

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

A clinical trail to compare the effects of shock wave and dry needling on clinical symptoms of upper trapezium trigger points

Protocol summary

Summary

This single center clinical trial will be done for comparing the effects of shock wave (SW) and dry needling (DN) on clinical symptoms of upper trapezium trigger points (MTrPs). In this study, 40 patient with active MTrPs of upper trapezius muscle and with no specific neck or shoulder pain are selected and divided randomly into two groups using Randomized Allocation Software. In one group DN and in other group SW will be used. The patients with myofascial pain syndrome in Trapezius muscle with pain intensity 30 - 60 in VAS scale for 3 months are included. If they have any other musculoskeletal problem or use any other intervention for their problem, they will be excluded. Evaluation of treatment effects will be performed using a visual analog scale (VAS), pressure pain threshold (PPT) and neck disability index questionnaire in patient with neck pain. In both groups these variables are measured before the first treatment session and before of the second, third and fourth treatment sessions and also seven days following the last treatment session. Patients in both groups will participate in four treatment sessions (With an interval of three days between each session) during two weeks. During treatment sessions and before each intervention, two variables (PPT, VAS) are measured by first examiner. The order of these measurements in each session is determined randomly. According to target group, treatment method is performed by second examiner. At the end of each session evaluation of patients is executed by first examiner again. In both groups, results of treatment methods will be reevaluated seven days following the last treatment session.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016110318760N3**

Registration date: **2016-12-16, 1395/09/26**

Registration timing: **prospective**

Last update:

Update count: **0**

Registration date

2016-12-16, 1395/09/26

Registrant information

Name

Fariba Ghaderi

Name of organization / entity

Tabriz University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 41 1333 4647

Email address

ghaderif@tbzmed.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice-Chancellor for Research of Tabriz University of Medical Science

Expected recruitment start date

2017-01-04, 1395/10/15

Expected recruitment end date

2017-12-21, 1396/09/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

A clinical trail to compare the effects of shock wave and dry needling on clinical symptoms of upper trapezium trigger points

Public title

The comparison between the effects of shock wave and dry needling on trigger points

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: myofascial pain syndrome in Trapezius muscle; pain intensity 60 -30 in VAS scale for 3 months. Exclusion criteria: contraindication of ESWT or dry needling; Pregnancy; Previous injection in MTrPs; Having had previous surgery in the neck or upper limb; Using anticoagulant drugs; advance osteopathic or arthropathic disorders of the cervical spine or the shoulder; Having ulcer in therapy region; Using the anti-pain drugs in last 24 hours; Having specific postural dysfunction

Age

From **20 years** old to **50 years** old

Gender

Both

Phase

2

Groups that have been masked

No information

Sample size

Target sample size: **40**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Single blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Randomization with Randomized Allocation Software (RAS)

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Tabriz University of Medical Sciences

Street address

Ethics committee of Tabriz University of Medical Sciences, Tabriz University of Medical Sciences, Daneshgah Ave., Tabriz

City

Tabriz

Postal code

Approval date

2016-10-10, 1395/07/19

Ethics committee reference number

IR.TBZMED.REC.1395.762

Health conditions studied

1

Description of health condition studied

Myofascial Trigger Point Syndrome

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Pressure pain threshold (PPT)

Timepoint

Each treatment session and one week after the last session

Method of measurement

digital algometer

2

Description

Pain Intensity

Timepoint

Each treatment session and one week after the last session

Method of measurement

Visual Analogue Scale (VAS)

Secondary outcomes

1

Description

Disability

Timepoint

Each treatment session and one week after the last session

Method of measurement

neck disability index questionnaire (NDI)

Intervention groups

1

Description

Control group: Shock wave 0.025 mJ/mm², 1000 shocks per session for 4 sessions, once a week. Shock wave is a method of treatment in which mechanical shocks are applied on tender or trigger points to break these points and release adhesions.

Category

Rehabilitation

2

Description

Intervention group: Dry needling is applied for upper trapezius trigger points for 4 sessions and each session runs once a week. Dry needling is a treatment method in

which fine needles are inserted into trigger points to release adhesions and there is no injection in this method.

Category

Treatment - Surgery

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

Rehabilitation Faculty of Tabriz University of Medical Sciences

Full name of responsible person

Fariba Ghaderi

Street address

Clinic of Rehabilitation Faculty, Tavanir ave., Tabriz

City

Tabriz

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

Vice Chancellor for Research (VCR) of Tabriz University of Medical Sciences

Full name of responsible person

Dr Mohhamad Reza Rashidi

Street address

Vice Chancellor for Research (VCR) of Tabriz University of Medical Sciences, Daneshgah Ave, Tabriz

City

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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

Vice Chancellor for Research (VCR) of Tabriz 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****Name of organization / entity**

Tabriz University of Medical Sciences

Full name of responsible person

Dr Fariba Ghaderi

Position

PhD, Faculty member

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Web page address

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