IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 18, Issue 2 Ser. 10 (February. 2019), PP 01-04
www.iosrjournals.org

Giant Cell Tumor of Tendon Sheath – A Case Report

Dr. Pradeep Balineni, Dr. Prasanna Manickam, Dr.Shruthi kamal
Department of General Surgery, Saveetha medical college hospital
Corresponding Author: Pradeep Balineni

Abstract
Introduction:
They are rare soft tissue tumors of hand. They are considered to be arising due to minute repeated tumors. There are also reported incidences of malignant giant cell tumors. Treatment would be complete surgical excision.
Case report:
*A 22 year old male came with complaints of a slow growing swelling in the right great toe of size 4*3 cms which is firm and not mobile. Fnac showed features suggestive of inflammation. Lesion was completely excised under regional anesthesia. Post operative biopsy showed giant cell tumor of the tendon sheath. Post operative follow up patient was comfortable and asymptomatic.*
Discussion:
They are mostly seen in hand and foot of women and are seen mostly in mid 30-40's. They appear as a slow growing, painless tumors. They are pre operatively diagnosed by USG, MRI and Fnac. They are treated by complete surgical excision. They have a high recurrence rate. Post operative radiotherapy shows no recurrence.

Date of Submission: 01-02-2019 Date of acceptance:18-02-2019

I. Case report

A 22 year old male presented with complaints of swelling in the right great toe since past 2 year.swelling was gradually progressive in nature. There is no history of pain, trauma, restriction of movements. On examination it was a well circumscribed lesion of size 4*3 cms, firm in consistency, non tender with restricted mobility and was not extending the interphalyngeal joint (fig 1).

X-ray showed no bony deformity (fig2) . Fnac of the swelling showed features suggestive of inflammatory pathology. Under regional anesthesia patient was taken up for excision. Intra operatively lesion was away from the neurovascular bundle and was adherent to the extensor hallucis tendon (fig 3,4).

Post operative biopsy showed Benign giant cell tumor of the tendon sheath (fig 5). On post operative follow up patient had no loss of movements of the toe or no neuro-vascular deficit and was comfortable.

II. Discussion

Giant cell tumors of tendon sheaths (GCTTS) they are 2nd common benign tumors of hand following ganglion cyst[7]. They are first described by chassaignae in 1852[7] as fibrous xantoma. Since then they were given names such as nodular tenosynovitis, localized pigmented villonodular synovitis, fibrous xanthoma, fibrous histiocytoma of the synovium, tenosynovial giant cell tumor, benign synovioma, and sclerosing hemangioma[5] . They are commonly seen in hand (75%) and foot (5%), but they can also arise from large joints as knee and elbow. There also reported cases of GCTTS of back where they were seen arising from the periosteum of the rib[1]. They have a incidence of 1 in 50,000 population with a female[2,7] preponderance. They are mostly seen in mid 30-40 years of age.

Etiology of GCTTS still remains unclear but there are many theories for consideration such as trauma, disturbance in lipid metabolism, inflammation, infection, osteoclastic proliferation, immune mechanism, metabolic disturbance[1,7]. Jaffe et.al proposed inflammation due to chronic stimulation by antigenic process and proliferation from synovial lining of tendons and joints[1]. This theory is also supported by high incidence in the right index and middle fingers which are more prone to minor trauma. They are divided as localized nodular type and diffuse type, nodular type is hypercellular and diffuse type is hypocellular[7].

They generally present as slow growing, painless, firm swelling arising from synovial lining of mostly small joints. Interosseous involvement is seen cases of large joints and are rarely reported. Radiographs are of little value for diagnosis they only show cortical compression or interosseous involvement[7]. Ultrasonography shows the lesions as homogenous and hypo echoic[2] and it also shows the gap between tendon and neurovascular bundle. MRI will show the lesion as hypointense lesion and also shows the exact size and extension

preoperatively. FNAC would give a exact tissue diagnosis preoperatively. Differential diagnosis for this would be giant cell tumor of bone, fibroma of tendon sheath, extra skeletal osteosarcoma, ganglion cyst, lipoma, malignant fibrous histiocytoma, synovial sarcoma, desmoids tumor[1,7].

Treatment for this would be complete surgical excision of the tumor[1,2,5,7]. Incision should be planned as to have a maximum reach to all the borders the tumor. But GCTTS has got a high recurrence rate which is thought to be because of the high mitotic rate in the tumor (>10/hpf). High recurrence rate is mostly seen cases with proximity to arthritic joint, distal interphalyngeal joint of finger, osseous erosions on X-ray[2]. Histology shows Osteoclast like cells. In cases where complete excision is not possible or high recurrence is expected Kotwal et.al proposed to give radiotheraphy postoperatively, where 20gy is given in divided doses of 2gy each[2]. Post operative radiotherapy in such cases have showed 0 recurrence. In conclusion giant cell tumor of tendon sheath is a rare soft tissue tumor and complete surgical excision is the treatment of choice.

References

[1]. H Monaghan, D M Salter, A Al-Nafussi; Giant cell tumour of tendon sheath (localisednodular tenosynovitis): clinicopathological features of 71 cases; J Clin Pathol 2001;54:404–407

[2]. Abhishek Singh, Nagendra Yadav, Bharat Bhushan Dogra, Ashutosh Singh; Giant cell tumor of tendon sheath; Int Surg J. 2017 Nov;4(11):3785-3788

[3]. Fotiadis E, Papadopoulos A, Svarnas T, Akritopoulos P, Sachinis NP, Chalidis BE. Giant cell tumour of tendon sheath of the digits. A systematic review: Hand (New York, NY). 2011;6(3):244-9.

