Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

Evaluation the effect of corticosteroid injection with and without sonography guide in electro-diagnostic and clinical findings of patients with carpal tunnel syndrome

Protocol summary

Summary

The aim of this study is to compare the effect of corticosteroid injection with and without ultrasound guide in treatment of patients with carpal tunnel syndrome. The patients who have paraesthesia or numbness in hand and confirm as moderate or severe carpal tunnel syndrome according to electro diagnostic findings, will enter the study. Patients with wrist surgery or tennar atrophy will be excluded. This study will be done in patients refer to physical medicine and rehabilitation clinic of AL Zahra and Ayatollah kashani hospitals of Isfahan during 1395 and suffering from carpal tunnel syndrom. 30 patients in each group will enrol the study and will divide randomly in two groups. In case group 40 mg methyl prednisolone will be injected at wrist according ulnar in-plane approach. In control group 40 mg methyl prednisolone will be injected at distal wrist crease medial side of Palmaris longus tendon. All patients will be evaluated by Boston questionary and electro diagnostic parameters before, 1 month and 3 month after injection.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017010831833N1**
Registration date: **2017-02-19, 1395/12/01**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2017-02-19, 1395/12/01

Registrant information

Name

Zahra Azimi

Name of organization / entity

Isfahan University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Isfahan University of Medical Sciences

Expected recruitment start date

2016-09-29, 1395/07/08

Expected recruitment end date

2016-11-30, 1395/09/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluation the effect of corticosteroid injection with and without sonography guide in electro-diagnostic and clinical findings of patients with carpal tunnel syndrome

Public title

Effect of corticosteroid injection in treatment of carpal tunnel syndrome

Purpose

Treatment

Inclusion/Exclusion criteria

inclusion criteria: patients with CTS symptomes; positive tinnel, phalen and compression tests; who had moderate to severe CTS according to electrodiagnostic criteria;

refuse surgery; are older than 18 and accept to inject corticosteroid exclusion criteria: pregnancy; presence of metabolic disorders that cause secondary CTS such as diabetes mellitus, thyroid disease; chronic kidney disease; rheumatological disorders; wrist fractures; having had corticosteroid injection before the study; conditions mimicking CTS such as cervical radiculopathy, polyneuropathy, brachial plexopathy, thoracic outlet syndrome; having had physical or medical therapy in the previous month; having had previous wrist surgery; having thenar muscle atrophy; patient refusal to continue the follow-ups.

Age
From **18 years** old to **70 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **60**

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 Science Ethics Committee

Street address
Gostaresh building, Isfahan University of Medical Science, Hezar jerib St.,

City
Isfahan

Postal code

Approval date
2016-09-28, 1395/07/07

Ethics committee reference number
IR.MUI.REC.1395.3.625

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
Symptom Severity Scale

Timepoint
befor, 1and 3 months after

Method of measurement
questionary

2

Description
Functional Status Scale

Timepoint
befor, 1and 3 months after

Method of measurement
questionary

3

Description
median nerve sensory latency

Timepoint
befor, 1and 3 months after

Method of measurement
EDX study

4

Description
median nerve motor latency

Timepoint
befor, 1and 3 months after

Method of measurement
EDX study

Secondary outcomes

1

Description
grade

Timepoint
before, 1 and 3 months after

Method of measurement
EDX study

2

Description
sensory NCV

Timepoint

before, 1 and 3 months after
Method of measurement
EDX study

3

Description
SNAP amp
Timepoint
before, 1 and 3 months after
Method of measurement
EDX study

4

Description
CMAP amp
Timepoint
before, 1 and 3 months after
Method of measurement
EDX study

5

Description
side effects
Timepoint
imediate, 1 and 3 months after
Method of measurement
questionary

Intervention groups

1

Description
depomedrol injection ultrasound guided
Category
Treatment - Other

2

Description
blind depomedrol injection
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Alzahra Hospital
Full name of responsible person
Dr. Zahra Azimi
Street address
Soffeh st.
City
Isfahan

2

Recruitment center
Name of recruitment center
Kashani Hospital
Full name of responsible person
Dr. Zahra Azimi
Street address
Ayatollah Kashani St.
City
Isfahan

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Isfahan University of Medical Science
Full name of responsible person
Dr. Mansoor Siavash
Street address
Vice-chancellery for research, Medical school, Hezar jerib st.
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 Science
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
Name of organization / entity
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Full name of responsible person
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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