

Multiple Giant Cell Tumours of Tendon Sheath of Thumb: A Rare Case Report

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Abstract:

Aim: The aim of this case report is to describe a rare case of multiple xanthomas of the tendon sheath on the dorsal aspect of the thumb in a 60 year old female.

Case Report: A 60 year old female presented with multiple swelling on the dorsal aspect of the left thumb without history of trauma. These were then excised using two incisions and the sample subjected to histopathological examination.

Discussion: In the present case we describe multiple xanthomas on the dorsal aspect of the thumb and its subsequent work up and excision.

Conclusion: The case has been reported keeping in mind the rarity and its successful treatment with surgery.

Key Words: Multiple, giant cell, dorsal, thumb.

I. Introduction:

Giant cell tumour of the tendon sheath (GCTTS) is a benign tumour, presenting as the second most common mass of the hand after ganglion cysts^[1]. It was first described by Chassaignac in 1852 as fibrous xanthoma^[2] and has since been referred to by multiple names. The large range of nomenclature indicates disagreement as to the aetiology of giant cell tumours. The prevailing divergence is between aneoplastic^[1-7] and inflammatory origin^[8-10] of the tumour, with multiple studies presenting evidence for each.

Herein, we present an interesting case of multiple GCTTS of the left thumb in a 65-years-old woman, which was successfully treated by surgery through a double approach.

II. Case Report:

A 65 year presented with multiple swelling on the dorsal aspect of the left thumb for duration of 3 years. The swellings were insidious in onset and gradually progressive. Both were noticed simultaneously. At the time of presentation they were both around 2 x 1 x 1 cm, located on the dorsolateral and dorsomedial aspect. There was no history of trauma, immobilization or massage. There were no constitutional symptoms or similar swellings in other parts of the body. On examination proper, two swellings were noticed, one on the lateral and the other on the medial aspect on the dorsal surface of the left thumb. Both of them were in the region of the interphalangeal joint. They were globular in shape with the overlying skin being normal. They were firm in consistency without tenderness or local rise of temperature. They were non-reducible and non-translucent, mobile in the horizontal plane while fixed in the vertical plane. Movements at the interphalangeal joint were restricted, however at the metacarpophalangeal joint the range of movement was within normal limits.

X-rays revealed no bony defects and the blood investigations such as calcium, phosphorus, alkaline phosphatase were all within normal limits. The ultrasound revealed lobulated hypoechoic lesion around the interphalangeal joint, which was closely associated with the flexor tendon sheath. However the tendon sheaths, both flexor and extensors, were within normal limits.

Excision biopsy was done through two separate incisions over the dorsal aspect of the thumb. Intra operatively the two masses were distinct and covered by a capsule which appeared to be attached to the extensor pollicis longus tendon. The surface was nodular and dull grey in colour. The cut section showed homogenous grey white nodular areas.

On histopathological examination, Histological findings were characteristic of a GCTTS and presented with histiocyte-like foamy, multinucleated giant cells and fibroblast-like cells.

III. Discussion

GCTTS are benign soft-tissue tumours of the limbs which arise from the complex of tendon sheath and periarticular soft tissues of small joints. It may occur at any age but usually presents in patients between the third and fifth decades of life with a peak incidence during the fifth decade^[11,15]. There is a slight female predominance, ranging from 1.5:1 to 2:1, although equal sex distribution has been reported^[16]. Most commonly, this tumour occurs on the volar aspect of the hand as compared to the dorsal soft tissues^[6,17]. Rarely, it could involve both the dorsal and volar aspects of the hand^[11].

Although different causes have been proposed, the aetiology of this pathological condition is still unclear. Usually, patients have no particular symptoms or present with a palpable, often painless, soft tissue mass that gradually increases in size over a long period of time ^[6,11-13,15]. The tumour mass may vary from solitary to multiple discrete soft-tissue nodules ^[6]. Usually, GCTTS are tendon-based, well circumscribed and localized ^[13].

Conventional radiographs commonly present completely normal radiological view or may show a soft tissue mass ^[14,15]. MRI, CT, ultrasonography and colour Doppler sonography images may reveal the precise topography of the tumour and are very useful in preoperative planning ^[11,12,15].

