

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Effect of dorsal wrist splint versus cock-up for carpal tunnel syndrome on median nerve conduction measurements

Protocol summary

Summary

The purposes of this study were to compare the efficacy of a new dorsal wrist splinting versus routine palmar splinting for CTS (both in neutral position). In this single blind randomized controlled trial, 24 CTS cases were recruited from the patients with clinical diagnosis of carpal tunnel syndrome for at least one month prior to the study and median neuropathy was confirmed by electro diagnostic test. The patients who had previously received surgical or nonsurgical treatments were excluded. The patients were randomly assigned to use dorsal or palmar splint for 4 weeks. Sensory and motor conductions of the median nerve were measured at the baseline and after 1 month and the results were compared between groups.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT138903224157N1**

Registration date: **2009-03-05, 1387/12/15**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2009-03-05, 1387/12/15

Registrant information

Name

Azam Bagheri

Name of organization / entity

Isfahan University Of Medical Sciences

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

vice chancellor for research, Isfahan University Of Medical Sciences

Expected recruitment start date

2009-03-05, 1387/12/15

Expected recruitment end date

2009-10-22, 1388/07/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of dorsal wrist splint versus cock-up for carpal tunnel syndrome on median nerve conduction measurements

Public title

Effect of splinting for carpal tunnel syndrome

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Presence of CTS diagnosed clinically for at least one month prior to the study and electrophysiological evidence of median neuropathy
Exclusion criteria: pregnancy, previously treated by surgery, steroid injection, or any other treatments, presence of neck arthroses

Age

From **18 years** old to **50 years** old

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 24

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Single blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Isfahan University Of Medical Sciences

Street address

Isfahan University of Medical Sciences, Hezarjarib
Boulevard, Isfahan, Iran.

City

Isfahan

Postal code

Approval date

empty

Ethics committee reference number

288103

Health conditions studied

1

Description of health condition studied

carpal tunnel syndrome

ICD-10 code

G56.0

ICD-10 code description

carpal tunnel syndrome

Primary outcomes

1

Description

median sensory peak latency

Timepoint

before intreviewtion and four weeks after intervention

Method of measurement

by medtronic electromyography, anti dromic, in
millisecond

2

Description

median sensory amplitude

Timepoint

before intreviewtion and four weeks after intervention

Method of measurement

by medtronic electromyography, anti dromic, in
millimeter

3

Description

median sensory nerve conduction velocity

Timepoint

before intreviewtion and four weeks after intervention

Method of measurement

by medtronic electromyography, anti dromic, in m/s

Secondary outcomes

empty

Intervention groups

1

Description

intervention group:dorsal splint in neutral angle of wrist,
4 weeks, nights and days except for rest

Category

Rehabilitation

2

Description

control group: conventional palmar wrist splint in neutral
angle, 4 weeks, nights and days except for rest

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Isfahan Amin Hospital

Full name of responsible person

A'zam Bagheri

Street address

City

Isfahan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Isfahan University Of Medical Sciences, Vice
Chancellery For Reasearch

Full name of responsible person

Dr. Peiman Adibi

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Vice Chancellery For Reasearch, Isfahan University of Medical Sciences, Hezarjarib Boulevard, Isfahan, Iran.

City

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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

Isfahan University Of Medical Sciences, Vice Chancellery For Reasearch

Proportion provided by this source

100

Public or private sector*empty***Domestic or foreign origin***empty***Category of foreign source of funding***empty***Country of origin****Type of organization providing the funding***empty***Person responsible for general inquiries****Contact****Name of organization / entity**

Isfahan University Of Medical Sciences

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Web page address**Sharing plan****Deidentified Individual Participant Data Set (IPD)***empty***Study Protocol***empty***Statistical Analysis Plan***empty***Informed Consent Form***empty***Clinical Study Report***empty***Analytic Code***empty***Data Dictionary***empty*