**Chandra PS, Singh PK, Goyal V et al. Early versus delayed endoscopic surgery for carpal tunnel syndrome: prospective randomized study. World Neurosurg. 2013;79(5-6);767-72.**

PMID: 23022645

Design: randomized clinical trial

Purpose of study: to compare the outcomes of endoscopic carpal tunnel release performed within one week of diagnosis of moderate to severe CTS with the results of surgery done after six months of conservative treatment

Reasons not to cite as evidence;

* The authors treated 100 patients (86 women, 14 men, mean age 45) with moderate to severe CTS at a department of neurosurgery in New Delhi
  + Moderate CTS meant preserved index finger sensory nerve action potential (SNAP) and distal motor latency between 4.5 ms and 6.5 ms
  + Severe CTS meant absent SNAP and distal motor latency < 6.5 ms
  + These definitions were somewhat altered from the source they cite for using it (Bland 2000), but are not substantially altered
* All patients had surgery, but at different times from that of diagnosis
  + Patients were randomized to have endoscopic surgery 1 week from the time of diagnosis (n=51) or surgery after 6 months of conservative treatment (n=49)
* Followup was done 6 months after surgery, with three primary outcomes: general improvement, nocturnal awakening, and severity of most important symptoms; these three outcome scores were combined to form a scale from 0 (best score) to 13 (worst score)
  + The three primary outcomes were then combined with scores from four secondary outcomes (patient satisfaction, use of pain medication, the Boston Symptom Severity Scale, and the Boston Functional Status Scale) to form a “clinical score” from 0 (best score) to 23 (worst score)
* The groups began with similar mean preoperative clinical scores (21.33 for the early surgery and 20.33 for the delayed surgery groups), but the postoperative scores were lower for the early surgery group (8.11 points) compared to the postoperative group (18.19 points)
  + 100% of the early surgery group returned to normal activity, but only 11% of the delayed surgery group returned to normal activity
* The problems with the study arise from an inadequate description of the conservative treatment received by the delayed surgery group: some trial of NSAIDS, pregabalin, and physiotherapy of some kind, with or without splint; there is no data on timing, dosage, or type of PT, and there is no indication that any patient actually received any of the conservative interventions; steroid injections were not mentioned
* In addition, the primary and secondary outcomes are combined into a single score, which defeats the purpose of designating primary outcomes
* There is an extremely poor return to normal activity (11%) in the delayed surgery group, compared to a perfect (100%) return to normal activity in the early surgery group; this is an implausibly poor outcome of endoscopic surgery for a group of patients who still had preserved motor nerve function with distal latency <6.5 ms
* The results of the study therefore do not constitute evidence that immediate surgery should be done in patients with CTS who have residual motor function

Reference:

Bland JD: A neurophysiological grading scale for carpal tunnel syndrome. Muscle Nerve 23:1280-1283, 2000.