Treatment of GCTTS remains controversial because recurrence rates as high as 30% have been reported ^[14]. This is due to the fact that in many cases GCTTS has extensions that go around and under critical structures, including the neurovascular bundle.

IV. Conclusion

We report a rare case of multiple Giant cell tumours of the tendon sheath on the dorsal surface of the thumb. This was effectively treated with complete excision of the tumours using two incisions.



Figure 1 A, B: Preoperative view of the tumour in the left thumb on the dorsal surface.



Figure 2A, B: Preoperative plain radiographs of the thumb.

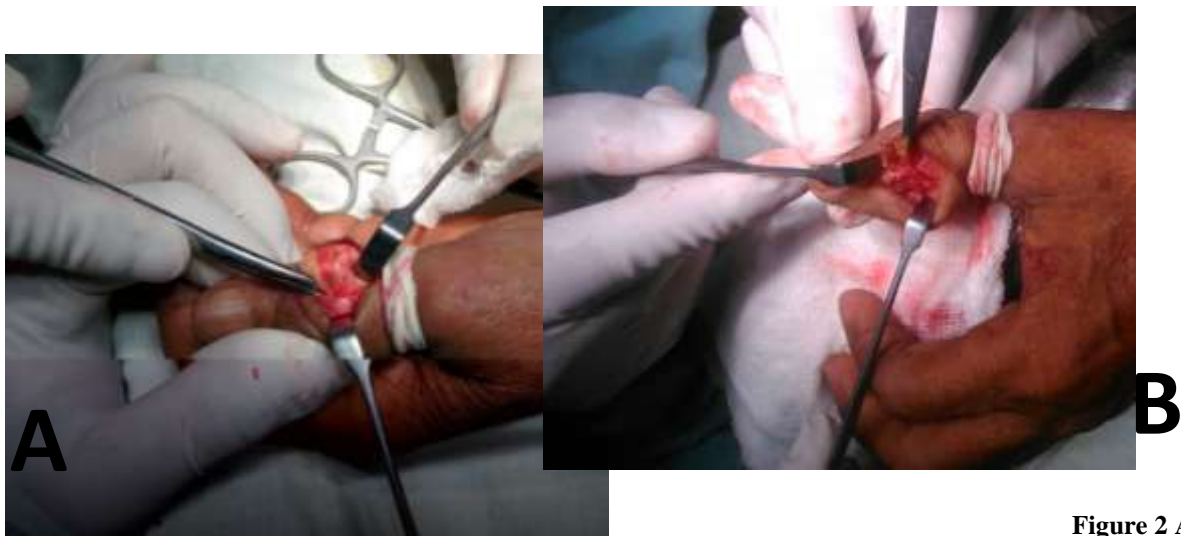


Figure 2 A,

B: Intraoperative view of the tumour.



Figure 3: Immediate post op.



Figure 4: Excised tumour mass.

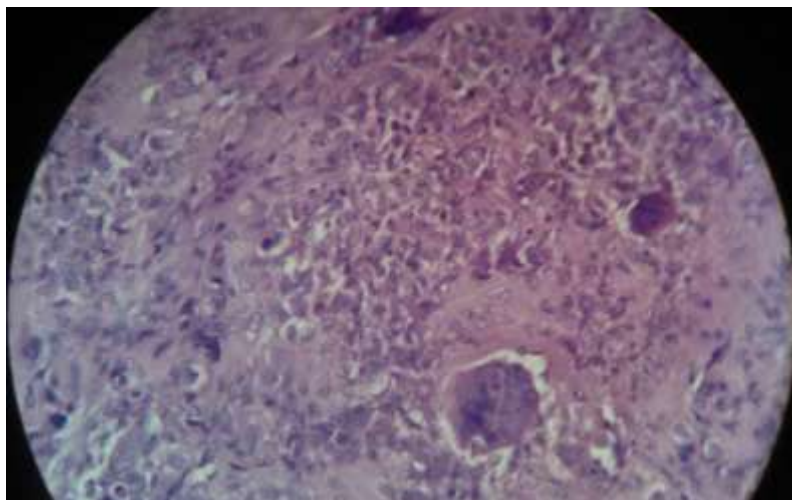


Figure 5: Microscopic view of the tumour.

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