

Clinical Trial Protocol

Iranian Registry of Clinical Trials

28 May 2026

The Effects of Ischemic Compression, Phonophoresis of Hydrocortisone and Ultrasound on Some of the Clinical Parameters in Latent Myofascial Trigger Point of the Upper Trapezius Muscle

Protocol summary

Summary

Introduction: Myofascial trigger points (MTrPs) is a sensitive nodule in palpable taut band that may be active or latent. As high as 85% to 93% of patients presenting to specialty pain management centers are given with MTrPs. There are some treatments for MTrPs in two types of manual and electrical medicine. In manual medicine, ischemic compression is a common treatment. The aim of this study was to investigate the effects of ischemic compression, phonophoresis of Hydrocortisone 1% and ultrasound on pain, pain pressure threshold and cervical lateral flexion in muscles with MTrPs. Material & Methods: this study was interventional. Sixty subjects, aged 20-30 years old diagnosed with MTrPs in the upper trapezius muscle participated in this study. The main factor was presence of a hypersensitive tender spot in the taut band in response to 25N or lesser. Subjects were randomly divided into four groups: which were treated with ischemic compression, phonophoresis of Hydrocortisone, ultrasound and control group. In all six sessions the treatments and assessments were done. The factors were pain, pain pressure threshold and cervical lateral flexion in 2 directions.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT138903194134N1**
Registration date: **2010-09-23, 1389/07/01**
Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2010-09-23, 1389/07/01

Registrant information

Name

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Name of organization / entity

Rehabilitation collage of Iran university of medical science

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Recruitment status

Recruitment complete

Funding source

Iran medical science university

Expected recruitment start date

2010-09-23, 1389/07/01

Expected recruitment end date

2010-12-22, 1389/10/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The Effects of Ischemic Compression, Phonophoresis of Hydrocortisone and Ultrasound on Some of the Clinical Parameters in Latent Myofascial Trigger Point of the Upper Trapezius Muscle

Public title

the evidence of three treatments on trigger points

Purpose

Treatment

Inclusion/Exclusion criteria

inclusion: 1. Presence of a palpable taut band in a skeletal muscle 2. Presence of a nodule 3. Presence of a hypersensitive tender spot in the taut band in response to 25 N or lesser. exclusion: 1. Diagnosis of fibromyalgia syndrome 2. History of a whiplash injury 3. History of cervical spine surgery 4. Diagnosis of cervical radiculopathy or myelopathy determined by their primary care physician 5. Having myofascial therapy with in the past month before the study 6. presence of spontaneous the typical referred pain pattern (Active Trigger Point) 7. Presence of a Jump sign 8. The period menstrual cycle 9. Presence of Postural disorders

Age

From **20 years** old to **30 years** old

Gender

Female

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)

Double blinded

Blinding description

Placebo

Used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Iran University of Medical Sciences

Street address

Faculty of Rehabilitation, Nezam Alley, Shahnazari Ave., Mohseni Sq., Tehran, Iran

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Postal code

Approval date

2010-01-01, 1388/10/11

Ethics committee reference number

216

Health conditions studied

1

Description of health condition studied

Trigger Point in Trapezius muscle

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Pain

Timepoint

Every day for 6 days

Method of measurement

By Algometer

2

Description

Pain Pressure Threshold

Timepoint

Every day for 6 days

Method of measurement

By Algometer

Secondary outcomes

1

Description

Range of Motion

Timepoint

Every day for 6 days

Method of measurement

By Inclinometer

Intervention groups

1

Description

Control group received usual care

Category

N/A

2

Description

In the one treatment group phonophoresis hydrocortison was used

Category

Treatment - Drugs

3

Description

In other treatment group ultrasound was used

Category

Other

4

Description

In other treatment group ischemic compression was used

Category

Other

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

Clinic of Physical Therapy, Iran University of Medical Sciences

Full name of responsible person

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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

Iran 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

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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