

# GIANT CELL SYNOVIOMA FOLLOWING PHYSICAL TRAUMA

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*Two cases of subcutaneous nodules over the fingers are presented. There was history of predisposing single blunt injury in the first case and repeated subclinical trauma in the second case. Examination revealed non tender, firm, lobulated, subcutaneous nodules over the fingers. FNAC and biopsy of the nodules revealed features of giant cell synovioma. The lesions were excised and the patients were kept under surveillance.*

*Key Words : Giant cell synovioma, Subcutaneous nodules*

## Introduction

Giant cell synovioma (GCS) is a dermal or subcutaneous nodule usually arising on the fingers, but may also appear over the hand, wrist or toes. This benign tumour arises from the tendon sheath and is presumably a reactive process to an unknown aetiology.<sup>1</sup> It doesn't resolve spontaneously but may extend to the skin or into the adjacent joint space.<sup>2</sup> Due to the paucity of such cases in literature, we report two cases of GCS. We also propose physical trauma as one of the aetiological factors precipitating this condition.

## Case Report

### Case 1

A 35-year-old man developed a gradually increasing painless swelling over the right fifth finger following an injury while playing volleyball five years ago. Examination revealed a lobulated, firm, non tender, subcutaneous nodule 3cm x 3cm large over the proximal palmar

aspect of right fifth finger. Movements of the interphalangeal and metacarpophalangeal joints were normal. X-ray of the finger revealed only soft tissue swelling. FNAC of the mass revealed clumps and sheets of spindle cells with occasional scattered multinucleated giant cells, and no atypical or inflammatory cells. Excision biopsy revealed dense fibroblastic stroma studded with multinucleated giant cells and absence of pallsading; confirming the diagnosis of GCS.

### Case 2

A 65-year-old man reported with a painless hard swelling over the right middle finger increasing over 10 years. It appeared gradually after years of driving a two wheeler moped, wherein the end of the clutch grip pressed and rubbed against the finger while driving. Examination revealed a solitary, multilobulated, nontender, hard, subcutaneous nodule 4cm x 4cm large over the proximal palmar aspect of right middle finger. Finger movements were normal. X-ray of the finger revealed no bony defect or calcification. FNAC of the mass showed a few spindle

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cells with scattered multinucleated giant cells. Excision biopsy revealed a lobulated mass with an indistinct capsule. Spindle shaped cells in sheets and nodular aggre-

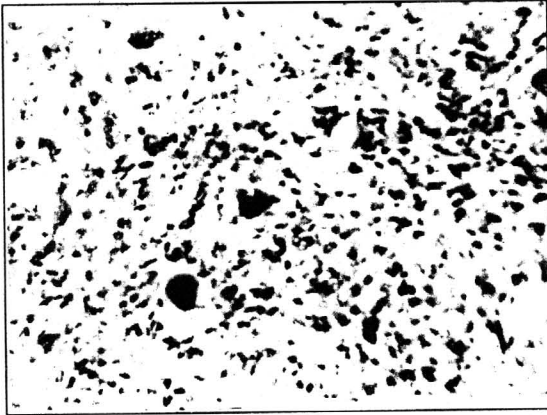


Fig.1. Spindle shaped cells in sheets studded with osteoclast like giant cells (H & E X40).

gates were studded with numerous osteoclast-like giant cells, confirming the diagnosis of GCS (Fig.1)

### Discussion

Giant cell synovioma usually appears in midlife and is usually asymptomatic, but occasionally the affected digit could be painful or stiff. Though osteoarthritis is reportedly associated, both our cases did not have this condition.<sup>3</sup>

An important observation in our cases was the causal relation of physical trauma to the onset of GCS. In the first case, a direct blunt physical injury presumably

damaged the synovial sheath of the flexor tendon of the finger and produced GCS. There is no direct blunt injury in the second case, but one may infer subclinical injury to the synovium following chronic pressure and friction induced by the clutch grip of the vehicle which the man drove for many years.

Clinically, the condition may mimic dermatofibroma, fibrous papule of the finger, fibrokeratoma and ganglion cyst. But histological appearance of spindle shaped fibroblasts, and scattered giant cells is characteristic. These giant cells may resemble osteoclasts.<sup>4</sup>

Recurrence after removal in 25% cases and malignant degeneration has been reported as complications.<sup>3</sup> Though four months and one year of follow up in the first and second cases respectively have not revealed any of these, it is still imperative to continue surveillance. In addition, a high clinical index of suspicion should be maintained to diagnose GCS in subcutaneous nodules of traumatic aetiology.

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