

# 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.

## CREATED



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## IP ADDRESS



## \* ABSTRACT TITLE

The Appropriate Intervention for Radial Head Fractures in Patients under 40 years: Single-Surgeon Case Series.

## \* Contact Person Name

Nienke Smits

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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.

Nienke Smits

## \* Please indicate if the presenter is:

Not currently a resident or fellow

## \* List full names of abstract authors

Nienke Smits

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

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Background

Radial head fracture is the most common elbow fracture in adults. This injury is more likely to occur in people aged between 30 to 40 years. The Hotchkiss classification is a commonly used system to define the type of radial head fractures and requires the best optional surgical treatment. Radial head arthroplasty is a viable treatment for a Hotchkiss Type 3 radial head fracture. Still, concern remains regarding the long-term outcomes after performing a radial head arthroplasty in young patients. This study aims to evaluate the functional and clinical outcomes of patients under 40 years after receiving a radial head arthroplasty due to a comminuted radial head fracture.

Methods

A retrospective review included 9 patients < 40 year. All diagnosed with a Hotchkiss Type 3 radial head fracture treated with a radial head prosthesis by one single hand-fellow trained surgeon in an urban hospital in the United States. We evaluated patients' clinical, functional, and radiographic outcomes.

Results

The median age was 30.5 years. After a clinical follow-up of median 14.1 months (interquartile range 10.6 – 18.7), all patients achieved a nearly full range of motion. Six patients were seen with normal grip strength, one with mild loss grip strength. For two patients the grip strength was not reported. All of our patients had good to excellent functional clinical outcomes, as indicated by the Broberg Morrey score.

Conclusions

In our experience, we recommend RHA to patients under 40 years old with a severely comminuted radial head fracture graded as a Hotchkiss Type 3

**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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**Table 1.**

<b>Patient Characteristics (n=9)</b>			
<b>ID#</b>	<b>Sex</b>	<b>Age, y</b>	<b>Trauma Mechanism</b>
<b>Patient 1</b>	Female	24	Sports
<b>Patient 2</b>	Male	25	Sports
<b>Patient 3</b>	Male	27	High energetic
<b>Patient 4</b>	Male	30	Low energetic
<b>Patient 5</b>	Male	30	Sports
<b>Patient 6</b>	Female	31	Sports
<b>Patient 7</b>	Male	33	High energetic/Sports
<b>Patient 8</b>	Female	34	Sports
<b>Patient 9</b>	Male	36	Sports

**Table 2.**

<b>Clinical and Radiographic Outcomes</b>							
<b>ID#</b>	<b>Last Clinical Follow up</b>	<b>Broberg &amp; Morrey Score</b>	<b>Capitellar erosion</b>	<b>Stem Lucency</b>	<b>Heterotopic Ossification (around the neck of the stem)</b>	<b>Heterotopic ossification (near the anchors)</b>	<b>Heterotopic ossification (medial epicondyle)</b>
<b>Patient 1</b>	28.5	Excellent	No	Yes	No	No	No
<b>Patient 2</b>	10.5	UK	No	Yes	No	No	No
<b>Patient 3</b>	19.5	Excellent	No	Yes	No	No	No
<b>Patient 4</b>	18.5	Good	No	Yes	No	No	No
<b>Patient 5</b>	3.5	Excellent	No	Yes	No	Yes	No
<b>Patient 6</b>	10.5	Excellent	No	Yes	No	Yes	Yes
<b>Patient 7</b>	11.5	Good	No	Yes	No	Yes	Yes
<b>Patient 8</b>	13.5	Excellent	No	Yes	Yes	No	No
<b>Patient 9</b>	9.0	UK	No	Yes	Yes	Yes	No