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Case report

Stener-like lesions due to radial collateral ligament rupture in the metacarpophalangeal joints of two adjacent fingers: A case report and review of literature

Lésion de Stener lors d'entorses du ligament collatéral radial des articulations métacarpo-phalangiennes de deux doigts adjacents. Cas clinique et revue de la littérature

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Abstract

Rupture of the collateral ligaments in the metacarpophalangeal (MCP) joint of a finger is less common than in the thumb. Literature about these lesions is sparse but the number of chronic injuries reported underlies the number of cases overlooked by physicians at the first visit. A Stener-like lesion is characterized by interposition of the extensor hood or the sagittal band between the torn collateral ligament of the MCP joint of a finger and its insertion. It was originally described as interposition of the adductor aponeurosis of the thumb. We present the first case of a Stener-like lesion in ruptured radial collateral ligaments of the MCP joint of two adjacent fingers.
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Keywords: Collateral ligament rupture; Fingers; Metacarpophalangeal joint; Stener lesion

Résumé

Les ruptures des ligaments collatéraux des articulations métacarpo-phalangiennes (MCP) des doigts longs sont moins fréquentes qu'au pouce. La littérature portant sur ces lésions est peu abondante, mais le nombre des lésions chroniques rapportées souligne la fréquence des cas non diagnostiqués. L'effet Stener est caractérisé par l'interposition de la dossière de l'appareil extenseur ou de la bandelette sagittale entre le moignon ligamentaire et son insertion. Il a initialement été décrit au pouce. Nous rapportons le premier cas de rupture du ligament collatéral radial de la MCP de deux doigts adjacents avec effet Stener.
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Mots clés : Rupture ; Ligament collatéral ; Doigt long ; Articulation métacarpo-phalangienne ; Lésion de Stener

1. Introduction

Rupture of collateral ligaments in the finger metacarpophalangeal (MCP) joint is rarer than in the thumb. In a prospective study, Delaere et al. reported that MCP collateral ligament ruptures are present in 1/1000 hand injuries seen in emergency departments, with up to 39% involving the long fingers [1]. Beauperthuy and Burke [2] reported 12 cases of unstable collateral ligament injuries of the MCP joints: 9 involving the ulnar collateral ligament (UCL) of the thumb and 3 affecting the radial collateral ligament (RCL) of the fingers. Literature on these lesions is sparse but the number of chronic injuries [3–7] reported underlies the number of cases overlooked by physicians at the first visit. A Stener lesion is characterized

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by the interposition of the extensor hood, sagittal band or interosseous tendon between a torn collateral ligament in the MCP joint of a finger and its insertion. It was originally described as interposition of the adductor aponeurosis of the thumb [8]. We present the first case of a Stener-like lesion in ruptured radial collateral ligaments of the MCP joint of two adjacent fingers.

2. Case report

A 62-year-old man fell on his right hand while running. When he struck the pavement, a forceful ulnar deviation of the 3rd and 4th digits injured the MCP joint of these two fingers. A diagnosis of RCL rupture in the MCP joint of the 3rd and 4th fingers was made at the emergency room. The patient complained of pain and joint instability when trying to grasp objects between the thumb and the affected fingers.

On physical exam, swelling and marked tenderness along the radial side of the MCP joints were found. When an ulnar stress was applied to flexed MCP joints, the resulting laxity revealed lateral instability of the joints (Fig. 1b). X-ray examination showed distal avulsion fracture of the RCL in the MCP joint of the 3rd and 4th fingers (Fig. 1a). The avulsed fragment was displaced only in the 3rd finger. Ultrasound imaging confirmed a displaced avulsion fracture of the RCL in the 3rd MCP joint and showed a torn ligament detached from the non-displaced avulsion fragment in the 4th finger (Fig. 2). In both fingers, interposition of the extensor apparatus between the ligament stumps and their distal insertions led to the diagnosis of Stener-like lesions. The volar plate and ulnar collateral ligaments were intact.

