Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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

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Sakineh Goljaryan
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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 rehabilitaion

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
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Position
PHD of physiotherapy- Assisstant 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