Metacarpophalangeal instability of the second finger: the use of ligamentoplasty

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OBJECTIVES
Our objective was to evaluate the clinical result of the ligamentoplasty with flexor carpi radialis hemitendon (FCR).

BACKGROUND
Metacarpal-phalangeal instability (MCP) of the second finger in an infrequent pathology associated with rheumatic diseases. The surgical treatment of this condition is not well defined yet.

MATERIAL AND METHODS
We present a clinical case of a 34-year-old woman who was referred for instability, which conditioned her work activity, at the level of the MCP joint of the 2nd finger due to incompetence of the radial collateral ligament. The patient did not report a history of rheumatic diseases or trauma at that level. Clinical examination revealed a positive ulnar stress test at the level of the MCP joint of the 2nd finger at 90º of flexion and in full extension. On plain radiographs, subluxation of the joint is observed. An MRI is requested, which aims for a complete rupture of the radial collateral ligament. (1)

The patient is offered a surgical intervention consisting of a FCR hemitendon ligamentoplasty (2). The objective of this technique is to reproduce the anatomy of the ligamentous complex (collateral radial and accessory ligaments). It is important to be able to control with precision the tension that we will give to the plasty both in flexion and in extension, that is why we will use interferential screws instead of anchors (3).

A dorsal-radial approach of the MCP joint was performed, opening the joint capsule and identifying the palmar plate (4). Two transosseous tunnels parallel to the joint were made in the 2nd metacarpal (MTC) and the proximal phalanx (PF) (5).

After this, the V-shaped ligamentoplasty was slipped through the transosseous tunnel of the 2nd MTC so that we obtained two bundles, which are responsible for reproducing both radial collateral and accessory ligaments, then this tunnel was blocked with an interferential screw. The first one would be in charge of replacing the radial collateral ligament and it was slipped through the transosseous tunnel carved into the PF and blocked with another interferential screw (6). The second of the bundles replaced the accessory ligament and was sutured to the palmar plate.

RESULTS
The clinical result has been satisfactory. On examination, the MTCF joint is stable and with full range-of-movement. The patient has resumed her work activity. The patient was referred to the rheumatologist, who diagnosed a psoriatic arthritis.

CONCLUSIONS
The ligamentoplasty for the chronic rupture of the radial collateral ligament of the MCP joint of the second finger is an original technique whose design is based on reestablishing the anatomy of this ligamentous complex. The clinical results after 9 months of the intervention are satisfactory, although long-term controls will be necessary.