Volar Plate Injuries Of The Thumb: An Important Role In Thumb Flexion

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INTRODUCTION:

Volar plate injuries of interphalangeal joints of the thumb often occurs from forced sudden hyperextension mechanism, resulting in severe restriction of grip function. The volar plate helps maintain stability of the interphalangeal joint in the anteroposterior plane and prevents interphalangeal joint hyperextension.

We report a case of a right thumb post traumatic volar plate injury which was initially treated as a flexor pollicis longus (FPL) rupture.

REPORT:

A 20 year old gentleman was referred to xxx Hand Unit with a right thumb soft tissue injury from a falling object, post trauma 4 months. Patient's main complaint was inability to actively flex right thumb.

On examination, right thumb was in hyperextension at rest, with an abnormal finger flexion cascade. Active flexion of right thumb is nil.

An USG of right thumb (figure 1) reported high grade tear of the distal FPL tendon.

Intraoperatively (figure 2), FPL was found intact. Interphalangeal volar plate was torn and detached from its insertion and displaced distally, and subsequently repaired plicated with Prolene 4/0 to oblique pulley.

Postoperatively, patient able to regain right thumb flexion up to 60^{o} with normal finger flexion cascade.

DISCUSSIONS:

The volar plate serves several functions, mainly providing stability against hyperextension, lateral displacement and torsional forces, and assisting tendon movement. However, it has no direct influence in function of interphalangeal joint active flexion.

CONCLUSION:

More emphasis should be given to the role of volar plate in finger flexion, and a higher degree of suspicion in diagnosis of injuries of volar plate versus tendon injuries.

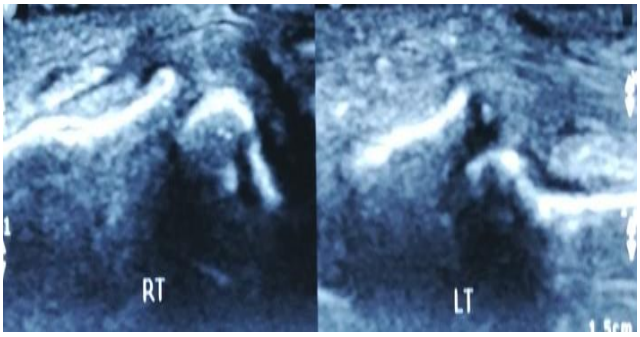

Figure 1: USG Right Thumb

Figure 2: Intact FPL with a ruptured volar plate beneath

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