

# Incidence of Trigger Digits after Carpal Tunnel Release: A Nationwide, Population-Based Cohort Study

Hsu-Tang Cheng, MD; Oscar J. Manrique, MD; Fu-Yu Lin, MD; Cheng-Li Lin, MSc; Yung-Chang Hsu, MD

**Disclosure/Financial Support:** None of the authors has a financial interest in any of the products, devices, or drugs mentioned in this manuscript.

**INTRODUCTION:** The onset of trigger digits after carpal tunnel release (CTR) have been reported inconsistently across the literature.<sup>1</sup> The aim of this study is to assess the incidence of trigger digits after CTR using a nationwide population cohort data.

**MATERIALS AND METHODS:** We conducted a retrospective cohort study using the Longitudinal Health Insurance Database 2000 (LHID2000) from the National Health Insurance Database (NHIRD) in Taiwan. The LHID2000 contained one million beneficiaries randomly selected from the year 2000 Registry for Beneficiaries in NHIRD. From 2000 to 2010, 2,605 carpal tunnel syndrome (CTS) patients received CTR (CTR cohort, n = 2,605). For each CTR patient, 4 CTS patients without CTR were randomly selected in the control cohort from the general population frequency matched by age, sex, and diagnosed year (non-CTR cohort, n = 10,420). Both cohorts were followed up until the end of 2011 to investigate the occurrence of trigger digits. Adjusted hazard ratios (aHRs) with 95% confidence interval (CI) of trigger digits were estimated using the Cox proportional hazards model after controlling for age, sex and comorbidities.

**RESULTS:** The CTR cohort had a mean follow-up period of  $5.58 \pm 3.18$  years and the non-CTR cohort had a mean follow-up period of  $5.90 \pm 3.10$  years. The overall risk of trigger digits was 3.63-fold greater in the CTR cohort than in the non-CTR cohort (incidence rate: 12.6 vs 3.38/1,000 person-years, aHR: 3.63, 95% CI, 2.97 - 4.44). The incidence of postoperative trigger digits was highest in the first six months (incidence rate: 27.9/1,000 person-years, aHR: 9.65, 95% CI: 5.27 - 17.7) and then significantly decreased over time.

**CONCLUSION:** CTR was significantly associated with the subsequent development of trigger digits, especially in the first postoperative six months.

## REFERENCE:

1. Cheng HT, Wu CI, Hsu YC. Coincidence or Complication? A Systematic Review of Trigger Digits After Carpal Tunnel Release. *Plast Reconstr Surg.* 2015;136(4 Suppl):21-2.