

**GIANT CELL TUMOR OF THE FLEXOR TENDON SHEATHS OF THE FINGERS
(ABOUT A CASE AND REVIEW OF THE LITERATURE).****Mbarek Akanou*, S. Mouktabis, T. Ahuary, A. Neqrachi, J. Mekkaoui, R.A. Bassir, M. Boufettal, M. Kharmaz,
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ABSTRACT

Giant cell tumors (GCTs) of the tendon sheaths are benign soft tissue tumors that recur frequently. They occur most often in the hand where they represent the second most common soft tissue tumor after synovial cysts. We report a case of TCG with rare localization in the third finger of the hand in a 45-year-old patient, who presented with a painful mass in his third finger that had been evolving for about two years, and study its clinical, radiological, therapeutic and prognostic features.

KEYWORDS: Giant cell tumor, soft tissue, tendon sheaths.**INTRODUCTION**

Giant cell tumors (GCTs) of the hand are benign tumors that can involve the joint synovium, bursa and tendon sheaths, but also the joints. They are one of the most common tumors of the hand after the synovial cyst.^[1]

Several names have been given to this condition: myeloplastic tumors, fibrous xanthoma, myeloxanthoma^[2], pigmented villonodular synovitis^[3], tendon sheath myeloma, giant cell tumor^[4], benign synovioma. Although these tumors are considered benign and have a good prognosis, they are characterized by a high risk of recurrence.^[5]

CLINICAL CASE

Mr L.B., aged 45, with no notable pathological history, had been suffering for 2 years from a subcutaneous swelling of the palmar surface of the 3rd right digit, which was

progressively increasing in volume, becoming painful and embarrassing during his work.

The examination revealed a patient in good general condition and afebrile. The hand had a non-inflammatory swelling on the palmar surface of the second^e phalanx of the third^e digit (Fig. 1). On palpation, the swelling was circumferential, firm and painful on palpation, and mobile in relation to the superficial plane. There were no vascular or nervous disorders. The skin opposite was normal.

Fig. 1: Tumour of the palmar surface of the third^e finger.

The wrist radiograph was normal (Fig. 2). Ultrasound revealed a nodular formation on the face of the third ray, with a heterogeneous



structure, enclosing a hypoechoic structure with no Doppler signal (Fig. 3).



Fig. 2: Radiograph of the hand : Absence of erosion of the cortical bone of P2 of the 3rd^e finger.

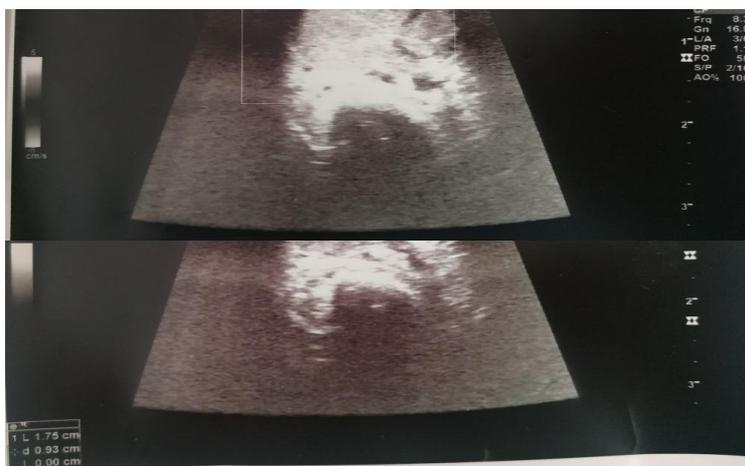


Fig. 3 : Ultrasonographic appearance of the tumor.

MRI revealed a well-limited tissue formation, with lobular contours, measuring 13.3 x 17 x 22.3 mm. It was hypointense in T1 and hyperintense in T2, not enhanced

after injection of gadolinium. The flexor tendons of the palmar interosseous muscles were displaced (Fig. 4).

