

2022 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 2, 2022.


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, 2022

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 2022, 8:34:59 pm

IP ADDRESS



* ABSTRACT TITLE

Risk of reoperation for ulnar neuropathy among distal humerus fractures treated with open reduction and internal fixation (ORIF) with anterior ulnar nerve transposition

* Contact Person Name

Chelsea Messinger

* Contact Person Email

* Contact Person Phone Number

* Name of who will present abstract at NEHS meeting on December 2, 2022 Please note that the same person cannot present more than one abstract at the meeting.

Chelsea Messinger

* Please indicate if the presenter is:

Not currently a resident or fellow

* List full names of abstract authors

Chelsea Messinger, BA
Janelle Greene, MD
Kevin Kooi, MD
Albert Hofman, MD, PhD
Neal Chen, MD

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

Introduction: Previous studies of ulnar nerve transposition in distal humerus fracture open reduction and internal fixation (ORIF) have found no difference in post-operative ulnar neuropathy, but few studies have assessed reoperation for ulnar neuropathy as an outcome. Reoperation reflects a clinically meaningful degree of ulnar neuropathy and is therefore an important objective outcome. We performed a descriptive study of reoperation for ulnar neuropathy among patients who underwent anterior ulnar nerve transposition during distal humerus ORIF.

Methods: We identified a retrospective cohort of distal humerus fractures treated with ORIF and ulnar nerve transposition at a single academic medical center between January 1, 2000 and December 31, 2019 (N=225). Included patients were 18 years old without prior ipsilateral ulnar nerve surgery, elbow fracture or surgery, pathologic fracture, type III open fracture, or total elbow arthroplasty. We assessed risk of reoperation for ulnar neuropathy within 2 years of ORIF among those with 2 years of follow-up or reoperation, whichever came first (N=144, 64%). We described associated risk factors using bivariate analyses with Fisher's exact test, relative risk (RR), and 95% confidence intervals (CI).

Results: 13 patients (9.0% [13/144], 95% CI=4.3%-13.7%) had at least one reoperation for ulnar neuropathy within 2 years of ORIF. The median time from ORIF to reoperation was 7.8 months (interquartile range 6.4-15.1 months). The risk of reoperation was higher among patients with open fracture (23.8% [5/21] vs. 6.5% [8/123], RR=3.3, 95% CI=1.2-9.1, p=0.024), AO/OTA Type C fracture (13.0% [12/92] vs. 1.9% [1/52], RR=3.5, 95% CI=0.4-25.8, p=0.032), and recorded ulnar neuropathy at the first post-operative visit (22.2% [8/36] vs. 3.1% [3/96], RR=5.4, 95% CI=1.5-19.2, p=0.001). Patients who were lost to follow-up had a slightly higher prevalence of polytrauma (40.7% [33/81] vs. 28.5% [41/144]) but were similar across other baseline and operative characteristics, suggesting our risk estimate is representative of the study population or possibly slightly conservative.

Conclusions: Reoperation for ulnar neuropathy within 2 years affects at least one in eleven patients who undergo anterior nerve transposition during distal humerus ORIF. Important risk factors include open fracture, AO/OTA Type C fracture, and ulnar neuropathy at the first post-operative visit.

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

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