Assessing preoperative nerve damage is the best predictor of outcome following carpal tunnel surgery


This article misses several very important points. Most importantly the authors have not included the severity of preoperative symptoms when they analyse the factors associated with persistent postoperative symptoms. Patients with constant (as opposed to intermittent) preoperative paraesthesia or numbness are likely to have a degree of damage to the median nerve that will not recover fully with carpal tunnel decompression. This is important to determine since the patient must be warned of the likelihood of at least some residual post-operative symptoms. While the authors state that they calculated a symptom severity scale for each subject, this information is not presented.

The authors should also distinguish between persistence of carpal tunnel symptoms and recurrence of carpal tunnel symptoms. Persistent “carpal tunnel symptoms” may indicate that the nerve has some permanent damage, the diagnosis was incorrect or that the carpal tunnel has not been completely released. Recurrence of carpal tunnel symptoms implies a symptom-free interval followed by a return of symptoms. While unusual, this can happen; scar formation may be one cause.

Almost all patients with intermittent carpal tunnel symptoms will experience dramatic and prompt resolution of their symptoms once the carpal tunnel is released. The night of surgery they no longer wake with symptoms. Where the preoperative symptoms are constant, suggesting median nerve damage, patients will usually report some change in their symptoms and often report a significant reduction in their pain levels. Visualisation of a hyperaemic segment of median nerve and identification of the carpal ligament completely released at both ends (particularly proximally where it is continuous with the deep forearm fascia) help reassure the surgeon that the diagnosis and treatment are correct.

The elderly are more likely to present with advanced carpal tunnel symptoms which indicate permanent nerve damage. However, even in this situation, carpal tunnel release is effective in improving symptom severity and functional status.

Unfortunately the authors’ failure to address these points invalidates their conclusions. The factors they assessed, which failed to gain statistical significance, are not useful predictors of outcome following surgical intervention. The most important factor that predicts outcome is the severity of symptoms preoperatively. It is imperative that the carpal tunnel is released before there is permanent damage to the median nerve, i.e. while the symptoms are intermittent and before the onset of thenar muscle atrophy.

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