

**TENODERMODESIS OF A CHRONIC MALLET FINGER, ABOUT A CASE****Tarik El Mountassir\*, Yassine Benbouzid, Moncef Boufettal, Reda Allah Bassir, Mohamed Kharmaz, Moulay Omar Lamrani and Mohamed Saleh Berrada**

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**ABSTRACT**

Tenodesis is the release of the distal interphalangeal joint to reposition the extended nail phalanx, perform distal interphalangeal arthritis, and perform extensor tendon repair and suture of the distal interphalangeal joint wound; tendon repair is done by shortening by resection of a skin-tendon block, followed by skin-tendon suture. The arthrosis is performed by a wire which will be removed in two months. The intervention is well codified, it is most often performed under locoregional anesthesia, can be performed on an outpatient basis or justify hospitalization for a few days; one or more incisions are necessary, the size of which depends on the difficulties encountered. We present the clinical observation and result of a 31-year-old patient operated by this technique.

**KEYWORDS:** Tenodesis-Mallet finger.**INTRODUCTION**

The mallet finger is a very common lesion that most often affects long fingers, especially those on the ulnar edge of the hand. This lesion was described by Segond in 1880.<sup>[1]</sup> In 1887, Schoening<sup>[2]</sup> described a subcutaneous rupture of the extensor without fracture. Among the various techniques of shortening of the tendon callus, the tenodesis of Brooks and Graner<sup>[3]</sup>, developed in France by Iselin et al.<sup>[4]</sup>, remains the most widely used.

**OBSERVATION**

This is a 31-year-old patient, followed for Crohn's disease for 3 years under treatment. His story goes back to 4 months when the patient was the victim of a domestic accident by a metal end causing a wound in him looking at the dorsal face of the distal phalanx of the 4th metacarpal of his right hand, the picture was complicated by the installation of a deformity of the distal interphalangeal joint of his right hand (Fig. 1).

**Fig. 1: wound next to the IPD, flossum of the IPD of the 4th ray.**

On clinical examination, the patient presented: A clean wound measuring 1cm facing the dorsal face of the distal interphalangeal joint of the 4th finger, a neck deformity indicative of IPD, on the other hand palpation of the distal interphalangeal joint was asymptomatic and supple.

A radiographic assessment was requested: no bone mallet (Fig. 2).



Fig. 2: Profile x-ray of the 4th finger without abnormality.

### SURGICAL TECHNIQUE

It is a technique which consists in correcting the extension deficit by an elliptical excision (a) monobloc of the skin and the distended tendon callus, 3mm wide at the back of the IPD, followed by a mass suture, edge to edge, with the non-absorbable suture (b, c). Extension IPD arthrosis is classically associated (d, e, and f) for four to five weeks, but immobilization by splint is preferred due to its lower iatrogenesis.



### RESULTS

At 1 year follow-up, we observed no major complications, such as skin necrosis, infection, algodystrophy, sensitivity to cold.

Amplitude of the active DIP from 10 ° to 60 ° after the operation, from an average position of 40 ° before. No hyperextension and active flexion at 65 °. The results were classified as improved according to objective clinical criteria of Abouna and Brown (5).



## DISCUSSION

Iselin *et al.* (4) obtained 85% satisfactory results with an average flexion of 62 ° and an average extension deficit of 11°.

Kon and Bloem (6) obtained similar results with a mean extension deficit of 5 ° and flexion of 60 ° in a series of 27 cases.

Levante *et al.* (7) point out, however, that tendon shortening is difficult to adjust and that there is a risk of stiffness in extension if the shortening exceeds 3mm.

In the case of swan neck deformity with moderate hyperextension of the PPI, tenodesis may be associated with capsulorrhaphy of the palmar plate of the PPI by a Bruner-type approach. This involves excision in an orange quarter of the palmar plate over 2 to 3mm, followed by re-tensioning by suturing edge to edge, in order to obtain a 15 ° flexion of the IPP.

## CONCLUSION

The mallet finger, which is a frequent lesion, is most often treated orthopedically in the acute phase, while the old form with aesthetic and functional repercussions requires surgery according to different techniques depending on the deformation of the finger.

## CONSENT

The patients have given their informed consent for the case to be published.

## Competing Interests

The authors declare no competing interest.

## Authors 'Contributions

All authors have read and agreed to the final version of this manuscript and have equally contributed to its content and to the management of the manuscript.

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