Quiz

An asymptomatic nodule on the finger

A 45-year-old female presented with a 2-month history of an insidiously growing, painless swelling on her left middle finger. There was no history of preceding trauma. Examination revealed a 15 × 15 mm, dome-shaped nodule with normal overlying skin, located on the dorsum of the proximal phalanx of the left middle finger [Figure 1]. The nodule was well defined, smooth, firm, nontender, and fixed to the subcutaneous structures but not to the overlying skin. There was no pain, numbness, or stiffness of the affected digit.

The hematoxylin and eosin (H and E) stained section of biopsy specimen [Figure 2a and b] revealed a well circumscribed tumor with a biphasic appearance. Moderately cellular areas of histiocyte-like cells with vesicular nuclei and foamy macrophages blended into hypocellular areas consisting of spindle cells within fibrous and hyalinized stroma. Giant cells were scattered through both the cellular and fibrous areas.

WHAT IS YOUR DIAGNOSIS?

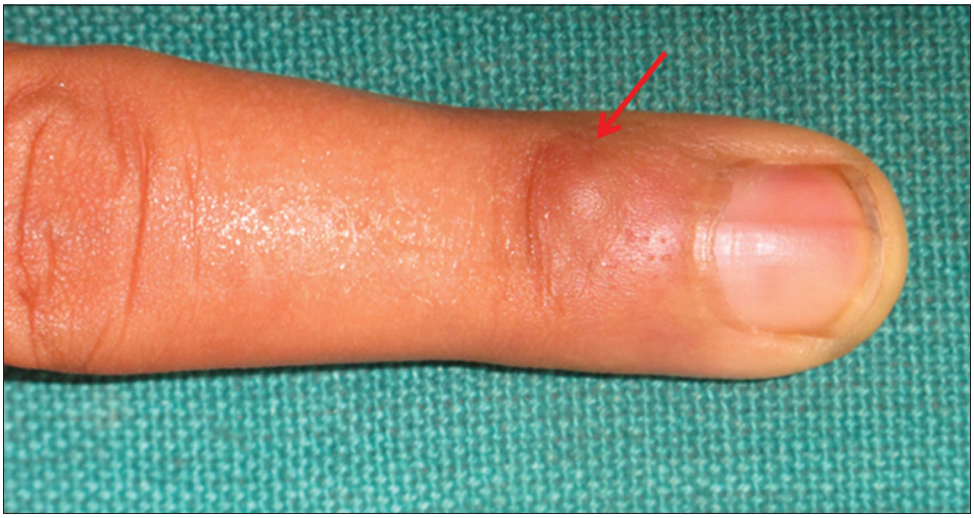

Figure 1: Dome-shaped nodule with normal overlying skin on the dorsum of the left middle finger

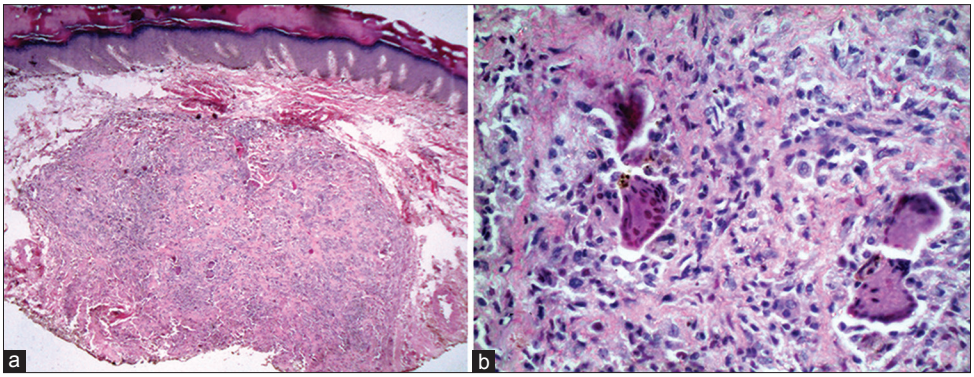

Figure 2: Biopsy from nodule showing (a) a well circumscribed tumor with a biphasic appearance (H and E, ×40) and (b) multiple giant cells (H and E, ×400)

How to cite this article: Agrawal PG, Mahajan SA, Khopkar US, Kharkar VD. An asymptomatic nodule on the finger. Indian J Dermatol Venereol Leprol 2014;80:577-8.

