Trends in the surgical treatment of cubital tunnel syndrome: an analysis of the NSAS database

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**Background:** Compression neuropathy of the ulnar nerve at the elbow, or cubital tunnel syndrome, is the second most common nerve compression syndrome after carpal tunnel syndrome. Surgical treatment of cubital tunnel is varied and most often based on surgeon preference.

**Methods:** The National Survey of Ambulatory Surgery (NSAS) was analyzed to study current trends in the treatment of compression neuropathy of the ulnar nerve, or cubital tunnel syndrome. The NSAS provides a comprehensive overview of ambulatory surgical procedures performed in the United States. Patients identified in the NSAS database with surgically treated cubital tunnel syndrome were verified by members of our research staff and compiled into these 3 groups: decompression, transposition, and other.

**Results:** An estimated 52,133 surgical procedures (95% CI 46,941 - 57,325) were performed for treatment of ulnar nerve compression in 2006. This represents an increase from 26,283 in 1994 and 35,406 in 1996. In the decade from 1996 to 2006 the total surgical procedures on the ulnar nerve increased by 47.2%. Transposition of the ulnar nerve went from approximately 49.2% of all cubital tunnel procedures in the 1990s to 37.8% in 2006. Males comprised 51.4% of cases in 1994 and 49.5% of cases in 1996. However, in 2006, males made up approximately 60% of the surgical population. It is notable that in 2006 females were much more likely to have a simple decompression (70%) than a transposition or other technique, Rao-Scott corrected chi-squared P < 0.001. Further, the mean age at time of surgery steadily increased throughout the study period, from 46.6 in 1994 to 48.3 and lastly 49.5 in the 2006 survey. Decompression had a mean surgical time of 47.5 minutes and transposition had a mean surgical time of 58.6 minutes, p = 0.04.

**Conclusions:** This analysis shows that the percentage of transpositions used in the treatment of cubital syndrome has decreased significantly to 37% in the last survey. We conclude that the major reasons for this change is an increasing body of evidence showing little to no difference in clinical outcome between the different surgical techniques.1-5 In conclusion, it is apparent that several trends have emerged in the surgical treatment of compression neuropathy of the ulnar nerve at the elbow. Decompression has become the most frequent procedure nationwide, with women even more so than men.