

Clinical Trial Protocol

Iranian Registry of Clinical Trials

04 Aug 2026

Compare the effectiveness of two different methods of ultrasound-guided local corticosteroid injection in the treatment of patient with carpal tunnel syndrome.

Protocol summary

Summary

(1) Objective: our aim in this study is to compare the effectiveness of two different methods of ultrasound-guided local corticosteroid injection in the treatment of patient with carpal tunnel syndrome. (2) Design: in this study forty patients with carpal tunnel syndrome referred to Firuzgar physical medicine and rehabilitation clinic, Tehran, Iran will be included in the study after qualifying the inclusion and exclusion criteria and obtaining the informed consent. (3) Setting and conduct: patients will be randomly divided to two groups of twenty. For randomization we will use randomized blocking method. (4) Interventions: ultrasound-guided local injection of forty mg of triamcinolone with the in-plane method; in the first group anterior to the median nerve and in the second group posterior to the median nerve will be done by a physical medicine and rehabilitation specialist. Routine treatments including wrist splint for 6 weeks will be performed for all patients. (5) Main outcome measures: electrodiagnostical and sonographic criteria, Boston questionnaire scores and VAS will be assessed in the 0, 6th week and 12th week.

General information

Acronym

CTS-Carpal Tunnel Syndrome

IRCT registration information

IRCT registration number: **IRCT2015101724572N1**

Registration date: **2016-05-25, 1395/03/05**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2016-05-25, 1395/03/05

Registrant information

Name

Arash Babaei-Ghazani

Name of organization / entity

Country

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Recruitment status

Recruitment complete

Funding source

Vice Chancellor for research of Iran University of Medical Sciences

Expected recruitment start date

2016-04-03, 1395/01/15

Expected recruitment end date

2016-09-05, 1395/06/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Compare the effectiveness of two different methods of ultrasound-guided local corticosteroid injection in the treatment of patient with carpal tunnel syndrome.

Public title

Compare two different methods of ultrasound-guided corticosteroid injection in the treatment of carpal tunnel syndrome

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: patients with signs and symptoms of carpal tunnel syndrome (including pain and sensory disturbances in the territory of median nerve) which is confirmed through EMG-NCS and by electrodiagnostic criteria are mild to moderate carpal tunnel syndromes. Exclusion criteria: severe carpal tunnel syndrome in EMG-NCV; tenar atrophy; contraindications for corticosteroid injection (including sensitivity to corticosteroids and symptoms of skin infection at the injection site); diseases which mimic CTS symptoms such as polyneuropathy, cervical radiculopathy, thoracic outlet syndrome; surgery or local injection treatments in last six months; neoplastic or traumatic source of pain; wrist bones fracture.

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 40

Randomization (investigator's opinion)

Randomized

Randomization description**Blinding (investigator's opinion)**

Double 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 Iran University of Medical Sciences

Street address

Ethics committee, Iran University of Medical Sciences, Hemmat Highway, Tehran

City

Tehran

Postal code

1449614535

Approval date

2015-07-26, 1394/05/04

Ethics committee reference number

IR.IUMS.REC.1394.9311524007

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**

The severity of symptoms and functional limitations

Timepoint

Zero, six and twelve weeks after

Method of measurement

By using Boston questionnaire

2**Description**

The severity of symptoms

Timepoint

Zero, six and twelve weeks after

Method of measurement

Visual Analog Scale(VAS)

3**Description**

Electrodiagnostic criteria

Timepoint

Zero, six and twelve weeks after

Method of measurement

By using EMG-NCV device

4**Description**

Sonographic criteria

Timepoint

Zero, six and twelve weeks after

Method of measurement

By using Sonographic device

Secondary outcomes**1****Description**

Side effects

Timepoint

Six and twelve weeks after

Method of measurement

questionnaire

Intervention groups

1

Description

In the first group, corticosteroid inject under the ultrasound-guid above the median nerve which will be done by an experienced physical medicine and rehabilitation specialist using in-plane approach.

Category

Treatment - Other

2

Description

In the other group, corticosteroid injection will be performed under the ultrasound-guid below the median nerve which will be done by an experienced physical medicine and rehabilitation specialist using in-plane approach.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Firuzgar hospital

Full name of responsible person

Dr Nadere Nikbakht

Street address

Department of Physical Medicine and Rehabilitation,
Firuzgar Hospital, Valiasr Square, Tehran

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice President of Research Iran University of Medical Sciences

Full name of responsible person

Dr Motovalian

Street address

5th floor, Headquarters, Iran University of Medical Sciences, Hemmat Highway, Tehran

City

Tehran

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Vice President of Research Iran University of Medical Sciences

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

Person responsible for scientific inquiries

Contact

Name of organization / entity

Iran University of Medical Sciences

Full name of responsible person

Dr. Arash Babaei

Position

Associate Professor of Physical Medicine and Rehabilitation

Other areas of specialty/work

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Web page address

Person responsible for updating data

Contact

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