Trigger Thumb After Carpal Tunnel Release

Ronit Wollstein, Duffield Ashmead, Lois Carlson, Haruko Okada, Jonathan Macknin, Steven Vantler Naalt
New York University, NY, USA, The Hand Center, CT, USA

PURPOSE
Trigger finger (TF) and carpal tunnel syndrome (CTS) are common hand conditions that often occur together with an unclear relationship. While some studies conclude that trigger fingers occur as a result of carpal tunnel release (CTR), others found that they present concurrently. We believe that trigger fingers tend to develop following CTR due to an underlying tendency that is exacerbated by post-operative edema. The purpose of this study was to evaluate the prevalence and timing of trigger finger development after open CTR in our population.

METHODS
This study was a retrospective review of 497 patients who underwent open CTR by a single surgeon. Two hundred and twenty-nine charts were included in the study for analysis. Exclusion criteria included patients who 1) had a previous or concurrent diagnosis of trigger finger, 2) had presented for revision carpal tunnel surgery, 3) had a corticosteroid injection for either carpal tunnel syndrome or trigger finger 4) had carpal tunnel release for traumatic reasons.

Patients were analyzed as to the specific digit involved and the timing of the development of triggering after CTR. Patients were also assessed for age, gender, handedness, BMI, workers compensation status and history of diabetes or hypothyroidism.

RESULTS
Thirty-one patients developed triggering after carpal tunnel release (13.5%). Mean population age was 52.5 (14.0).

Follow up ranged from 1-53 months with a median follow up of 6 months (IQR = 2,13).

The thumb was the most common digit to trigger (42.22%) followed by the ring finger 24.44% (11 cases), middle finger 22.22% (10 cases), 8.89% little finger (4 cases), and index finger 2.22% (1 case).

Trigger thumb occurred at a median of 3.5 months (3,6 months) post-operative while other digits occurred at a median of 7.5 months (4,10.25) after surgery (p=0.022). No clear risk factors to trigger finger development after CTR were identified.

CONCLUSIONS
1) In tandem with recent literature, our results suggest that a trigger thumb develops more frequently and earlier than other trigger digits after an open carpal tunnel release.

2) Further study may reveal the underlying mechanism of combined occurrence and may enable specific treatment such as local anti-inflammatory medication following carpal tunnel surgery.

3) We suggest educating prospective carpal tunnel surgery patients that the risk of trigger thumb and trigger digits following CTR is increased.

REFERENCES: