

**Svernlöv G, Larsson M, et al. Conservative Treatment of the Cubital Tunnel Syndrome. J Hand Surg Eur 2009;34E:2:201-207.**

Design: Randomized clinical trial

Population/sample size/setting:

- 70 patients (39 women, 31 men, mean age 43) referred for treatment of ulnar neuropathy at the elbow to a university department of hand and plastic surgery in Sweden
- Eligibility criteria were 3 months of numbness and paresthesia of the ulnar aspect of forearm and hand, pain of ulnar aspect of the elbow, tenderness over cubital tunnel, and subjective feeling of weakness of intrinsic muscles of the hand
- No patient had wasting of intrinsic hand muscles, changes in medication, concurrent illness, or change of working conditions during the trial
- Exclusion criteria were neck problems, clinical signs of another nerve problem, previous trauma or surgery of the same arm, elbow arthritis, or palpable subluxations of the ulnar nerve

Main outcome measures

- Randomized to three groups: nocturnal elbow brace for 3 months (n=26), instruction in nerve gliding to be done for 3 months (n=23), or control, receiving information only (n=21)
- Brace was prefabricated with an aluminum splint which prevented flexion beyond 45°
- Gliding exercises were to be done twice per day, with six different positions to be held for 30 seconds, and subsequently to be increased to 3 times per day with each position held for 60 seconds
- Control group received information on description of anatomy, probable causes of symptoms, and instructions on how to avoid provocative movements
- 51 patients were available for examination at the end of 6 months; 6 patients (2 from each group) had had surgery after completing conservative treatment but before the end of the 6 month follow-up; 13 other dropouts were not re-examined at 6 months
- All 51 patients were evaluated with Canadian Occupational Performance Measure (COPM), which asks patients about activity performance and satisfaction, at baseline and again at 6 months
- All patients were similarly evaluated for grip strength, adduction strength of 5<sup>th</sup> digit, daytime pain, nocturnal pain, and ulnar motor/sensory nerve conduction studies & EMG
- For COPM performance scores, the three groups improved equally from baseline to 6 months, with no differences between the 3 groups
- For COPM satisfaction scores, the nerve gliding and control groups had statistically significant improvement, and the brace group had an improvement that was not statistically significant

- Grip strength improvement was not statistically significant in any of the groups
- Fifth digit adduction power did not change significantly in any group
- Nocturnal pain improved significantly in all three groups; daytime pain improved significantly in the gliding and control groups
- Patients with normal baseline electrodiagnostic studies remained normal, and 9 of 12 patients with abnormal baseline studies improved during the period of observation

Authors' conclusions:

- Majority of patients with mild to moderate cubital tunnel syndrome benefit from conservative treatment
- Number of patients was small and many declined to attend 6-month follow-up, but the dropouts were evenly distributed between the three groups and did not differ from those who remained in the study
- Information on the causes of the condition and how to avoid provocation may be sufficient; and bracing and gliding exercises may be superfluous

Comments:

- "Another, independent" occupational therapist evaluated the patients before and at 6 months after starting the study; this was independent of the therapist who administered the interventions, but it is not clear that the evaluator was unaware of the treatment assignment
- The functional significance of the COPM is not clear, but it appears to be a global self-report measure, and tasks specific to the function of the ulnar nerve are not likely to be captured
- The data do support the suggestion that many patients with ulnar nerve entrapment at the elbow benefit from education about the anatomy of the nerve and ways to avoid provoking symptoms

Assessment: Adequate for an evidence statement that a trial of conservative treatment, with emphasis on education concerning nerve anatomy and appropriate movements, should be the first line of treatment for mild to moderate cubital tunnel syndrome