



Contents lists available at BioMedSciDirect Publications

International Journal of Biological & Medical Research

Journal homepage: www.biomedscidirect.com



Case Report

GIANT CELL TUMOUR OF TENDON SHEATH IN THUMB – A CASE REPORT

SANKAR RAO. P *, SIDDARAM PATIL **, SANDEEP ***

Associate Professor *, Professor **, Post Graduate ***, Mamata Medical College, Department Of Orthopaedic, Ratary Nagar, Khammam

ARTICLE INFO

Keywords:

Thumb
Tendon sheath
Giant cell tumor
Flexor tendon.

ABSTRACT

Giant cell tumor of the tendon sheath are the second most common tumors of the hand often referred to as xanthoma. Histologically these tumors are composed of multinucleated giant cells, polyhedral histiocytes, fibrosis and hemosiderin deposits. Marginal excision of giant cell tumor of the tendon sheath is the treatment of choice. We present a case of Xanthoma of flexor pollicis longus tendon that presented as single enlarging mass in volar aspect of left thumb. After clinical diagnosis work up is done with ultrasound, FNAC and excision biopsy.

© Copyright 2010 BioMedSciDirect Publications IJBMR -ISSN: 0976:6685. All rights reserved.

CASE REPORT

A 55-yr old female patient presented to us with complaints of swelling over the palmar aspect of the left thumb since 3yrs. Swelling was insidious in onset, initial size being that of pea nut which gradually progressed to about 3 x 2 x 2 cm at the time of presentation. Patient did not give any history of trauma/prick injury. There was no history of any kind of immobilization or massage treatment. No history of constitutional symptoms and any other similar swellings in the body. On examination proper, swelling extended from the Metacarpo-phalangeal joint to interphalangeal joint of left thumb. Swelling was globular in shape with the overlying skin being normal. Swelling was firm in consistency with mild tenderness and no local rise of temperature. It was non-reducible and non-translucent, mobile in horizontal direction and fixed in vertical direction. Movements are completely restricted at all joints of left thumb. She is unable to flex both MCP and IP joints of left thumb.

Fig 1 : Clinical Picture of swelling on volar aspect of thumb.



X-ray revealed no bony involvement. Serum calcium and serum phosphorus was 10.2 mg/dl and 3.0 mg/dl respectively. Serum ALP (127 IU/l), parathyroid hormone levels, creatinine kinase, aldolase levels, ANA, Vitamin D levels, 24 hours urinary calcium and inorganic phosphate were all within normal limits. Ultrasound of the swelling confirmed solid, homogenous, hypoechoic mass adjacent to insertion of flexor pollicis longus tendon. Histopathological detailing was done with Fine Needle Aspiration Cytology (FNAC) which reported features suggestive of giant cell tumor of tendon sheath and excision biopsy was planned for confirmative diagnosis and definitive treatment. Gross examination of the biopsy specimen revealed single nodular grey white mass of tissue measuring 3 x 2 x 1.5 cm, external surface nodular, cut section shows homogenous grey white nodular areas.

Fig 2 : Gross specimen of resected tumour



* Corresponding Author : SANKAR RAO. P

MAMATA MEDICAL COLLEGE, DEPARTMENT OF ORTHOPAEDIC,
RATARY NAGAR, KHAMMAM
drsnp_2006@yahoo.co.in

© Copyright 2010 BioMedSciDirect Publications. All rights reserved.

Microscopic examination smears showed moderate cellularity comprising of few dispersed plump fibrohistiocytic cells with oval vesicular nuclei and bland chromatin and moderate amount of cytoplasm, variable number of osteoclast like multinucleated giant cells are seen against hemorrhagic background. Biopsy findings confirmed the diagnosis of giant cell tumor of tendon sheath. Patient was followed up to a period of one year, where there were no signs of recurrence.

Fig 3 : HPE showing scattered groups of mononuclear cells with occasional osteoclast like giant cell

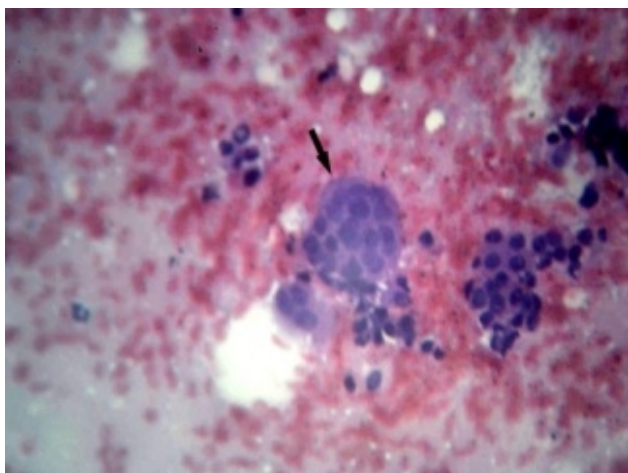


Fig 4 : Post operative picture of the left thumb shows a healed surgical scar.