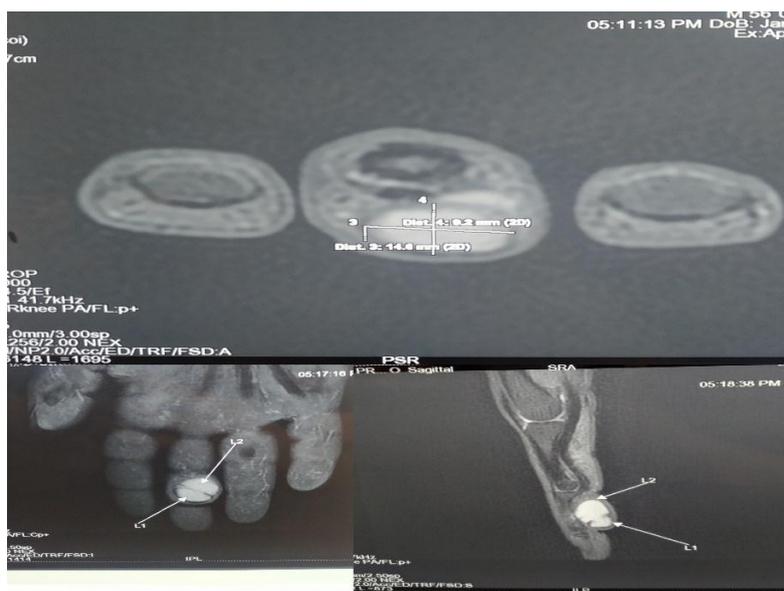


Fig. 4: MRI of the hand showing the tumor in the flexor tendon sheath.

Under local anaesthesia and with a tourniquet, the procedure was carried out via a digital zigzag palmar approach (Bruner). After opening the skin, the tumour

was connected to the tendon and presented lateral extensions, brownish in colour. No invasion of the pedicle. Dissection was careful, sparing the vascular and

neural pedicles, and the resection was wide, following all the lateral extensions (Fig. 5).



Fig. 5: Intraoperative appearance
Anatomopathological study showed a giant cell tumour of the tendon sheaths. The postoperative course was simple. No recurrence was noted after 12 months.

DISCUSSION

Giant cell tumors of the tendon sheaths are one of the most common tumors of the hand, second only to synovial cysts.^[1,6] Due to its numerous names, this tumor is sometimes poorly defined. Hypotheses have been put forward^[7]: a proliferation reaction developed from the synovium of the tendon sheath or a lesion derived from monocytes/macrophages, an inflammatory reaction due to chronic antigenic stimulation. Cases with notion of chronic trauma. The lesion can take two anatomical-clinical forms: localized TCG (nodular tenosynovitis) in the form of a nodule adherent to a tendon, not painful; slow-growing as in our observation, or diffuse TCG which is the equivalent of a pigmented villonodular articular synovitis. Diffuse TCG is the least common form.^[8]

Standard radiography is necessary preoperatively; it allows to find a thickening of the soft parts as in our case, or bone lesions observed in 15% of the cases.^[9,10] These lesions are associated with cortical erosions and pseudocystic geodes. Ultrasound usually reveals a hypoechoic lesion^[11,12], although hyperechoic lesions have been described.^[11,13,14] MRI shows a hyposignal lesion, rather tissue-like.^[14,15] It is useful especially to determine the extension in a diffuse form or in case of recurrence.^[15]

The positive diagnosis is made clinically and radiographically and confirmed by anatomopathological study where the tumor is characterized microscopically by a proliferation of multinucleated giant cells associated with an active proliferation of histiocytes, which is in agreement with the data in the literature.^[10,16,17] The differential diagnosis is mainly with synovial cyst, fibroma, lipoma, and synovial sarcoma.^[18]

In all cases, surgical treatment is based on complete removal of the tumour to prevent recurrence. This tumor always presents extensions, especially on the deep side of the tendons. But when there is an erosion of the bone cortex or an intra-bone penetration, it is necessary to perform a careful curettage of the bone. The recurrence rate according to different studies varies between 4 and 44%.^[19,20] This depends on whether the initial resection was complete or not.

CONCLUSION

Giant cell tumors of the tendon sheaths of the fingers pose diagnostic and therapeutic problems. Complete removal of this tumor is often difficult, which would increase the rate of recurrence.

Consent: The patient has given their informed consent for the case to be published.

Conflict of interests: None.

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