A dorsolateral surgical approach was used. In both fingers, the distally avulsed ligament was trapped by the injured sagittal band (Fig. 1c). In the 4th finger, the RCL was completely avulsed and detached from the bone fragment. Incision of the extensor mechanism at the junction between the extensor tendon and the sagittal band revealed a large dorsal capsule rupture. A Mini-Mitek® suture anchor was used to reattach the RCL at the base of the proximal phalanx after subchondral bone abrasion. The MCP joint was positioned in 45° flexion in order to repair the ligament with the correct tension. The dorsal capsule and the extensor mechanism were closed using 4-0 PDS.

The MCP joint was immobilized in a cast in 60° flexion for the first 3 weeks and in a thermoplastic splint for an additional 3

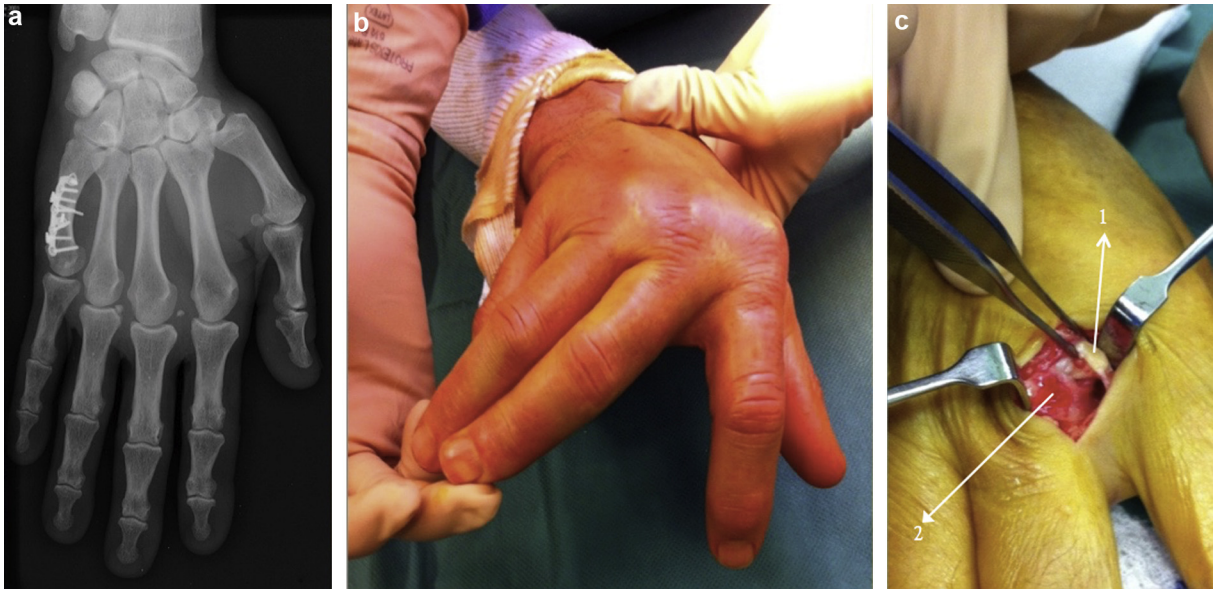

Fig. 1. Preoperative X-ray (a). Laxity to ulnar stress (b). Distally avulsed ligament (1) trapped by the sagittal band (2) (c).

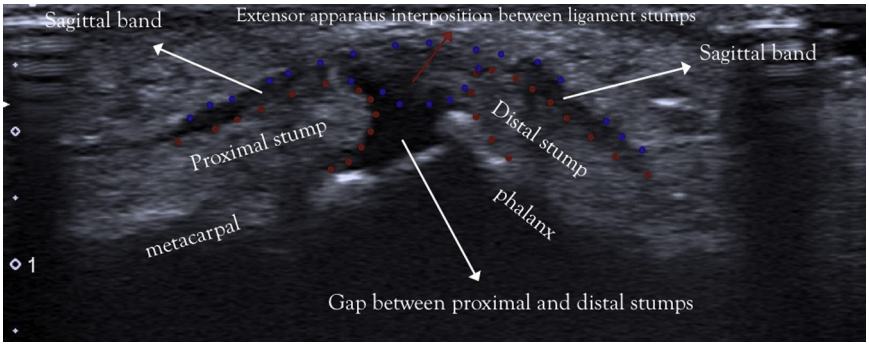

Fig. 2. Ultrasound image (longitudinal view).

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