Discussion :

GCT of tendon sheath are reactive lesions, not really tumors, which are similar to PVNS. They do not always arise from the tendon sheath but may arise from the synovium.

It is the second most common benign hand tumor next to ganglions. Despite recurrences no malignant transformation has been reported.[15-17] Complete surgical excision remains the mainstay of treatment, assisted either with an operating microscope or a magnifying loupe. Radiotherapy has been suggested after inadequate excision and in patients with high mitotic activity to prevent recurrence.[18-20]

Conclusion :

Giant cell tumors are benign conditions, appearing as asymptomatic nodules. In our case it presented as a single enlarging mass on volar aspect of left thumb. After clinical diagnosis we proceeded with ultrasound, FNAC and excision biopsy. Microscopic examination revealed scattered groups of mononuclear cells with occasional osteoclast like giant cell. After correlating the clinical history and presentation with the pathological findings a diagnosis of Giant cell tumor of tendon sheath was concluded. We recommend complete excision of the lesion as it not only provides successful resolution without recurrence, but also establishes our diagnosis.

REFERENCES :

1. Murphey MD, Rhee JH, Lewis RB, Fanburg-Smith JC, Flemming DJ, Walker EA. Pigmented villonodular synovitis: radiologic-pathologic correlation. *Radiographics*. Sep-Oct 2008;28(5):1493-518.
2. Giant cell tumours of tendon sheath: classification and recurrence rate.: Al-Qattan MM *J Hand Surg Br*. 2001 Feb; 26(1):72-5.-
3. Reilly KE, Stern PJ, Dale JA. Recurrent giant cell tumors of the tendon sheath. *J Hand Surg Am*. 1999;24:1298-1302. doi: 10.1053/jhsu.1999.1298.
4. Kotwal PP, Gupta V, Malhotra R. Giant cell tumour of the tendon sheath- is radiotherapy indicated to prevent recurrence after surgery? *J Bone Joint Surg*. 2000;82B:571-573. doi: 10.1302/0301-620X.82B4.10328.
5. Rao AS, Vigorita VJ. Pigmented villonodular synovitis (Giant-Cell tumor of the tendon sheath and synovial membrane): a review of 81 cases. *J Bone Joint Surg*. 1984;66A:76-94.
6. Choudhury M, Jain R, Nangia A. Localized tenosynovial giant cell tumor of tendon sheath. A case report. *Acta Cytol*. May-Jun 2000;44(3):463-6.
7. *Dermatol*. Oct 1991;25(4):728-9.
8. Suresh SS, Zaki H. Giant cell tumor of tendon sheath: case series and review of literature. *J Hand Microsurg*. Dec 2010;2(2):67-71.
9. Garg B, Kotwal PP. Giant cell tumour of the tendon sheath of the hand. *J Orthop Surg (Hong Kong)*. Aug 2011;19(2):218-20
10. Agarwal PK, Gupta M, Srivastava A. Cytomorphology of giant cell tumor of tendon sheath. A report of two cases. *Acta Cytol*. Mar-Apr 1997;41(2):587-9.
11. Iyer VK, Kapila K, Verma K. Fine-needle aspiration cytology of giant cell tumor of tendon sheath. *Diagn Cytopathol*. Aug 2003;29(2):105-10.
12. Phalen GS, McCormack LJ, Gazale WJ. Giant-cell tumor of tendon sheath (benign synovioma) in the hand. Evaluation of 56 cases. *Clin Orthop*. 1959;15:140-51.
13. Moore JR, Weiland AJ, Curtis RM. Localized nodular tenosynovitis: experience with 115 cases. *J Hand Surg [Am]*. May 1984;9(3):412-7.
14. Reilly KE, Stern PJ, Dale JA. Recurrent giant cell tumors of the tendon sheath. *J Hand Surg [Am]*. Nov 1999;24(6):1298-302
15. Reilly KE, Stern PJ, Dale JA. Recurrent giant cell tumors of the tendon sheath. *J Hand Surg [Am]*. Nov 1999;24(6):1298-302.
16. Wright CJE. Benign giant-cell synovioma; an investigation of 85 cases. *Br J Surg*. Jan 1951;38(151):257-71.
17. Goda JS, Patil P, Krishnappa C, Elangovan D. Giant cell tumor of the tendon sheath treated by brachytherapy (surface mold) technique-A technical illustration. *Brachytherapy*. Oct 22 2008;
18. Rodrigues C, Desai S, Chinoy R. Giant cell tumor of the tendon sheath: a retrospective study of 28 cases. *J Surg Oncol*. Jun 1998;68(2):100-3.
19. Darwish FM, Haddad WH. Giant cell tumour of tendon sheath: experience with 52 cases. *Singapore Med J*. Nov 2008;49(11):879-82.
20. Messoudi A, Fnini S, Labsaili N, Ghrib S, Rafai M, Largab A. [Giant cell tumors of the tendon sheath of the hand: 32 cases]. *Chir Main*. Jun 2007;26(3):165-9.