

# Distal rupture of the biceps tendon with median nerve neurological symptoms

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**MM Al-Qattan, CVA Bowen. Distal rupture of the biceps tendon with median nerve neurological symptoms. Can J Plast Surg 1994;1(4):191.** A rare case of acute onset of median nerve neurological symptoms associated with distal biceps tendon rupture is reported. The patient had a pre-existing asymptomatic carpal tunnel syndrome and the pathophysiology was thought to be the double crush syndrome.

**Key Words:** *Biceps tendon, Median tendon, Tendon rupture*

## Rupture distale du tendon du biceps avec symptômes neurologiques d'atteinte du nerf médian

**RÉSUMÉ :** Cas rare de déclenchement soudain de symptômes neurologiques d'atteinte du nerf médian associée à la rupture du tendon du biceps distal. Le patient présentait un syndrome pré-existant, mais asymptomatique, de tunnel carpien et la physiopathologie a été associée à un syndrome de double écrasement.

**T**raumatic rupture of the distal bicipital tendon is a rare lesion. Reattachment of the tendon to the radial tuberosity through the two-incision technique (1) is the treatment of choice. More recently, the use of a small fragment AO screw and washer to reattach the tendon has been described (2).

### CASE REPORT

While lifting a tree, a 65-year-old man noted acute pain in his left cubital fossa and a sudden onset of numbness into the left hand. The numbness persisted until he presented to us two weeks later. On examination, elbow flexion and forearm supination was weak and associated with pain. He had decreased sensation in the distribution of the median nerve (average static two point discrimination was 6 mm and 4 mm in the left and right hands, respectively). There was no weakness in the muscles supplied by the median nerve. Phalen test was negative and no Tinel sign was noted either in the proximal or distal forearm. Nerve conduction studies of the median nerve in the forearm were normal but an incidental carpal tunnel syndrome was found at the wrist. On exploration of the proximal forearm, complete rupture of the biceps tendon was found but no pathology in the median nerve was noted.

Reattachment of the tendon to the radial tuberosity using a screw and washer was done through the two-incision technique. No carpal tunnel release was performed. Hand numbness gradually resolved and the patient resumed normal activity three months later at which time the average static two point discrimination was 4 mm.

### DISCUSSION

Review of the literature revealed only one case of chronic median nerve compression at the elbow by a synovial bursa that was found on exploration to have a partial tear of the distal biceps tendon (3). Acute onset of neurological symptoms associated with distal biceps tendon rupture has never been reported. Disturbances in antegrade and retrograde axonal transport of various substances may predispose to additional distal symptoms (double crush syndrome) (4) or additional proximal problems (reversed double crush syndrome) (5).

Although our patient was asymptomatic before his injury, he had signs of carpal tunnel syndrome with nerve conduction studies. Biceps tendon rupture caused a minor injury to his proximal median nerve and represented the second crush to the nerve. Recovery of the median nerve from its proximal injury relieved the distal symptoms.

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