**Karadas O, Tok F, et al. Triamcinolone acetonide vs procaine hydrochloride injection in the management of carpal tunnel syndrome: randomized placebo-controlled study. J Rehabil Med. 2012;44(7);601-4.**

PMID: 22674243

Purpose of study: to determine the effectiveness of triamcinolone, of procaine HCl, and the combination of both in the treatment of CTS

Brief summary of findings and authors’ conclusions:

* 99 patients with CTS confirmed by nerve conduction studies were randomized into three groups, each of which received an injection into the carpal tunnel: 40 mg triamcinolone (n=34), 4 ml of 1% procaine (n=32), and a combination of both (n=33)
* Followup was done at 2 months and 6 months after treatment
* Outcomes were distal motor latency, compound muscle action potential, compound sensory action potential, sensory nerve conduction velocity, and pain on a 10 point VAS measurement
* Electrophysiologic outcomes were not statistically different between steroid only and procaine groups at 2 or at 6 months, but VAS scores were better in the steroid only than in the procaine group at 2 months, becoming statistically equal at 6 months
* Electrophysiologic outcomes were not statistically different between steroid only and combination steroid + procaine groups at any followup time, but VAS scores were better in the combination group than in the steroid only group at 6 months
* The combination group had better VAS scores at 2 and 6 months than the procaine only group
* The authors concluded that procaine was as effective in treating CTS as triamcinolone and could be used when steroids are contraindicated

Reasons not to cite as evidence:

* The outcomes did not directly measure wrist function, and the electrophysiologic variables may not reflect how well the interventions restore functional abilities
* The pain VAS was not quite equivalent between interventions at all time points, and steroid injection was slightly favored over procaine injection
* Therefore, there is insufficient information to support an evidence statement that procaine is as effective as triamcinolone in treating CTS
* However, there is also no evidence that triamcinolone is superior to procaine, and it is justifiable to say that procaine may be offered as an option when it is desirable to avoid steroid injections in patients with CTS