Received: April, 2014. **Accepted:** September, 2014. **Source of Support:** Nil. **Conflict of Interest:** None declared.

ANSWER

Diagnosis

Giant cell tumor of tendon sheath

DISCUSSION

Giant cell tumor of tendon sheath is synonymous with localized nodular tenosynovitis or giant cell synovioma.[1] Giant cell tumors of tendon sheath are the second most common benign tumors of the hand, simple ganglion cysts being the most common.[2] It can present at any age but usually appears in adults aged 30-50 years, and is more common in women than in men.[1] Antecedent trauma is reported in a variable number of cases (1-50%). The most widely accepted theory is that it is a reactive or regenerative hyperplasia associated with an inflammatory process.[3]

The tumor usually presents as a firm nodule measuring from 1 to 3 cm on the hands or fingers but can also occur on the toes and other peri-articular sites such as wrist, ankle, knee, and very rarely the elbow and the hip. It has a predilection for flexor surfaces. It is typically slow growing and fixed to subcutaneous structures without attachment to the overlying skin, except on the distal fingers and toes. Although usually asymptomatic, there can be pain, numbness, or stiffness of the affected digit. The lesions may infrequently erode or infiltrate the nearby bone or rarely involve the skin.[1,2]

The tumor consists of lobules of varied cellularity surrounded by dense collagen. In cellular areas, most cells are histiocyte-like with vesicular nuclei, foamy macrophages, and siderophages. Less cellular areas consist of spindle cells within a fibrous or hyalinized stroma. The characteristic giant cells resembling osteoclasts are scattered through both the cellular and fibrous areas; their cytoplasm is deeply eosinophilic and they contain a variable number of haphazardly distributed nuclei. Although mitotic figures are seen in a large proportion of cases and may be frequent, there is no evidence that mitotic activity is related to metastasis, which is an extremely rare event in these tumors.[1,3]

The differential diagnosis is broad and includes rheumatoid nodule, myxoid or ganglion cyst, foreign body granuloma, tendinous xanthoma, nodal osteoarthritis, fibroma of tendon sheath, subcutaneous granuloma annulare and rare entities such as epithelioid sarcoma, synovial sarcoma and clear cell sarcoma.[4] Fibroma of tendon sheath is clinically similar in terms of location and microscopically resembles the hyalinised form of giant cell tumor of tendon sheath. Therefore, it is considered to represent the late stage of giant cell tumor.[5]

Despite the hypercellularity and large cells in this tumor, it is benign with a local recurrence rate of 30%. It can be treated by simple excision that includes a small margin of normal tissue.[1] The rate of recurrence depends on the presence or absence of a pseudocapsule, lobulation of the tumor, extra articular location, and the presence of satellite lesions. Radiation therapy has been reported anecdotally to be effective.[6]

Prachi G. Agrawal, Sunanda A. Mahajan, Uday S. Khopkar, Vidya D. Kharkar

Department of Skin and V.D, GSMC and KEM Hospital, Parel, Mumbai, Maharashtra, India

Address for correspondence: Dr. Prachi G. Agrawal, Department of Skin and V.D, GSMC and KEM Hospital, Parel, Mumbai - 400 012, Maharashtra, India.
E-mail: prachi.agrawal86@gmail.com

REFERENCES

1. Rao AS, Vigorita VJ. Pigmented villonodular synovitis (giant-cell tumor of the tendon sheath and synovial membrane). A review of eighty-one cases. J Bone Joint Surg Am 1984;66:76-94.
2. 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;23:732-6.
3. Monaghan H, Salter DM, Al-Nafussi A. Giant cell tumour of tendon sheath (localised nodular tenosynovitis): Clinicopathological features of 71 cases. J Clin Pathol 2001;54:404-7.
4. Chung EB, Enzinger FM. Fibroma of tendon sheath. Cancer 1979;44:1945-54.
5. Satti MB. Tendon sheath tumours: A pathological study of the relationship between giant cell tumour and fibroma of tendon sheath. Histopathology 1992;20:213-20.
6. Al-Qattan MM. Giant cell tumours of tendon sheath: Classification and recurrence rate. J Hand Surg Br 2001;26:72-5.

Access this article online	
Quick Response Code:	Website: www.ijdvl.com
	DOI: 10.4103/0378-6323.144223