

Elevated Complications Among Young Orthopedic Surgeons Due to Insufficient Wrist Arthroscopy Volume

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INTRODUCTION:

Over the last decade, there has been increased research interest in wrist arthroscopy, likely related to its broad applications in addressing instability, intrinsic ligament and soft tissue injuries, masses, infections, and fractures. However, there has been little exploration of the existing training paradigm for exposure to and active practice of wrist arthroscopy. The purpose of this study is to provide an overview of wrist arthroscopy utilization among American Board of Orthopaedic Surgery (ABOS) Part II candidates, with a focus on fellowship training status and the volume of wrist arthroscopy in early practice.

METHODS:

A database search of the ABOS Part II Examination Database was conducted to include all orthopaedic surgeons who participated between 2010-2021 with cases collected between 2009-2020. Inclusion criteria consisted of surgeons who performed at least one wrist arthroscopy during their collection period, identified by CPT codes. Data collected and analyzed include trends in wrist arthroscopy utilization over time, type of fellowship training completed, total number of procedures performed, type of procedure performed, patient demographics, and any complications.

RESULTS:

Annual wrist arthroscopy case volume remained relatively stable during the study period ($p=.11$), despite an increasing number of ABOS candidates each year ($p=.005$). Most cases involved excision or repair of the triangular fibrocartilage complex (TFCC) (70.7%), followed by synovectomy (14.7%) and diagnostic arthroscopy (10.3%). The majority of candidates ($n=760$, 81%) performed four or fewer wrist arthroscopies during their collection period ($n=1438$ procedures, 52%), while a small percentage of candidates ($n=31$, 3%) performed at least 10 procedures ($n=391$ procedures, 14%). There was no increase in wrist arthroscopy cases performed by hand fellowship-trained surgeons, regardless of number of fellowships obtained ($p=.15$ and $p=.66$); however, there was a decrease in wrist arthroscopy among non-hand-trained surgeons ($p=.016$). Surgical complications occurred in 13.2% of cases and were higher among diagnostic arthroscopy cases (17.9%, $P=.03$).

DISCUSSION AND CONCLUSION:

Over the past decade, wrist arthroscopy case volumes have remained stable, despite an increasing number of ABOS candidates. While nearly all procedures were performed by surgeons who had completed a hand and upper extremity fellowship, there was a decrease in the utilization of wrist arthroscopy among surgeons without hand and upper extremity fellowship training. The most common procedure performed was to address excision or repair of the TFCC, followed by synovectomy, and diagnostic arthroscopy. Most notably, complication rates in this study, among early-career orthopaedic surgeons, were high and mirrored complication rates of inexperienced or low-volume surgeons.