

Wong SM, Hui ACF et al. Local vs systemic corticosteroids in the treatment of carpal tunnel syndrome. Neurology 2001;56:1565-1567.

Design: Randomized clinical trial

Population/sample size/setting:

- 60 patients (7 men, 63 women, mean age 49) treated for carpal tunnel syndrome at a university department of orthopedics in Hong Kong
- Eligibility based on 3 month history of new sensory symptoms in median nerve distribution, with prolonged median distal motor latency or median-ular palmar sensory latency difference; all had failed to improve with 2 months of splinting
- Exclusion criteria were severe CTS with thenar muscle fibrillation or atrophy, nerve conduction studies consistent with other diagnoses, contraindication to steroid use, CTS-associated disorders such as diabetes, RA, pregnancy; or previous steroid therapy for CTS

Main outcome measures:

- Randomized to either oral (n=30) or injection (n=30) of steroid
- Oral steroid group received 10 day course of 25 mg prednisolone and a placebo injection into the carpal tunnel; injection group received a 10 day course of oral placebo and 15 mg injection of methylprednisolone into carpal tunnel
- Global Symptom Score (GSS) measures symptoms in 5 categories on a scale of 0-10: pain, numbness, paresthesia, weakness/clumsiness, and nocturnal awakening; score of 0 is symptom-free and 50 is maximal severity
- GSS was measured at baseline and at 2, 8, and 12 weeks by a blinded clinician
- GSS did not differ significantly at baseline (25.0 for injection group, 25.7 for oral steroid group) or at 2 weeks; however, at 8 weeks the injection group had significantly lower GSS than the oral steroid group (13.7 vs. 20.8), and this difference was again observed at 12 weeks (14.3 vs. 21.4)
- Side effects were minimal, but appeared more frequently in the oral steroid group (2 injection pain, 3 polyphagia, 2 bloating, and 2 insomnia, with the injection group having only 2 reports of injection pain)

Authors' conclusions:

- Local steroid injection is superior to a 10 day course of oral steroid for newly diagnosed CTS over a 3 month period
- The greater benefit of steroid injection is not likely to be accounted for by the half-life of Depo-Medrol

Comments:

- Population consisted of recently diagnosed CTS and may not apply to chronic CTS
- Double blinding was preserved by giving each group one active and one placebo agent, which increases the quality of the study

- Statistical analysis by analysis of covariance would have been preferable to the t-tests that were used for group comparisons; however, the apparent advantage of steroid injection would probably have been observed in any analysis

Assessment: High quality (good randomization and blinding, complete follow-up, alternative treatments adequately described)