

Current Trends in Carpal Tunnel Release:

Effects of Hand Fellowship Training on Endoscopic and Open Carpal Tunnel Release using the ABOS Database

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Background

CTS is the most commonly reported neuropathy within the United States^{1,2,3}. It is a type of compressive neuropathy. Endoscopic techniques⁴ are becoming more common. Lack of data surrounding current rates of endoscopic technique for CTR in the United States. The effect of hand fellowship training on CTR is unknown.

Objectives

To determine the effect of hand fellowship training on the percentage of CTR performed endoscopically. The American Board of Orthopaedic Surgery (ABOS) database was used to compare open versus endoscopic carpal tunnel release (OCTR) versus non-hand fellowship trained surgeons in the United States. The study was conducted both on a regional and national level. The primary outcome was the percentage of CTR performed endoscopically based on hand versus non-hand fellowship training.

Methods

We searched for patients with CTS who were treated either endoscopically or open from 2003-2013. Patients who were excluded were those who were not in the ABOS database, geographic location, fellowship training, and surgeon level of training. We used Chi-squared tests of independence to compare the two groups.

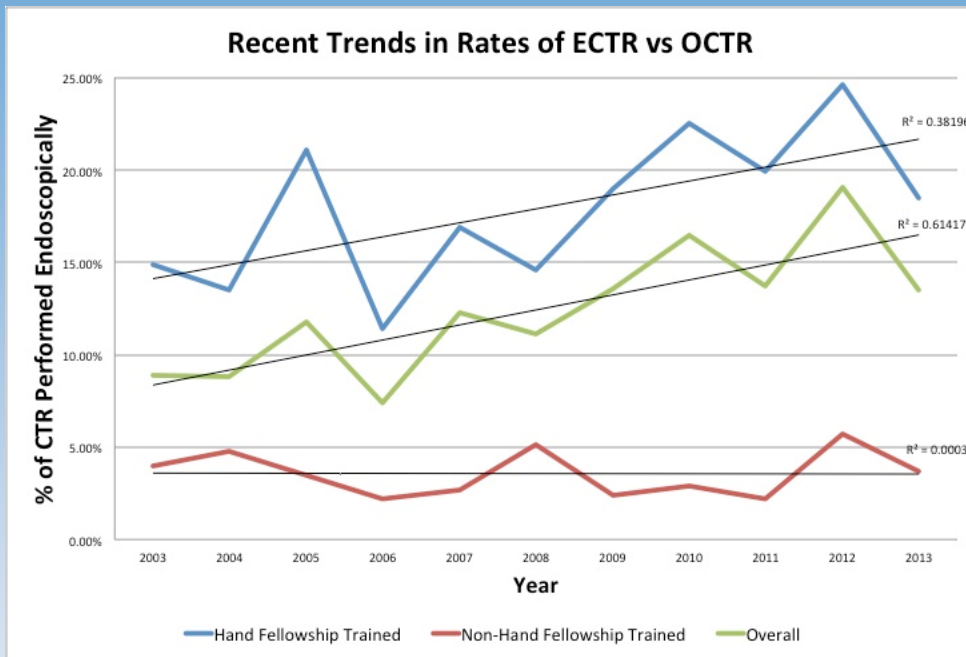


Figure 1. Percentage of CTR performed endoscopically per year within each cohort of our study. Best-fit trendlines are depicted for each cohort as are the corresponding R-squared values.

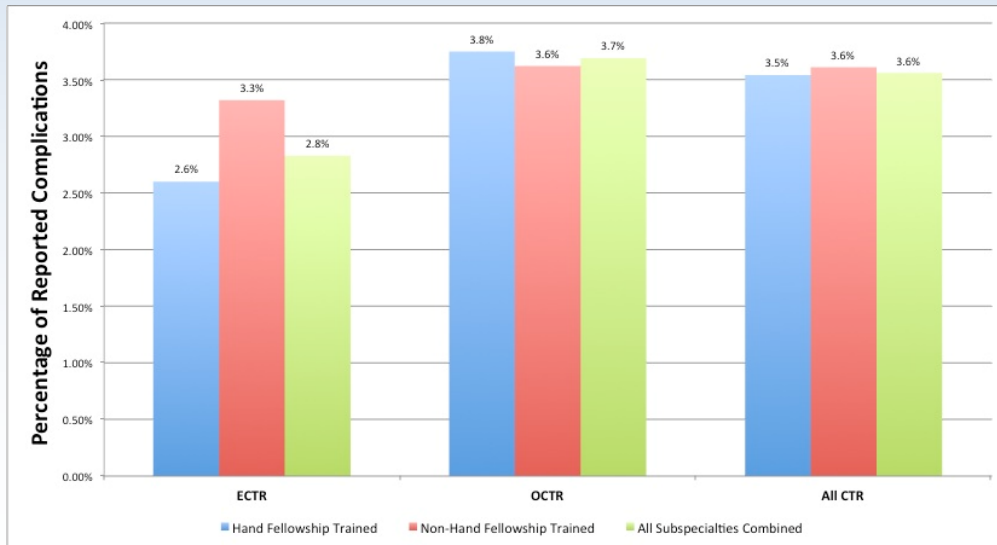


Figure 2: Total reported complications within each cohort for ECTR, OCTR and CTR without

Results

- Overall, 12.4% of all CTR cases were performed endoscopically.
- Hand fellowship trained orthopaedists performed 14.4% (4% more than non-fellowship trained surgeons) (Figure 1)
- An increasing trend towards ECTR was seen in the hand fellowship cohort (Figure 1)
- The Northwest performed the highest percentage of ECTR (18.5%) and the lowest (5.9%) percentage of OCTR.
- Complications rates: CTR overall was 3.6% and with OCTR was 3.7%, with no difference between hand fellowship trained and non-hand fellowship trained surgeons.
- There was no difference between overall complication rates for ECTR and OCTR between the two cohorts.
- Wound complications were significantly higher in the hand fellowship cohort (2.8% versus 0.25%) and nerve palsy with postoperative pain equivalent to that of hand fellowship training.

Conclusion

- Within the United States from 2003-2013, there was an increasing trend towards ECTR, as are reported complications.
- Complication rates remain low in the United States.
- Hand fellowship trained surgeons performed a higher percentage of ECTR than non-hand fellowship trained surgeons.
- However no difference in complication rates was seen between the two cohorts.

References

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