

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jul 2026

The Effects of Manual Passive Muscle Shortening and Positional Release Therapy on Upper Trapezius Latent Myofascial Trigger Point: A randomized double blinded clinical trial

Protocol summary

Summary

Positional release therapy (PRT) has been suggested as an effective treatment for myofascial trigger points (MTrPs). The aim of this double blinded parallel randomized clinical trial is to compare the immediate effects, on pain, pressure pain threshold (PPT) and active lateral flexion following three treatment sessions of latent trigger points in the upper trapezius muscle involving a new technique (Manual Passive Muscle Shortening-MPMS) and PRT. Thirty female university students who are identified with upper trapezius latent MTrP will participate in this study. Using a computer generated randomized block of numbers, subjects will be randomly allocated into 2 groups and will be blinded to allocation: Experimental group (n=15) which will be treated with MPMS and control group (n=15) which will be treated with PRT. Participants will take part in three treatments and a follow up session (one week after third session). Outcome measures are visual analogue scale (VAS), pressure pain threshold (PPT) and active range of cervical lateral flexion motion. Physiotherapist 1 who is blinded to treatment allocation of the subjects will record outcomes and Physiotherapist 2 who is blinded to pre-treatment data will apply the appropriate technique. Data analysis process will be blinded.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015100724412N1**
Registration date: **2016-05-06, 1395/02/17**
Registration timing: **prospective**

Last update:

Update count: **0**

Registration date

2016-05-06, 1395/02/17

Registrant information

Name

Sakineh Goljaryan

Name of organization / entity

Tabriz University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Vice Chancellor for Research of Tabriz University of Medical Sciences (TUOMS).

Expected recruitment start date

2016-05-09, 1395/02/20

Expected recruitment end date

2016-07-10, 1395/04/20

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The Effects of Manual Passive Muscle Shortening and Positional Release Therapy on Upper Trapezius Latent Myofascial Trigger Point: A randomized double blinded clinical trial

Public title

Effects of physiotherapy techniques on painful points of trapezius muscle

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: 18-35 years old; Subjects have to exhibit a latent trigger point in the upper trapezius muscle, either on the left or right side; Normal Body Mass Index (BMI); Local pain 3-7/10 on a visual analogue scale elicited by the application of 2.5 kg/cm² of pressure with an algometer; Non athletic Exclusion criteria: Diagnosis of cervical radiculopathy or myelopathy determined by their primary care physician; Diagnosis of fibromyalgia syndrome; neck or shoulder surgery within the past year; Having undergone myofascial pain therapy in the cervical region within the past month before the study; Any sensory disturbances in the trapezius region.

Age

From **18 years** old to **35 years** old

Gender

Female

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Double blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Randomization will be applied using a computer generated randomized block of numbers

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Tabriz University of Medical Sciences

Street address

Third floor, No 2 Central Building, Tabriz University of Medical Sciences, Golgasht St.

City

Tabriz

Postal code

Approval date

2016-01-18, 1394/10/28

Ethics committee reference number

TBZMED.REC.13940940

Health conditions studied

1

Description of health condition studied

Myofascial trigger points-Myofascial pain syndrome

ICD-10 code

M62.9

ICD-10 code description

Disorder of muscle, unspecified

Primary outcomes

1

Description

Visual analogue scale

Timepoint

On first session before treatment, On third session five minutes after treatment, On follow up session one week after third session.

Method of measurement

VAS ruler

2

Description

Pressure pain threshold

Timepoint

On first session before treatment, On third session five minutes after treatment, On follow up session one week after third session.

Method of measurement

Algometer

3

Description

active range of motion of lateral flexion

Timepoint

On first session before treatment, On third session five minutes after treatment, On follow up session one week after third session.

Method of measurement

goniometer

Secondary outcomes

1

Description

-

Timepoint

-

Method of measurement

-

Intervention groups

1

Description

Control group: Subjects in this group will be treated by classical Positional Release Therapy. The subject will be in supine with therapist standing on the affected side. Pressure is applied to the trigger point. The subject's head is laterally flexed toward the side of trigger point, then therapist grasps the subject's forearm and abducts shoulder to approximately 90°. The ideal position of comfort achieved (the point where a reduction in pain of at least 70% was produced) will be held for a period of 90 seconds and followed by a passive return of the body part to an anatomically neutral position. Technique will be repeated three times with one minute intervals.

Category

Other

2

Description

Intervention group: Participants in this group will be treated by Manual Passive Muscle Shortening. The participant will be in prone position with therapist standing on the affected side. Origin and insertion of the upper trapezius muscle will be approximated by the hands of therapist and this position will be hold for 90 seconds. Technique will be repeated three times with one minute intervals

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

clinic of faculty of rehabilitation

Full name of responsible person

Street address

City

Tabriz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for Research of Tabriz University of Medical Sciences (TUOMS).

Full name of responsible person

Mohammad-Reza Rashidi

Street address

International Relations Office, No 2 Central Building, Tabriz University of Medical Sciences, Golgasht St, University Street, Tabriz, PO Box: 5165665931, Iran.

City

Tabriz

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 of Tabriz University of Medical Sciences (TUOMS).

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

Sakineh Goljaryan

Position

PHD of physiotherapy- Assistant professor

Other areas of specialty/work

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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