

FPLT position in two separate wrist positions: (1) wrist neutral and fingers fully extended position and (2) wrist in 45° extension and clenched fist position. For analysis, we used the axial ultrasound videos. Postoperative X-rays and CT scan were included for the analysis, especially the soft tissue CT-scan window for the exact localization of the FPLT. To analyze the position of the FPLT and plate in the ultrasound and CT scan, the distance to the radial border of the distal radioulnar articulation in the CT scan was measured (point 1) and put into relation (in percentage) to the distal radius width.

**Results:** In all cases, the FPLT is positioned closer to the volar distal edge of the FPL-Plate in position 2 than in position 1. In four cases, the FPLT didn't touch the plate at all and is moving independently from the plate position. In those cases, the center of FPLT in position 2 is laying the most ulnar, within less than 50% of the distance to point 1. In the other two-third of the cases, the FPLT is gliding into the material gap even if the ulnar edge of this material gap is laying more radial than the middle of the distal radius up to 62% to point 1. No signs of tendinopathy of the FPLT was found in any of the cases. Different parameters to avoid tendon and FPL-Plate interference in a distal plate position are: (A) position of the center of the FPL-Plate between 40% and 50% to point 1, (B) dorsovolar inclination angle of the distal radius of about 10° in the lateral X-ray projection, and (C) the FPL-Plate position at least 1.5mm proximal to the watershed line in the ulnar half of the distal radius.

**Conclusions:** The FPLT slips into the material gap of the FPL-Plate reducing the contact pressure to the distal edge of the plate in its distal position.

#### **A-0250 Minimal endoscopic surgery for treatment the cubital tunnel syndrome**

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**Background:** Compression of the ulnar nerve in the cubital tunnel is the second most frequent entrapment neuropathy of the upper extremity after carpal tunnel syndrome. None of the described techniques for ulnar nerve decompression, however, have proved to be superior in randomized prospective trials. The ideal operative treatment for cubital tunnel syndrome remains controversial. We therefore presented our series of endoscopically decompression of the ulnar nerve at the elbow to determine the effectiveness of this procedure.

**METHODS:** It was prospective, nonrandomized clinical study. In 25 patients: 15 men and 10 women (age's

range 29–76 years) with clinical McGowan grade I (3 patients), II (16 patients), and III (6 patients), and electrophysiologic signs of cubital tunnel syndrome, 21-cm of the ulnar nerve was released through a 2-cm-long skin incision. Diagnosis was based on history, clinical examination (i.e. pain over medial epicondyle, sensory loss, positive Tinel's sign, weakness or atrophy of the muscles innervated by the ulnar nerve, and positive elbow flexion test), and confirmed by neurophysiological studies (nerve conduction velocity and electromyography). A 4-mm, 30° standard endoscope and Storz retractor were used during the procedure, and the mean postoperative follow-up examination was 12 months.

**Results:** There were no visible nerves and vessels injured during the procedure. The main postoperative complication was hematoma in two patients which resolved after conservative management. There was no elbow extension deficit after surgery and surgical wounds, all healed within a week. At final follow-up evaluation, according to the Bishop Rating system, excellent outcomes were obtained in 20 (80%) patients and good outcomes in 3 (12%) patients. Grip strength showed a highly significant increase after surgery compared to the nonoperated hand ( $p < 0.005$ ). The mean DASH score was decreased significantly about 72% (from 76.4 before operation to 21.3 after procedure) ( $p < 0.005$ ); 88% patients were satisfied with the procedure.

**Conclusions:** Endoscopic technique for treating cubital tunnel syndrome is a safe and reliable procedure, characterized by a short incision, minimal soft tissue manipulation, less scar sensitivity, and early postoperative mobilization. It demonstrates promising benefits against conventional approaches (complete release and good visualization) and reduced complication profile (painful scarring and elbow contracture). Endoscopy is a widely imaging study for assessing nerves providing useful information on the severity and stage of nerves pathology.

#### **A-0253 The natural history of elbow flexion strength following obstetric brachial plexus injury**

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**Objective:** There is little published literature regarding recovery of elbow flexion after obstetric brachial plexus injury (OBPI) managed without nerve reconstruction. A study was undertaken to establish the outcome for elbow flexion in children with OBPI who