Chang MH, Chiang HT, et al. Oral drug of choice in carpal tunnel syndrome [CTS]. Neurology 1998;51(2):390-393.

PMID: 9710008

Design: Randomized clinical trial

Purpose of study: to evaluate the effectiveness of commonly uses oral medications (NSAIDs, diuretics, steroids) in the treatment of CTS

Population/sample size:

* 73 patients (53 women, 20 men, mean age 45.7) with symptoms of CTS treated at a veterans hospital neurology clinic in Taiwan
* Prospective participants underwent motor & sensory conduction studies of median, ulnar, radial nerves
* Excluded from further study if abnormal EMG of abductor pollicis brevis, proximal median neuropathy or cervical radiculopathy, hypothyroidism, DM, wrist arthritis, pregnancy, vibratory machine use, obesity, NSAID intolerance, cognitive impairment, or recent peptic ulcer

Interventions:

* 79 randomized to 4 weeks of placebo (n=19), 4 weeks of trichlormethiazide 2 mg/d (n=18), 4 weeks of NSAID 20 mg/d (tenoxicam-SR, n=19) or 2 weeks of prednisolone 20 mg followed by 2 weeks of 10 mg (n=23), but only 73 completed the study
* White pills of similar appearance were used for each group, and the evaluating physician was the same for each time for each patient

Main outcome measures:

* Global symptom score (GSS) is sum of 5 symptoms (pain, numbness, paresthesia, weakness/clumsiness, nocturnal wakening) each on scale of 1-10
* Change in GSS from baseline to 4 weeks analyzed by analysis of variance (ANOVA) was main outcome for effectiveness
* 6 failed to complete study (3 placebo, 2 thiazide, 1 NSAID); 73 completed study with no major adverse effects
* GSS improved at 2 and 4 weeks significantly more in prednisolone than in other 3 groups, which did not differ significantly from each other
* Mean GSS decreased from 27.9 to 10.0 in prednisolone group, 22.9 to 20.8 in placebo, 26.0 to 21.6 in thiazide, and 29.7 to 24.0 in NSAID

Authors’ conclusions:

* For mild to moderate CTS when oral medication is used, short course of oral steroid is drug of choice
* Further study needed to determine whether symptoms recur after steroids discontinued, whether long-term side effects occur after short course of steroid, how oral steroids compare with other conservative therapies such as splinting and steroid injection

Comments:

* No functional measures of outcome provided; only the GSS was assessed
* Followup ends at 4 weeks
* Although the authors conclude that further study was needed to investigate whether steroid therapy was effective for long-term symptom relief, and whether symptoms recur after they are discontinued, it appears that no followup study has been done for this patient population since 1998, even though the article ends by saying, “further studies are now in progress”
* While the design and analysis have a low risk of bias for the main conclusion, the scope of the study is limited to an outcome of similarly limited relevance to decision-making for the treatment of CTS

Assessment: adequate for some evidence that a short course of oral prednisolone decreases the composite score of CTS symptoms of pain, numbness, paresthesia, weakness/clumsiness, and nocturnal wakening more effectively than placebo, tenoxicam, or a thiazide diuretic, but inadequate for evidence of functional benefit or for benefit beyond 4 weeks

Note: not used because appeared to be included in Huisstede systemic study which included a number of meta-analyses and systemic reviews from earlier years