case patient underwent surgical excision of the mass. Post operative period was uneventful. On follow up patient is doing well without any complaints. We conclude that calcific myonecrosis is a rare sequelae that follows trauma or compartment syndrome. Clinical history, radiographical findings, examination of biopsy help in the definitive diagnosis. Accurate diagnosis is necessary to rule out malignant conditions which mimic similar clinical findings.

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