

Surgery provides modest benefit over non-surgical treatment for patients with carpal tunnel syndrome

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(PhysOrg.com) -- While surgery for carpal tunnel syndrome in patients without an indication of severe nerve damage (denervation) provides better outcomes than non-surgical treatment, the clinical relevance of this difference is modest. The findings of this comparative effectiveness research are reported in this week's Surgery Special Issue of The Lancet, written by Dr. Jeffrey Jarvik, professor of radiology and neurosurgery at the University of Washington and director of the Comparative Effectiveness, Cost and Outcomes Research Center at UW, and colleagues.

In this randomized controlled trial, the authors assigned 116 patients from eight academic and private practice centers to carpal tunnel surgery (57 patients) or to a well-defined, non-surgical treatment (including hand therapy and ultrasound; 59 patients). The primary outcome was hand function measured by the Carpal Tunnel Syndrome Assessment Questionnaire (CTSAQ) at 12 months, assessed by research personnel unaware of group assignment.

A total of 44 (77%) patients assigned to surgery underwent surgery. At 12 months, 101 (87%) completed follow-up and were analyzed (49 of 57 assigned to surgery and 52 of 59 assigned to non-surgical treatment). Analyses showed a significant 12-month adjusted advantage for surgery in both function and symptoms (calculated by proportions of patients having at least 30% improvement in CTSAQ scores for these indicators,

and having minimal interference in daily work or housework duties). Forty-six % of surgery patients met all three criteria, compared with 27% of non-surgery patients.

While the findings indicate surgery modestly improves hand function and symptoms in patients who have carpal tunnel syndrome but no severe [nerve damage](#), the study also found that some patients who underwent surgery experienced persistent symptoms. In addition, patients allocated to non-surgical treatment, such as physical therapy and ultrasound, also improved over time -- just not as much as those who underwent surgery.

"Our study is a prime example of how comparative effectiveness research can provide practical answers to relevant questions," Jarvik explained. "Not everyone will benefit from surgery, and some people will improve just as much without surgery. The decision to have surgery should take into account patients' own preferences about surgery, as well as their physician's advice. This study helps to inform that decision."

In an accompanying commentary, Dr. Isam Atroshi, Hässleholm and Kristianstad Hospitals, and Lund University, Sweden, and Dr. Christina Gummesson, Lund University, Sweden, wrote: "Future studies should compare the overall costs of surgical and non-surgical treatments, to take into consideration all relevant aspects. Finally, patients' preference is important: faced with the need to wear a splint each night and during daytime for some weeks, some might prefer early surgery while others may prefer partial recovery to potential surgical risk. Nevertheless, patients with carpal tunnel syndrome who do not have satisfactory improvement with non-surgical treatment should be offered [surgery](#)."

Provided by University of Washington ([news](#) : [web](#))

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