Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The comparison of the effectiveness of acupuncture and exercise therapy in patients with carpal tunnel syndrome

Protocol summary

Study aim
Comparison of short-term efficacy of acupuncture and exercise therapy in patients with mild to moderate CTS.

Design
This is a randomized controlled clinical trial study conducted on 60 patients

Settings and conduct
Imam Hossein Hospital in Tehran

Participants/Inclusion and exclusion criteria
Patients with mild to moderate CTS referring to Imam Hossein Hospital in Tehran in 2016.

Intervention groups
The patients were randomly divided in to 3 equal groups (20 patients in each group; age range, 29-70 years). In the first group only night splint was used for 6 weeks (control), in the second group splint and tendon and nerve gliding exercises (2 times a day for 6 week) were applied, and the third group splint with electroacupuncture was performed in the PC-6 and PC-7 points for 12 sessions of 40- minute duration (2 sessions/week)

Main outcome variables
The score on the Boston Carpal Tunnel Questionnaire (BCTQ) for Functional Status and Symptom Severity (BCTQ FUNCT and SYMPT), parameters of pinch force, grip force, ROM (flexion and extension) and visual analog scale (VAS) score were evaluated at baseline and after the treatment

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20180212038693N1**
Registration date: **2018-04-12, 1397/01/23**
Registration timing: **retrospective**
Last update: **2018-04-12, 1397/01/23**
Update count: **0**

Registration date
2018-04-12, 1397/01/23

Registrant information

Name
Amir Rashed
Name of organization / entity
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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2017-05-22, 1396/03/01

Expected recruitment end date
2017-09-22, 1396/06/31

Actual recruitment start date
2017-05-22, 1396/03/01

Actual recruitment end date
2017-09-22, 1396/06/31

Trial completion date
empty

Scientific title
The comparison of the effectiveness of acupuncture and exercise therapy in patients with carpal tunnel syndrome

Public title
The effectiveness of exercise therapy and acupuncture in carpal tunnel syndrome

Purpose
Treatment

Inclusion/Exclusion criteria
Inclusion criteria:

Mild to moderate disease stage No severe CST Lack of extreme limitation upper extremity limbs No symptoms of atrophy and muscle dystrophy Lack of other types of peripheral neuropathy No history of carpal tunnel surgery, or any damage to the median nerve The absence of autoimmune or inflammatory diseases No history of using steroid medications No use of splint or any treatment for CTS

Exclusion criteria:

Age
From **18 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **60**
Actual sample size reached: **60**

Randomization (investigator's opinion)
Randomized

Randomization description
Permuted block randomization (based on ABC)

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
Ethics committee of Shahid Beheshti University of Medical Sciences

Street address
District 1, Daneshjou Boulevard

City
Tehran

Province
Tehran

Postal code
1983969411

Approval date
2016-06-19, 1395/03/30

Ethics committee reference number
IR.SBMU.MSP.REC.1395.152

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
Functional Status and Symptom Severity

Timepoint
At baseline and after the treatment (6 week)

Method of measurement
Boston Carpal Tunnel Questionnaire (BCTQ) for Functional Status and Symptom Severity (BCTQ FUNCT and SYMPT)

2

Description
Pinch and grip force

Timepoint
At baseline and after the treatment

Method of measurement
Using hydraulic dynamometer

3

Description
ROM (flexion and extension)

Timepoint
At baseline and after the treatment

Method of measurement
Inclinometer

4

Description
Pain severty

Timepoint
at baseline and after the treatment

Method of measurement
visual analog scale (VAS)

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: splint with electroacupuncture

Category
Treatment - Devices

2

Description
Intervention group: splint and tendon and nerve gliding exercises
Category
Treatment - Other

3

Description
Control group: only night splint was used
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Imam Hossein Hospital
Full name of responsible person
Amir Rashed
Street address
District 7, Imam Hossein Hospital
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1617763141
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Shahid Beheshti University of Medical Sciences
Full name of responsible person
Dr. Shahin Salehi
Street address
Daneshjou Boulevard, Shahid Shahriari Square, Yemen Street, Shahid Chamran Highway
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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
Shahid Beheshti 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
Shahid Beheshti University of Medical Sciences
Full name of responsible person
Amir Rashed
Position
Resident
Latest degree
Medical doctor
Other areas of specialty/work
Sport Medicine
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Shahid Beheshti University, Daneshjou Boulevard, Shahid Shahriari Square, Yemen Street, Shahid Chamran Highway
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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
Undecided - It is not yet known if there will be a plan to make this available
Analytic Code
Undecided - It is not yet known if there will be a plan to make this available
Data Dictionary
Undecided - It is not yet known if there will be a plan to make this available