Clinical Trial Protocol
Iranian Registry of Clinical Trials

18 Sep 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 chancellery 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 intrevention and four weeks after intervention
Method of measurement
by medtronic electromyography, anti dromic, in millisecound

2

Description
median sensory amplitude
Timepoint
before intrevention and four weeks after intervention
Method of measurement
by medtronic electromyography, anti dromic, in millimeter

3

Description
median sensory nerve conduction velocity
Timepoint
before intrevention 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
Isfahan
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

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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