Background

Carpal Tunnel Syndrome (CTS) is the most commonly reported entrapment neuropathy within the United States\(^1\),\(^2\),\(^3\) and it is second only to radiculopathy as the most common compressive neuropathy within the United States\(^4\).\(^5\) With the increasing popularity of endoscopic techniques\(^4\),\(^5\) in the treatment of CTR, the effect of hand fellowship training on the recent trends in rates of endoscopic and open carpal tunnel release (CTR) is unknown. Herein, we aimed to investigate the current trends in rates of endoscopic and open CTR using the data surrounding current rates of endoscopic and open CTR in the United States from 2003-2013 both on a regional and national level.

Aims

We hypothesized that hand fellowship trained surgeons would perform a higher percentage of endoscopic carpal tunnel release (ECTR) versus non-hand fellowship trained orthopaedic surgeons. We also hypothesized that the Northwest performed the highest percentage of ECTR, and the Southeast performed the lowest percentage of ECTR. Our secondary objective was to compare complication rates between ECTR and open carpal tunnel release (OCTR) based on surgeon level of training (hand fellowship trained versus non-hand fellowship trained). Additionally, we investigated the effect of hand fellowship training on the rates of ECTR versus OCTR within each cohort of our study.

Methods

The study population included patients with CTS who underwent CTR either endoscopically or open from 2003-2013. Patients with CTR performed in non-ambulatory care settings were excluded. The demographic data included age, sex, the geographic location of surgery, fellowship training, and subspecialty. The primary outcome was the percentage of ECTR versus OCTR between the two fellowship groups. The secondary outcome was reported complication rates between ECTR and OCTR based on surgeon level of training (hand fellowship trained versus non-hand). Chi-squared tests of independence were performed to compare reported complication rates between ECTR and OCTR within each fellowship group.

Results

Within the United States from 2003-2013, the number of ECTR has been increasing, as are reported complication rates. Hand fellowship trained surgeons performed a significantly higher percentage of ECTR compared to non-hand fellowship trained surgeons. There was no difference in complications rates between ECTR and OCTR between the two fellowship groups. Wound complications were significantly higher with ECTR (2.4% versus 0.25%) and nerve palsy with OCTR (0.3% versus 0.1%).

Conclusion

Within the United States from 2003-2013, the number of ECTR has been increasing, as are reported complication rates. Hand fellowship trained surgeons performed a significantly higher percentage of ECTR compared to non-hand fellowship trained surgeons. However, no difference in complication rates was observed between ECTR and OCTR between the two fellowship groups.

References