

Clinical Trial Protocol

Iranian Registry of Clinical Trials

09 Jun 2026

Evaluation of the effectiveness of periscapular trigger points deactivation on pain and disability in patients with carpal tunnel syndrome

Protocol summary

Summary

The aim of this study is to evaluate the effectiveness of periscapular trigger points deactivation on pain and disability of patients with carpal tunnel syndrome. The patients with mild to moderate carpal tunnel syndrome according to the electrodiagnostic findings, existence of trigger points in at least 2 muscles of periscapular region and age between 24 to 60 years old are included. The exclusion criteria are: history of physical therapy, surgery or steroid injection for the treatment of CTS; history of treatment for periscapular trigger points, rheumatoid arthritis and cervical disk herniation. The sample population are patients with carpal tunnel syndrome who are referred to the physiotherapy clinic of Shiraz school of rehabilitation by orthopedic surgeons. The sample size is 30. Patients are randomly assigned either to control or intervention groups. Both groups receive routine physical therapy including transcutaneous electrical nerve stimulation, ultrasound and hot pack. The intervention group also receive ischemic compression method for deactivation of periscapular trigger points in 10 sessions for 2 weeks. Variables including pain, grip strength, hand functional disability and sensitivity of trigger points will be measured and compared before 1st and after 10th sessions.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2014071915932N6**

Registration date: **2014-08-14, 1393/05/23**

Registration timing: **prospective**

Last update:

Update count: **0**

Registration date

2014-08-14, 1393/05/23

Registrant information

Name

Alireza Motealleh

Name of organization / entity

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Recruitment status

Recruitment complete

Funding source

Shiraz University of Medical Sciences, School of Rehabilitation

Expected recruitment start date

2014-08-29, 1393/06/07

Expected recruitment end date

2014-11-03, 1393/08/12

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluation of the effectiveness of periscapular trigger points deactivation on pain and disability in patients with carpal tunnel syndrome

Public title

The effectiveness of manual therapy of shoulder trigger points on pain and disability in patients with carpal tunnel syndrome

Purpose

Treatment

Inclusion/Exclusion criteria

inclusion criteria:patients with CTS syndrome for more than 1 month; positive Tinne'sl sign at the wrist area; positive Phalen's test; mild to moderate carpal tunnel syndrome by electrodiagnostic findings; existence of trigger points in at least two periscapular muscles(teres minor& major: supraspinatus: infraspinatus: subscapularis: upper trapezius); aged between 24 to 60 years. exclusion criteria:any neuropathy such as diabetic neuropathy; thoracic outlet syndrome; cervical disk herniation; double crush syndrome(positive neck compression test); regular use of analgesics or anti-inflammatory drugs; Pregnancy; Rheumatoid Arthritis; history of physical therapy, surgery or steroid injection for the treatment of CTS; history of treatment for periscapular trigger points such as steroid injection in last 3 months; fibromyalgia; T4 syndrome.

Age

From **24 years** old to **60 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

Randomized

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

Shiraz University Of Medical Sciences

Street address

Shiraz University of Medical Sciences, Zand Street,
Shiraz.

City

Shiraz

Postal code

71345-1987

Approval date

2014-05-22, 1393/03/01

Ethics committee reference number

CT-P-9369-6959

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

power grip

Timepoint

First and tenth session

Method of measurement

Be assessed by hand-held dynamometer

2

Description

pain

Timepoint

First and tenth session

Method of measurement

Visual analogue scale

3

Description

sensitivity of periscapular trigger points

Timepoint

First and tenth session

Method of measurement

algometry

4

Description

functional disability

Timepoint

First and tenth session

Method of measurement

DASH questionnaire

Secondary outcomes

empty

Intervention groups

1

Description

Patients in control group received 10 sessions of physical therapy at the wrist area as the following: -Therapeutic ultrasound for 3 min with a continuous 3.0 MHz applicator, ERA = 5 cm2, intensity= 1.0 W/cm2. - TENS-

Burst type with parameters (frequency = 110Hz, pulse width = 200µsec) and the size of the electrode 4* 6 for 20 min and the electrode placed on the median nerve path. - Hot pack on wrist area

Category

Rehabilitation

2**Description**

Patients in intervention group received 10 sessions of physical therapy at the wrist area as the following: - Therapeutic ultrasound for 3 min with a continuous 3.0 MHz applicator, ERA = 5 cm², intensity= 1.0 W/cm². - TENS- Burst type with parameters (frequency = 110Hz, pulse width = 200µsec) and the size of the electrode 4* 6 for 20 min and the electrode placed on the median nerve path. - Hot pack on wrist area Deactivation of periscapular trigger points applying ischemic compression method.

Category

Rehabilitation

Recruitment centers**1****Recruitment center****Name of recruitment center**

physiotherapy clinic of Shiraz School of Rehabilitation

Full name of responsible person

Mrs. katayoon Rezaee

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Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

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Shiraz University Of Medical Sciences Building, Zand Street,shiraz.

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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

Shiraz 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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empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report

empty

Analytic Code

empty

Data Dictionary

empty