

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 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

Khouzestan

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
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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
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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
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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
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Position
Resident
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Person responsible for updating data

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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