

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 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 into 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 weeks) 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

###### Country

Iran (Islamic Republic of)

###### Phone

+98 21 2303 1406

###### Email address

a.rashed@sbmu.ac.ir

##### 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 severity

**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

##### City

Tehran

##### Province

Tehran

##### Postal code

1617763141

##### Phone

+98 21 7343 3000

##### Email

a.rashed1353@gmail.com

## 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

##### City

Tehran

##### Province

Tehran

##### Postal code

1983969411

##### Phone

+98 21 2990 2233

##### Email

a.rashed1353@gmail.com

##### 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

##### Street address

Shahid Beheshti University, Daneshjou Boulevard,  
Shahid Shahriari Square, Yemen Street, Shahid  
Chamran Highway

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##### Province

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## Person responsible for scientific inquiries

#### Contact

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**Latest degree**

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**Other areas of specialty/work**

Sport Medicine

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Chamran Highway**City**

Tehran

**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