

# Early Postoperative Function and Patient-Reported Outcomes Following Simultaneous Bilateral Carpal Tunnel Release

Tim Lancaster MD, Rashard Dacus MD

## Background

Over 500,000 carpal tunnel release surgeries are performed each year in the U.S., accounting for significant healthcare cost and time off work. Simultaneous bilateral carpal tunnel release has been advocated as a safe and cost-effective treatment option which allows for shorter overall recovery as compared to staged procedures. Concerns have been raised regarding early postoperative patient function and ability to return to work following surgery on bilateral hands, as well as infection risk in setting of more difficult hygiene and wound care.

## Methods

All patients who underwent simultaneous bilateral carpal tunnel release with a single fellowship-trained hand surgeon from 2017 to 2022 were considered for inclusion into the study cohort. A control group of patients who underwent unilateral carpal tunnel release during this time were randomly selected. Retrospective chart review was performed on both groups and the following data were collected: patient age, sex, comorbidities, smoking status, duration of symptoms, previous interventions, severity of EMG changes, and clinical outcomes from first and second postoperative visits. Patient-reported outcomes collection is planned for patients who undergo simultaneous bilateral carpal tunnel release, in the form of a survey with questions regarding early functional status and return to work.

## Results

20 patients underwent simultaneous bilateral carpal tunnel release during the study period and were compared to 20 control patients who underwent unilateral carpal tunnel release. Bilateral patients were average age 54.5, 20% were active smokers, 40% reported symptoms for over one year, and average time from initial visit to surgery was 154 days. Unilateral patients were average age 58.6, 20% were active smokers, 35% reported symptoms for over one year, and average time from initial visit to surgery was 266 days. In the bilateral group one patient experienced a superficial wound dehiscence which healed with local wound care and did not require antibiotics. At second postoperative visit 6 unilateral patients had documentation of residual paresthesias or numbness as compared to 2 in the bilateral group. Patient-reported outcomes collection is currently underway.

## Conclusion

This study is ongoing and patients are actively being recruited. We are seeking to expand both the study and control groups with emphasis on patient-reported outcomes data as survey results are completed. Early results from retrospective review indicate a trend toward decreased time from initial visit to surgery for bilateral patients, although this is not statistically significant. There does not appear to be a difference in wound complications or infection rates in our current sample. Of particular interest within patient-reported outcomes data will be postoperative-week-one function with regard to ADLs, timing of return to work, and ability to work at a full-duty capacity.