[4]. Middleton WD, Patel V, Teefy SA, Boyer MI. Giant cell tumor of the tendon sheath: analysis of sonographic findings. Am J Roentgenol. 2004;183:337-9.

[5]. Rukavina I, Ćaleta D. Giant-cell tumour of the tendon sheath: A review. OA Orthopaedics 2014 Jun 11;2(2):11.

[6]. Adams EL, Yoder EM, Kasdan ML. Giant cell tumour of tendon sheath: experience with 65 cases. Eplasty. 2012; 12: e50.Epub 2012 Nov 12.

[7]. Davod Jafari ; Hooman Shariatzadeh ; Farid Najd Mazhar ; Mehran Razavipour ; Mohammad Ali Okhovatpour; Giant Cell Tumor of Tendon Sheath of the Hand: Experience With Forty-Seven Cases; Shafa Ortho J. 2015 February; 2(1):e444.

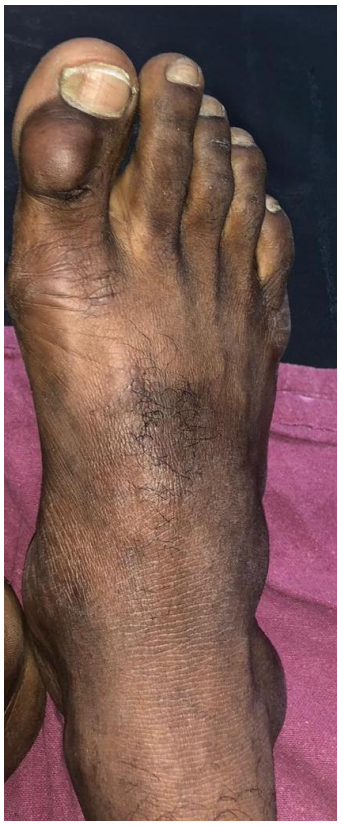

Fig 1 showing swelling in the right great toe

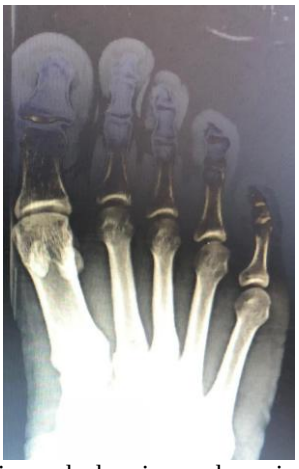

Fig 2 radiograph showing no bony indentation

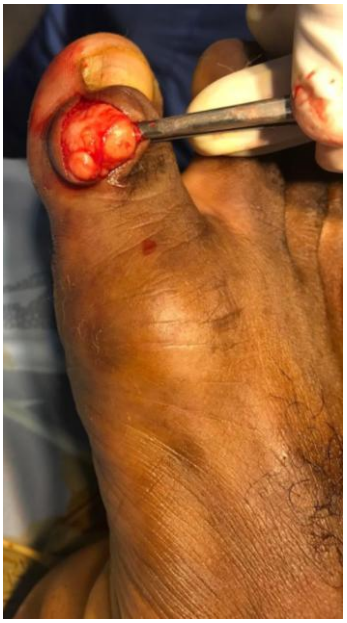

Fig 3 showing intra operative picture of the tumor

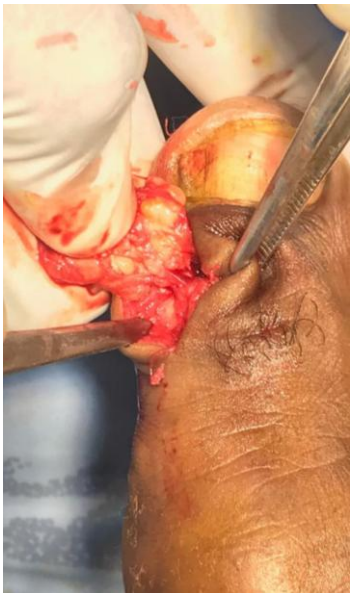

Fig 4 showing intra operative image of lesion

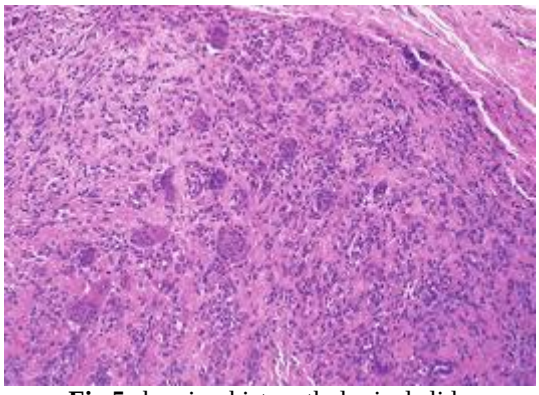

Fig 5 showing histopathological slide

Pradeep Balineni. "Giant Cell Tumor of Tendon Sheath – A Case Report." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 18, no. 2, 2019, pp 01-04.