

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Comparing the functional results, pain, range of motion and angulation of buddy taping versus closed reduction and splint immobilization in patients with fifth metacarpal neck fractures; A prospective trial

#### Protocol summary

##### Study aim

Comparison of two treatments of buddy taping versus closed reduction and splinting of metacarpal neck fractures in regard of pain, function, range of motion and angulation.

##### Design

Clinical trial with parallel groups on 60 patients

##### Settings and conduct

This study is a clinical trial without blinding, will be performed on the all patients who have the metacarpal neck fracture. Blinding is not possible due to the nature of the study and both the interventionist and the patients see the method of treatment . In this study, patients referred to the emergency department of Imam Khomeini and Golestan hospitals in Ahvaz will be examined. All patients who have the fracture are selected and divided into two groups and are treated by closed reduction and splinting or buddy taping.

##### Participants/Inclusion and exclusion criteria

Inclusion criteria are metacarpal 5 neck fracture during the last 72 hours . Exclusion criteria include comminuted neck fracture, angulation more than 70 degrees, rotational deformity, previous fracture, open fracture, concomitant upper limb fracture, concomitant tendon injury, multiple trauma, and patients who are unable to complete follow-up.

##### Intervention groups

Patients were divided into closed reduction and splinting (Ulnar Gutter) group and buddy taping group.

##### Main outcome variables

Pain; Range of motion; Hand grip strength; Disabilities of the Arm, Shoulder and Hand (DASH) questionnaire

#### General information

##### Reason for update

##### Acronym

#### IRCT registration information

IRCT registration number: **IRCT20211225053518N1**

Registration date: **2022-01-11, 1400/10/21**

Registration timing: **registered\_while\_recruiting**

Last update: **2022-01-11, 1400/10/21**

Update count: **0**

#### Registration date

2022-01-11, 1400/10/21

#### Registrant information

##### Name

Sadegh Ehsanbakhsh

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 61 3311 4155

##### Email address

ehsanbakhsh.s@ajums.ac.ir

#### Recruitment status

**Recruitment complete**

#### Funding source

#### Expected recruitment start date

2022-01-09, 1400/10/19

#### Expected recruitment end date

2022-03-10, 1400/12/19

#### Actual recruitment start date

empty

#### Actual recruitment end date

empty

#### Trial completion date

empty

#### Scientific title

Comparing the functional results, pain, range of motion and angulation of buddy taping versus closed reduction

and splint immobilization in patients with fifth metacarpal neck fractures; A prospective trial

IR.AJUMS.HGOLESTAN.REC.1400.143

#### Public title

buddy taping in Boxer fracture

#### Purpose

Treatment

#### Inclusion/Exclusion criteria

##### Inclusion criteria:

neck of 5th metacarpal fracture acute fracture (72 hour)

##### Exclusion criteria:

Comminuted fracture Patients who can not complete follow-up. More of 70 degree of angulation Rotational deformity Previous fracture Open fracture Upper limb fracture on the same side Tendon injury Multiple trauma

#### Age

From **17 years** old

#### Gender

Both

#### Phase

N/A

#### Groups that have been masked

*No information*

#### Sample size

Target sample size: **60**

#### Randomization (investigator's opinion)

Not randomized

#### Randomization description

#### Blinding (investigator's opinion)

Not blinded

#### Blinding description

#### Placebo

Not used

#### Assignment

Parallel

#### Other design features

### Secondary Ids

empty

### Ethics committees

#### 1

##### Ethics committee

###### Name of ethics committee

Research Ethics Committee of Golestan Hospital, Ahvaz Jundishapur University of Medical Sciences

###### Street address

University City, Vice Chancellor for Research and Technology, Ahvaz Jundishapur University of Medical Sciences, ground floor.

###### City

Ahvaz

###### Province

Khuzestan

###### Postal code

61357-15794

##### Approval date

2021-10-12, 1400/07/20

##### Ethics committee reference number

### Health conditions studied

#### 1

##### Description of health condition studied

Neck of 5th metacarpal fracture; Boxer fracture

##### ICD-10 code

S62.2

##### ICD-10 code description

Fracture of first metacarpal bone

### Primary outcomes

#### 1

##### Description

Pain

##### Timepoint

Initial visit and 3 weeks later

##### Method of measurement

Visual Analogue Scale

#### 2

##### Description

Range of motion

##### Timepoint

Initial visit and 3 weeks later

##### Method of measurement

examination

#### 3

##### Description

Dysfunction

##### Timepoint

3 weeks later

##### Method of measurement

Disabilities of the Arm, Shoulder and Hand (DASH) questionnaire

### Secondary outcomes

empty

### Intervention groups

#### 1

##### Description

Intervention group:buddy taping finger 5 and 4 (put together) during 3 weeks

##### Category

Treatment - Devices

#### 2

##### Description

Control group: Closed reduction and splinting by ulnar gutter (fiberglass 3inch) during 3 weeks

**Category**

Treatment - Devices

**Recruitment centers****1****Recruitment center****Name of recruitment center**

Golestan hospital

**Full name of responsible person**

Sadegh Ehsanbakhsk

**Street address**

Ahvaz - Golestan Alley - Golestan Hospital

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**2****Recruitment center****Name of recruitment center**

Imam Khomeini hospital

**Full name of responsible person**

Sadegh Ehsanbakhsk

**Street address**

Azadegan St. (24 meters) Imam Khomeini Educational and Medical Center

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eduaum@ajums.ac.ir

**Sponsors / Funding sources****1****Sponsor****Name of organization / entity**

Ahvaz University of Medical Sciences

**Full name of responsible person**

Dr. Mehrnoosh Zaker Kish

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University City, Vice Chancellor for Research and Technology, Ahvaz Jundishapur University of Medical Sciences, Ground Floor

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**Grant name****Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

**Title of funding source**

Ahvaz University of Medical Sciences

**Proportion provided by this source**

100

**Public or private sector**

Public

**Domestic or foreign origin**

Domestic

**Category of foreign source of funding***empty***Country of origin****Type of organization providing the funding**

Academic

**Person responsible for general inquiries****Contact****Name of organization / entity**

Ahvaz University of Medical Sciences

**Full name of responsible person**

Sadegh Ehsanbakhsh

**Position**

Resident

**Latest degree**

Medical doctor

**Other areas of specialty/work**

Orthopedics

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## Person responsible for updating data

### Contact

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## Sharing plan

### Deidentified Individual Participant Data Set (IPD)

Undecided - It is not yet known if there will be a plan to make this available

### Study Protocol

Undecided - It is not yet known if there will be a plan to make this available

### Statistical Analysis Plan

Not applicable

### Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

### Clinical Study Report

Not applicable

### Analytic Code

Not applicable

### Data Dictionary

Not applicable