

Myositis Ossificans Traumatica of the Wrist in Elderly: A Description of an Unusual Case

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Abstract

Myositis ossificans commonly involves muscles and subcutaneous tissues in people of younger age group. The myositis ossificans is commonly seen around the muscles of elbow joint but occurs less commonly in muscles around hands and wrist. We report a case of Myositis ossificans involving the wrist in a 65 year old lady.

Keywords: *Myositis Ossificans, Wrist Joint, Myositis in Elderly.*

Introduction

Myositis ossificans commonly involves muscles and subcutaneous tissues in people of younger age group.¹ The disease is usually found in muscles but less commonly changes are seen in subcutaneous tissues, tendons, fascia and periosteum. The myositis ossificans is commonly seen around the muscles of elbow joint but occurs less commonly in muscles around hands and wrist. This is a case report of myositis ossificans in a 65 year old women involving muscle and tendons around wrist joint.

Case Report: A 65 years old lady came to Out-patient department with a history of injury to right wrist 4 year earlier. She had fall of a heavy object over her right wrist sustaining an injury to right wrist. The patient was advised massage from a practitioner for 5–6 weeks, there-after mobilization of wrist was started. She then incidentally noticed lump around her right wrist after 6 months which was of the size of a pea. The swelling gradually increased for next 12 months, also there was wrist joint movement was restricted. Since past 1 year, patient has pain localised to right wrist and has aggravated since past 6 months. On presentation, patient now has restricted right wrist movements. No history of constitutional symptoms. Single spherical swelling of size 3x3cm was present on the dorsum of right wrist along the ulnar border, with smooth surface, ill defined

edges, tender on touch, hard in consistency, attached to the underlying bone was seen. Movements of involved wrist were reduced to 10 degrees of dorsiflexion and palmar flexion. Movements at Distal radio-ulnar joint like supination and pronation were restricted to 0°-30° only. Visual analogue scale was 8/10 and Mayo wrist score was poor (52). Distal vascular status of hand was preserved.

Antero-posterior (AP) and lateral radiographs of the right wrist (As shown in Fig. 1) revealed ossification around dorsal aspect of distal end of ulna in the areas of the extensor tendons. This radiological finding was in favour of traumatic myositis ossificans.

Clinically, the patient had history of trauma followed by massage and radiographically there was ossification around distal ulna. Based on above 2 findings, a provisional diagnosis of myositis ossificans (secondary to trauma) was made. This was confirmed by subsequent Magnetic resource imaging of right wrist joint (Fig. 2) which showed lobulated calcified mass around anterior, posterior and lateral border of distal ulna. The mass was surgically excised (Fig. 3) and histopathological examination confirmed the diagnosis. There was an improvement in the Post-operative Visual analogue scale and Mayo wrist score which was 2/10 and good (84) respectively.



Fig. 1: Antero-posterior and lateral radiographs of the right wrist showing ossification around dorsal aspect of distal end of ulna.

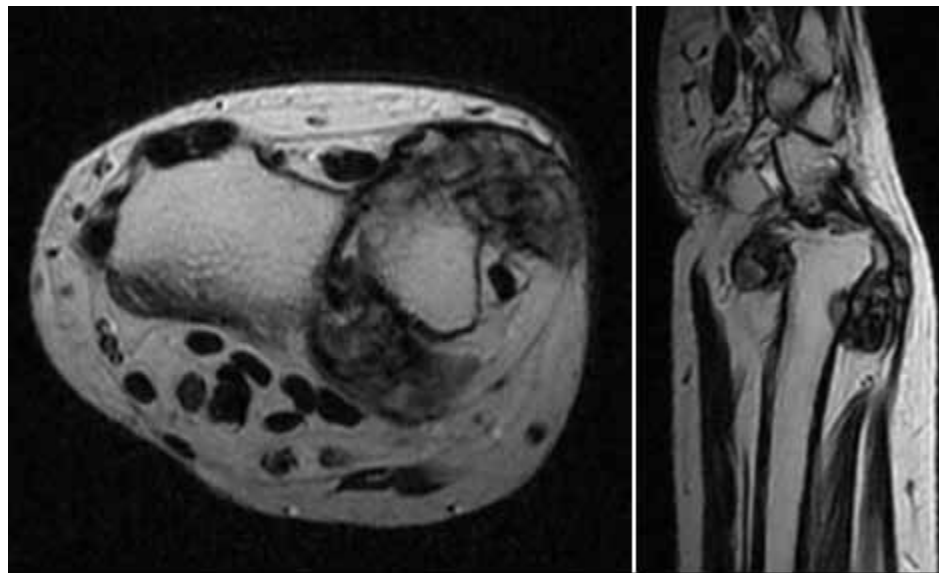


Fig. 2: MRI of right wrist joint showing calcified mass around anterior, posterior and lateral border of distal ulna.



Fig. 3: Intra-operative picture of the mass

Discussion

The term “tendonitis ossificans traumatica”, a broad term for calcification or ossification in or around tendons was coined by Rothberg². The majority cases of myositis ossificans, mentioned in literature are of non-traumatic cause involving in the muscle and subcutaneous tissues of the hand often mimicking as a neoplasm³. In this case, the patient had myositis ossificans which was secondary to trauma and involving extensor tendon sheaths around wrist making it as a rare presentation.

The hypothesis behind ossification can be proliferation of mesodermal tissues as a reaction to traumatic stimulus⁴. Increased vascularity and metabolism with calcium brought to the injured part by the hyperaemia of the injury results in new bone formation. It is difficult to differentiate between calcification and ossification in a tendon radiologically. The histopathological examination is considered to be accurate in these cases.

Foreign-body granuloma, osteoclastoma, atypical fibroxanthoma and nodular fasciitis are some of the differential diagnosis with similar features. Kai Y⁵ et al reported pseudo-malignant myositis ossificans of the hand in 35 years old male without any history of trauma. The histopathological examination revealed central zone of fibroblastic tissue with multinucleated giant cell and intermediate zone of mixture osteoblasts and fibroblasts.

The benign and self-limiting nature of this disease, the treatment of choice can be conservative for a majority cases. However, severe pain with compressive symptoms and loss of function of the joint may require aggressive surgical intervention.⁶

Conclusion

In immediate post traumatic phase, hyperaemia due to massage should be prevented and there is definitive role of cryotherapy² in prevention of post traumatic myositis ossificans.

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