

2023 NEHS Annual Meeting Abstract Submission

COMPLETE

NEHS Vice President, Daniel Mastella, M.D., is currently accepting abstract submissions for presentation at our Annual Meeting on December 1, 2023.


This meeting will be held at the Sturbridge Host Hotel in Sturbridge, MA.

Therapists, NPs, and PAs are also encouraged to submit.

THE DEADLINE FOR SUBMISSION IS OCTOBER 15, 2023

RESIDENTS AND FELLOWS ONLY. Please indicate if you want your paper to be considered for the prestigious H.Kirk Watson, M.D. Founder's Award. The abstracts for award consideration will be presented in the morning and the award will be presented in the afternoon.

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Oct 15th 2023, 7:48:00 pm

IP ADDRESS



* ABSTRACT TITLE

Wide-Awake Digital Flexor Tendon Repair: A Nationwide Analysis of Postoperative Events and Reimbursement

* Contact Person Name

Alexander Kammien

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* Name of who will present abstract at NEHS meeting on December 1, 2023 Please note that the same person cannot present more than one abstract at the meeting.

Samuel Kim

* Please indicate if the presenter is:

Resident

* List full names of abstract authors Please note - one of the lead authors must be present at the meeting to answer questions about the paper.

Alexander J. Kammien, BS, Samuel Kim, MD, Neil Parikh, BS, K. Lynn Zhao, MD, Jonathan N. Grauer, MD, David L. Colen, MD

*** ABSTRACT - should include background information and a description of methods, programs, or practices.**

Introduction

Wide-awake hand surgeries have the potential to increase efficiency, reduce cost and improve patient satisfaction, and increasingly complex surgeries, such as fracture fixation and tendon repair, are being performed wide-awake. Single-institution studies have compared flexor tendon repairs performed with traditional anesthetic techniques to those performed wide-awake, finding no significant difference in outcomes such as range of motion and rates of tendon rupture and tenolysis. The current study compares the two techniques on a national scale, comparing adverse events and cost for FTR performed wide-awake versus with traditional anesthesia.

Methods

Adults undergoing zone II FTR between 2010-2022 were identified in a national administrative dataset (PearlDiver). Exclusion criteria were patients with other FTR, concomitant treatment for vascular injury, fracture or dislocation, age <18 years and <90 days of follow-up. Patients with traditional anesthesia were identified by procedural codes for general anesthesia, monitored anesthesia care, sedation and nerve blocks. Patients were matched 1:1 based on age, sex, Elixhauser Comorbidity Index (ECI) score, geographical region, insurance coverage, number of tendon repairs and presence of concomitant nerve repair.

30-day events (wound complications, emergency department visits, readmissions and filled opioid prescriptions) and 1-year reoperations (for rupture and for stiffness) were identified and analyzed with chi-squared tests and logistic regressions. Total reimbursement for surgery was determined by insurance type and analyzed with Wilcoxon rank-sum tests and linear regression. All regressions used patient age, sex, ECI score, region, insurance, number of repairs, presence of concomitant nerve procedure and anesthesia technique as independent variables.

Results

A total of 11,883 patients met the inclusion and exclusion criteria: 7,213 (61%) with traditional anesthesia and 2,563 (39%) with wide-awake surgery. After matching, 2,563 patients remained in each group with no significant differences in characteristics used for matching.

Within 30 days of surgery, fewer wide-awake patients visited the emergency department (2.7% vs 4.8%; OR 0.54; $p < 0.001$). There were no significant differences in 30-day wound complications (0.9% vs 1.2%; $p = 0.252$), readmissions (0.4% vs 0.5%; $p = 0.545$) or filled opioid prescriptions (67% vs 67%; $p = 0.916$). Within 1 year of surgery, there was no significant difference in reoperations for rupture (3.1% vs 3.3%; $p = 0.586$) or reoperations for stiffness (6.9% vs 7.8%; $p = 0.100$).

Of patients with commercial insurance, those with wide-awake surgery had lower total reimbursement for surgery (median \$1674 vs \$1951; $p = 0.012$). There was no significant difference for patients with Medicaid (median \$1347 vs \$1721; $p = 0.218$) and Medicare (\$863 vs \$830; $p = 0.203$). Multivariate linear regression identified wide-awake surgery to be a significantly associated with lower total reimbursement (regression coefficient -\$854; 95CI -1031, -677; $p < 0.001$).

Conclusions

Compared to FTR with traditional anesthesia, wide-awake FTR is associated with less unplanned healthcare utilization following surgery, similar rates of reoperation for tendon rupture or stiffness, and lower total costs. These findings, in conjunction with literature demonstrating increased efficiency and patient satisfaction with wide-awake hand surgery, indicate increased healthcare value and should encourage surgeons to consider wide-awake procedures when possible.

Please attach files with diagrams and/or photos to support your abstract (10 MB limit)

*** Please attach the abstract presenter's CV**
