



# Aggressive Giant Cell Tumor of Tendon Sheath

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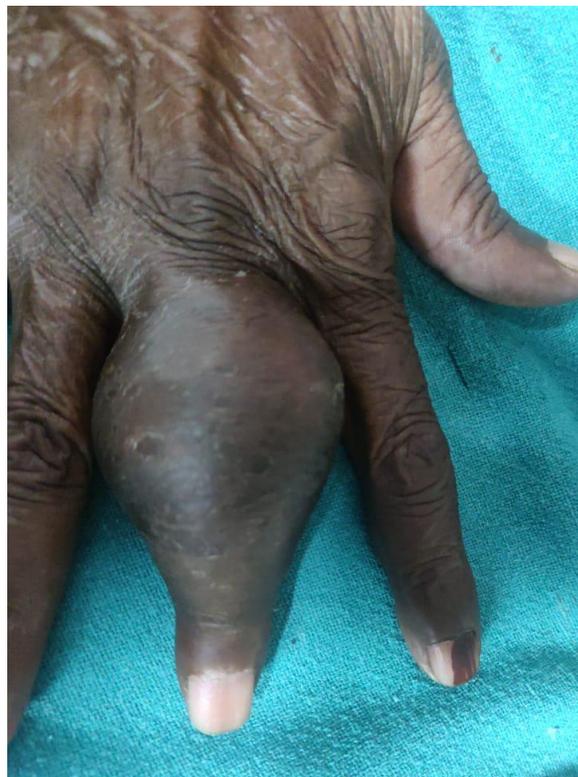
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## Introduction

- Tenosynovial giant cell tumor is a part of the spectrum of benign synovial proliferative lesions. The peak incidence is the third to the fifth decades of life.
- It is the second most frequent tumor of the hand, after synovial cysts. It is a benign tumor with aggressive behavior in some cases, and the best treatment for it is surgical, with wide excision margins.
- Characteristically, it is a painless nodule that appears on the dorsal or volar side of the finger, generally located proximally to the distal interphalangeal joint.
- It may sometimes resemble an intraosseous lesion, i.e. cortical or intramedullary, well defined and osteolytic. True bone invasion occurs in around 5% of the cases

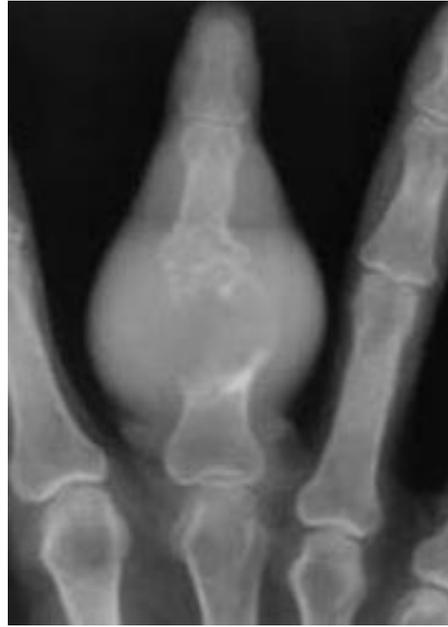
## Clinical Features

A 63-year-old man presented with a mass in the proximal phalanx level of his right middle finger. The mass lesion was first detected 12 months previously, and the patient explained that the mass has slowly grown have caused discomfort and mild pain since 1 month. He was not able to flex the MCP or PIP joint of the middle finger and only partially able to flex DIP. He had no history of trauma or cancer. There were no systemic complains.

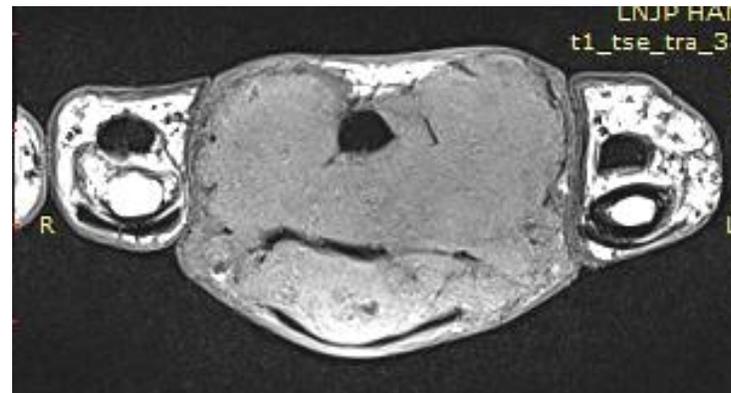


On **examination**, there was huge swelling in Rt middle finger extending from MCP upto middle phalyx with no ulceration or sinus. The mass was firm and showed a lobulated contour and tender on deep palpation. DNVD status maintained.

# Radiographic Features



Initial **Xray** shows severe cortical destruction & erosion with cystic changes in the proximal phalynx extending upto PIP. After a month it shows complete destruction of most part of the proximal phalynx.



Bone involvement by a soft-tissue mass and its intraosseous extension, when seen on **MRI** images, is more aggressive than bone lesions seen on plain radiographs.

## Management

- Because an intraosseous bone lesion of tenosynovial giant cell tumor is related to the tumor recurrence and prognosis, complete resection of tenosynovial giant cell tumor is very critical for treating the disease
- Incomplete resection is a significant risk factor for local tumor recurrence in the hand.
- With intraosseous involvement, ideal is wide resection of soft tissue mass with curettage and irrigation of residual bony cavity.
- Here due to extensive bony destruction, Ray Amputation of middle finger was done.



**Histology**-Tumor resected was 4\*3\*2cm. Growth well circumscribed. Cut section grey white and homogenous. Admixture of mononuclear cells, osteoclastic giant cells, inflammatory cells and pigmented histiocytes in hyalinized stroma.

## Discussion

- Uriburu et al.<sup>(1)</sup> and De Schepper et al.<sup>(2)</sup> reported series of patient with tenosynovial GCT of finger showing intraosseous lesion with typical radiographic findings.
- Jalgaonkar et al.<sup>(3)</sup> recommended that curettage of the bone should be done in patients with osseous erosion in order to prevent recurrence.
- Our case is a very unique where a tenosynovial Giant cell tumor went on to cause extensive expansile intramedullary lesion with severe geographical destruction of the plalanx of a finger.
- There is no reported case in the literature to our knowledge where Tenosynovial GCT caused such bony destruction, which eventually required ray amputation of the involved finger.

1. Uriburu IJ, Levy VD. Intraosseous growth of giant cell tumors of the tendon sheath (localized nodular tenosynovitis) of the digits: report of 15 cases. J Hand Surg Am 1998;23:732-736.

2. De Schepper AM, Hogendoorn PC, Bloem JL. Giant cell tumors of the tendon sheath may present radiologically as intrinsic osseous lesions. Eur Radiol 2007;17:499-502.

3. Jalgaonkar A, Dhinsa B, Cottam H, Mani G. Giant cell tumours of tendon sheath of hand: causes and strategies to prevent recurrence. Hand Surg 2011;16:149-154.