Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparison the efficacy of therapeutic laser and phonophoresis of diclofenac on latent trigger points of upper trapezius muscle on 30 female students of Tehran university of Medical Sciences

Protocol summary

Summary

Objectives: the aim of this study is to determine the effects of two therapeutic methods on myofascial trigger points of upper trapezius muscle in 30 student girls. Design: the design of this study is not blinded randomized and based on repeated measures. Setting and conduct: the Patients will randomly allocate into two groups and the treatment will be done 3 weeks and 3 times per week for each group. Participants: patients with severe pain will not include in the study and any subject with history of systemic illness or history of surgery will exclude from the study. Interventions: for phonophoresis group, pulsed ultrasound with 1 MHz, 1.5 W/cm2 and using Diclofenac1% for 5 minute will be used and for second group, the laser will be used for one minute. Main outcome measures variables: some parameters such as pain, pain pressure threshold, and lateral cervical flexion range of motion will be measured using VAS, algometer and inclinometer respectively.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201108074134N2**
Registration date: **2011-11-26, 1390/09/05**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2011-11-26, 1390/09/05

Registrant information

Name

Amir Ahmadi

Name of organization / entity

Rehabilitation collage of Iran university of medical science

Country

Iran (Islamic Republic of)

Phone

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amirahmadi@tums.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Tehran University of Medical Sciences

Expected recruitment start date

2011-08-23, 1390/06/01

Expected recruitment end date

2012-02-20, 1390/12/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison the efficacy of therapeutic laser and phonophoresis of diclofenac on latent trigger points of upper trapezius muscle on 30 female students of Tehran university of Medical Sciences

Public title

Comparison the efficacy of therapeutic laser and phonophoresis of diclofenac on latent trigger points of upper trapezius muscle

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Have at least one latent myofascial

trigger point on upper trapeziuos muscle ; Having pain less than 3 on VAS Exclusion criteria: History of systemic disease; History of surgery in upper extremity or spine

Age
From **18 years** old to **40 years** old

Gender
Female

Phase
2

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
Ethics committee of Tehran University of Medical Sciences

Street address
Nezam St., Shahnazari AV., Madar Sq.

City
Tehran

Postal code

Approval date
2011-09-25, 1390/07/03

Ethics committee reference number
130/1265/90/ص

Health conditions studied

1

Description of health condition studied
Myofascial Trigger point

ICD-10 code
M62.9

ICD-10 code description
Disorder of muscle, unspecified

Primary outcomes

1

Description
Cervical Lateral Flexion Range of Motion

Timepoint
In each session

Method of measurement
Cervical ROM

2

Description
Pain

Timepoint
In each session

Method of measurement
Visual analogue scale

3

Description
Pain Pressure Threshold

Timepoint
In each session

Method of measurement
Algometer

Secondary outcomes

empty

Intervention groups

1

Description
phonophoresis: Dyclofenac 1% ; 1.2 W/Cm ; Freq of 1 Mega Hz (pulse) ; sata 0.2 ; Duration of 5min ; 3 weeks and 3 times per week

Category
Treatment - Other

2

Description
Laser: 830 nm; 10 mV; 5000 Hz

Category
Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center
Physiotherapy clinic, Tehran University of Medical Sciences

Full name of responsible person
Mrs. Amini

Street address
Nezam St., Shahnazari AV., Madar Sq.

City
Tehran

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Vice chancellor for research, Tehran University of Medical Sciences
Full name of responsible person
Dr. Akbar Fotohi
Street address
Gods St., Keshavarz Av., Tehran, Iran
City
Tehran
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, Tehran 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
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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