

# 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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PUBLIC

Oct 15th 2022, 11:57:51 pm



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## \* ABSTRACT TITLE

Incidence of Non-union and Risk Factors Associated with Hardware Complications after Thumb Metacarpophalangeal Arthrodesis

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## \* Contact Person Name

Ingmar Legerstee

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## \* 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.

Ingmar Legerstee

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## \* Please indicate if the presenter is:

Not currently a resident or fellow

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## \* List full names of abstract authors

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

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Hypothesis: Arthrodesis of the metacarpophalangeal joint (MCPJ) of the thumb is a common procedure to treat patients with chronic joint degeneration. In cases of chronic collateral ligament insufficiency and arthritic joint pain, arthrodesis can be used to achieve joint stability and pain relief. Studies reporting non-union rates after thumb MCPJ arthrodesis are scarce and usually report on small sample sizes. Secondly, risk factors that contribute to hardware complications following arthrodesis of the thumb MCPJ still need to be investigated. We aim to report the non-union and hardware complications rate among patients undergoing thumb MCPJ arthrodesis and identify risk factors contributing to those complications.

Methods: Five urban hospital databases in a single city in the United States were searched for patients that underwent thumb MCPJ arthrodesis between January 2000 and September 2020. After reviewing patient records, we identified 124 thumbs that underwent MCPJ arthrodesis and had a minimum follow-up of three months. We recorded risk factors (i.e., age, gender, previous trauma), surgical indication, type of arthrodesis, and postsurgical complications. A bivariate analysis was performed to identify associations between patient characteristics and hardware complications.

Results: Twelve out of 124 thumbs (10%) had a non-union after MCPJ arthrodesis. Twenty-two of 124 thumbs (18%) had hardware complications. In bivariate analysis, screw fixation (31% of used surgical techniques) had no events of hardware complications and subsequent hardware removal (p-value < 0.001).

Summary Points:

- The non-union rate after thumb MCPJ arthrodesis of our cohort is 10% which shows most arthrodeses heal well.
- It might be beneficial to use screw fixation for thumb MCPJ arthrodesis to avoid hardware complications and subsequent removal.

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

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

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