

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

05 Jul 2026

### The effect of dry needling of tenar muscles on the management of patients with carpal tunnel syndrome

#### Protocol summary

##### Study aim

The effect of dry needling of tenar muscles on the management of patients with carpal tunnel syndrome.

##### Design

The clinical trial with a control group, with parallel groups, randomized, single-center. The sample size is 12 patients (consist of 2 groups of 50 control and intervention).

##### Settings and conduct

Physiotherapy clinics, Semnan University of Medical Sciences

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: patients who Phalen and Tinel tests are positive; patients electromyography (EMG) has a median reduction in NCV. Exclusion criteria: presence of patients with symptoms of CTS; drugs that cause neuropathy; the pregnancy and breastfeeding, history of previous surgeries or injections Astrvydal to the wrist, elbow and wrist deformity tumor.

##### Intervention groups

Intervention group: In the intervention group DN, DN two sessions with an interval of two days of one another, occurs. In both groups immediately after the second meeting with the re-evaluation electrodiagnostic tests of functional performance and completion of a questionnaire by volunteers Boston is repeated. To assess the reliability of the effect of treatment, all evaluations are done after two weeks. Control group: There is no intervention in the control group. In both groups immediately after the second meeting with the re-evaluation electrodiagnostic tests of functional performance and completion of a questionnaire by volunteers Boston is repeated.

##### Main outcome variables

The functional operations of the maximum power of pinching and groping f

#### General information

##### Reason for update

Change the sampling date

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT2016032625732N4**

Registration date: **2016-04-18, 1395/01/30**

Registration timing: **prospective**

Last update: **2020-10-02, 1399/07/11**

Update count: **1**

##### Registration date

2016-04-18, 1395/01/30

##### Registrant information

##### Name

Alireza Emadi

##### Name of organization / entity

Semnan University of Medical Sciences, Semnan, Iran

##### Country

Iran (Islamic Republic of)

##### Phone

+98 23 3345 1336

##### Email address

are20935@semums.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

Vice Chancellor for Research and Technology, Semnan University of Medical Sciences

##### Expected recruitment start date

2016-05-21, 1395/03/01

##### Expected recruitment end date

2016-10-21, 1395/07/30

##### Actual recruitment start date

2016-05-21, 1395/03/01

##### Actual recruitment end date

2016-10-21, 1395/07/30

**Trial completion date**

2017-01-19, 1395/10/30

**Scientific title**

The effect of dry needling of tenar muscles on the management of patients with carpal tunnel syndrome

**Public title**

The effect of dry needling thenar (thumb muscle down) the treatment of patients with trapped nerve in the wrist

**Purpose**

Supportive

**Inclusion/Exclusion criteria****Inclusion criteria:**

Patients who test positive Phalen and Tinel them patients in their study, electromyography (EMG) decreased median nerve conduction velocity has been confirmed Patients who evaluate trigger Myofascial trigger points in the muscles Tnarshan according to diagnostic criteria simons been confirmed

**Exclusion criteria:**

The existence of a disease that mimics the symptoms of CTS such as polyneuropathy, radiculopathy, cervical, thoracic outlet syndrome and double-crush syndrome There are conditions such as hyperthyroidism, gout, systemic lupus erythematosus, rheumatoid arthritis, diabetes, chronic kidney failure and acromegaly drugs that cause neuropathy is Pregnancy and lactation previous surgery or injection wrist Astrvvydal Tumors or deformities elbow and wrist are effective on carpal tunnel dimensions

**Age**

No age limit

**Gender**

Both

**Phase**

N/A

**Groups that have been masked**

No information

**Sample size**

Target sample size: **100**

Actual sample size reached: **100**

**Randomization (investigator's opinion)**

N/A

**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**

Ethics Committee of the Semnan University of Medical sciences

**Street address**

Semnan, Basij Blvd, Semnan University of Medical Sciences

**City**

Semnan

**Province**

Semnan

**Postal code**

3514799442

**Approval date**

2016-02-24, 1394/12/05

**Ethics committee reference number**

IR.SEMUMS.REC.1394.185

**Health conditions studied****1****Description of health condition studied**

dry needling of tenar muscles on the management of patients with carpal tunnel syndrome

**ICD-10 code**

G56.0

**ICD-10 code description**

Carpal tunnel syndrome

**Primary outcomes****1****Description**

The functional operations of the maximum power of pinching and groping f

**Timepoint**

Two treatments with an interval of two days of the DN

**Method of measurement**

Electrodiagnostic evaluation with the tests functional performance and completion of a questionnaire Boston by volunteers

**Secondary outcomes**

empty

**Intervention groups****1****Description**

Volunteers are randomized into two treatment groups. There is no intervention in the control group. In both groups immediately after the second meeting with the re-evaluation electrodiagnostic tests of functional performance and completion of a questionnaire by volunteers Boston is repeated. To assess the reliability of the effect of treatment, all evaluations are done after

two weeks.

**Category**

Prevention

**2**

**Description**

Volunteers are randomized into two treatment groups. In the intervention group DN, DN two sessions with an interval of two days of one another, occurs. In both groups immediately after the second meeting with the re-evaluation electrodiagnostic tests of functional performance and completion of a questionnaire by volunteers Boston is repeated. To assess the reliability of the effect of treatment, all evaluations are done after two weeks.

**Category**

Prevention

**Recruitment centers**

**1**

**Recruitment center**

**Name of recruitment center**

Physiotherapy clinics, Semnan University of Medical Sciences

**Full name of responsible person**

Dr Atefeh Aminianfar

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Semnan, Basij Blvd, Vice Chancellor for Research and Technology Semnan University of Medical Sciences

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**Sponsors / Funding sources**

**1**

**Sponsor**

**Name of organization / entity**

Semnan University of Medical Sciences

**Full name of responsible person**

Parviz Kokhaie

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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**

Semnan 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**

Semnan University of Medical Sciences

**Full name of responsible person**

Dr Atefeh Aminianfar

**Position**

Ph.D Physiotherapy

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Physiotherapy

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**Position**

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**Latest degree**

Ph.D.

**Other areas of specialty/work**

Physiotherapy

**Street address**

Semnan, Basij Blvd, Semnan University of Medical

**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**

Undecided - It is not yet known if there will be a plan to make this available

**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**

No - There is not a plan to make this available