Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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
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Iran (Islamic Republic of)
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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

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 truama
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
IR.AJUMS.HGOLESTAN.REC.1400.143

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
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2

Recruitment center
Name of recruitment center
Imam Khomeini hospital
Full name of responsible person
Sadegh Ehsanbakhsk
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Azadegan St. (24 meters) Imam Khomeini Educational and Medical Center
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
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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
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Sadegh Ehsanbakhsh
Position
Resident
Latest degree
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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