

Extensor hood injuries: a rare ultrasound finding in our patient's hands

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Dear Sir,

We want to share the case of a 70-year-old woman with an aggressive rheumatoid arthritis diagnosed when she was 55. She complained of subacute and atraumatic pain and swelling in the dorsal aspect of the 3rd right knuckle, with moderate limitation for complete extension of the finger. Ultrasound (US) showed an heterogeneous extensor tendon (ET) with a hypoechoic area surrounding it and positive PD signal, findings compatible with tendinosis and paratenonitis, and an anomalous location in the ulnar side of the metacarpophalangeal joint (MCPj) (Figure 1). The patient was sent to the surgeon after one month of immobilization without improvement, and a tendinous plasty was made with resolution of the symptoms.

The extensor hood or dorsal hood is a complex aponeurotic retinacular system that stabilizes the ET at the dorsal aspect of the MCPj, keeping it in place during flexion and extension. US and MRI have been used to study this structure, with plenty of publications specially by radiologists and surgeons. The purpose of this letter is to alert the rheumatologists for this clinical enti-

ty, and show US as a reliable and simple diagnostic tool for its diagnosis¹⁻³.

Rupture of the dorsal hood is relatively frequent and mostly reported in traumatic cases due to its superficial location, typically in boxers ("boxer knuckle"). But it has also been reported as congenital absence or laxity, spontaneous ruptures and related to inflammatory disorders² as our case. Nevertheless, dislocation or subluxation of the ET is uncommon due to its system of bands: sagittal bands (SB), oblique bands (OB) and transverse bands (TB).

The SB run circumferentially around the MCPj attaching strongly the ET. It is the most important component of this stabilizer system as it restricts proximal displacements of the ET and contributes to the extension of the finger¹. In an US transverse view, with the hand in extension with 30° flexion of MCPj, these structures are seen as two hypoechoic lines on both sides (radial and ulnar) of the ET¹ (see C of Figure 1). Injuries are seen as focal hypoechoic thickening with loss of its normal echostructure¹⁻³ and subluxation of the tendon during flexion⁴ (dynamic examination) (see A of Figure 1). Ulnar side dislocation due to radial band rupture has been more frequently reported^{2,5,6}.

The OB and TB are fibrous extensions of the lum-

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FIGURE 1. Transverse view of dorsal aspect of MCPj. (A) Luxation of extensor tendon (star) respect the metacarpal bone (MC), looking heterogeneous and with associated paratenonitis (arrow). (B) Same image with doppler signal. (C) Contralateral joint showing normal location of extensor tendon and normal sagittal bands (arrows).

brical and interosseus muscles, with a less important role in the stability extensor system for most authors, but enough to maintain the tendon correctly placed if the SB is broken (that is why, although SB injuries are the most common, true dislocation of the ET is not frequent). These are more difficult to assess by US¹ because of their thinner structure.

In normal conditions, it is described a 10-15° ulnar deviation in the 2nd and 3rd fingers, which is felt to represent a predisposing factor for SB rupture in these fingers^{1,2,7}. Actually, some authors have demonstrated that the rupture of the radial SB in this fingers leads systematically to ulnar dislocation of their ET^{1,2,5}. By contrast, the 5th finger is the most stable, even with complete rupture of the radial SB.

There is no consensus about the treatment. There are more reports of successful outcomes after surgery^{2,6,8,9} than with conservative approaches¹⁰ (splinting in full extension).

To sum up, US is a useful and cheap diagnostic tool to assess the SB, the most frequently affected one and allows us to do dynamical study. This pathology is more frequently seen in the 2nd and 3rd fingers, and less in 5th. Surgery seems to be the better treatment approach.

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AGENDA

4TH JOINT MEETING OF ECTS AND IBMS

Local e Data: Rotterdam, Netherlands, 28 a 30 de Abril de 2015

1ST INTERNATIONAL SUMMIT ON SPORTS AND EXERCISE MEDICINE

Local e Data: Oeiras, Portugal, 30 de Abril a 02 de Maio de 2015

SIMPOSIUM: IMAGIOLOGIA EM REUMATOLOGIA

Local e Data: Póvoa do Varzim, Portugal, 14 a 16 de Maio de 2015

XXIII JORNADAS INTERNACIONAIS DO INSTITUTO PORTUGUÊS DE REUMATOLOGIA

Local e Data: Lisboa, Portugal, 26 e 27 de Novembro de 2015