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Boxer's Knuckle: About A Case

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Case Report

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Abstract: Direct trauma to the dorsal aspect of the metacarpophalangeal joint is common in sports practice, especially in martial arts practitioners, who experience repetitive trauma to the closed fist. The rupture of the sagittal fibers of the metacarpophalangeal joints is a specific pathology of the boxer. We present here the case of a boxer operated for a fresh rupture of the sagittal fibers of the 3rd ray of the hand, with a good post-operative evolution.
Keywords: Boxer's knuckle, Sagittal strip, Treatment

INTRODUCTION

The sagittal strip corresponds to a ligamentous structure allowing, under normal conditions, to stabilize the extensor tendon of the finger at the head of the metacarpal and which prevents this tendon from being dislocated. The rupture of the sagittal fibers of the metacarpophalangeal joints is a specific pathology of the boxer. We present here the case of a boxer operated for a rupture of the sagittal fibers of the 3rd ray of the hand.

CLINICAL CASE

He is a 25-year-old amateur boxer, right-handed, having presented a punch on a punching bag by his right hand, a sharp pain localized opposite the dorsal surface of the third metacarpophalangeal joint, with painful limitation of the extension of the third finger.

Physical examination revealed ulnar deviation of the third finger with limitation of active extension of the metacarpophalangeal joint, and there was no bone lesion on the X-ray. In flexion of the third metacarpophalangeal joint, ultrasound showed marked translocation of the tendon to the ulnar slope.

Surgical exploration, through a vertical dorsal edge pathway, showed a longitudinal rupture of the sagittal fibers facing the radial aspect of the third metacarpophalangeal joint, resulting in ulnar dislocation of the extensor tendon of the third finger in bending of the finger (Figure 1). A suture of the torn area was performed, using a slow resorption wire, allowing a refocusing of the tendon. The 3rd finger was immobilized at 20 ° of flexion by a dorsal metal splint for 6 weeks, before beginning the rehabilitation. A stop of sport of 3 months was recommended.

After a 1-year follow-up, finger mobility is complete, the extensor tendon is centered around the metacarpophalangeal joint and our patient was able to resume his sports activities at the same level.

DISCUSSION

The sagittal strip corresponds to a ligamentous structure allowing, under normal conditions, to stabilize the extensor tendon of the finger at the head of the metacarpal and which prevents this tendon from being dislocated.

In general, it is after a direct impact on the head of the metacarpal that this strip breaks subcutaneously; without lesion of the skin opposite, resulting in subluxation or dislocation of the extensor tendon. Given its frequency in boxers, this lesion was named "boxer's knuckle" in 1957 by Gladden [1].

In case of rapid diagnosis and absence of blunt dislocation of the extensor tendon, corresponding to a partial rupture of the sagittal fibers, possibly confirmed by ultrasound, orthopedic treatment may be envisaged by setting up a splint immobilizing 20 Bending the metacarpophalangeal joint of the affected finger [1, 2].

In cases of dislocation or unstable instability, surgical treatment should be offered [1- 6]. It consists of the open repair of the sagittal band and a

postoperative immobilization of the same type as the orthopedic treatment [7- 9].

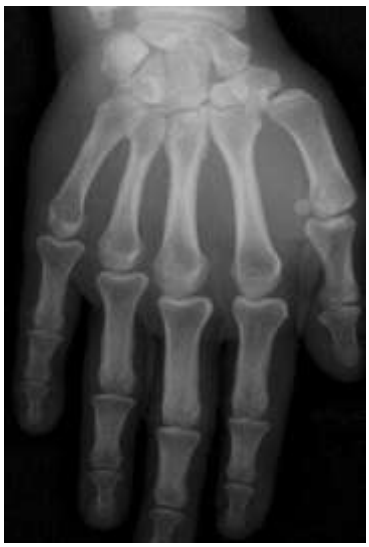

Fig-1: Absence d'anomalie sur la radiographie standard de la main

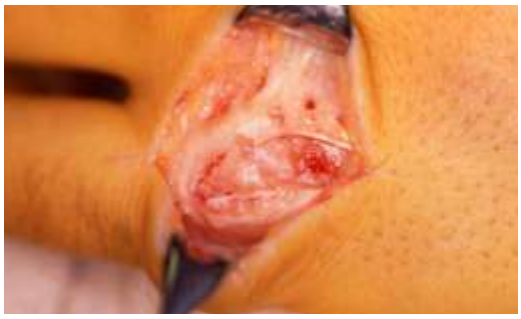

Fig-2: Aspect per-opératoire de la rupture de la rupture de la fibre sagittale, sans rupture capsulaire

Arai [10] considers that conservative treatment of this lesion may not be effective when the joint capsule is disrupted, and recommends arthrography of the metacarpophalangeal joint to facilitate the decision of surgical or conservative treatment.

CONCLUSION

The rupture of the sagittal fibers is a diagnosis not to be missed in the boxer. Orthopedic treatment may be considered when there is no dislocation of the extensor tendon. In cases of dislocation or unstable instability, surgical treatment must be the rule, allowing consistently favorable outcome data.

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