Clinical Trial Protocol
Iranian Registry of Clinical Trials

10 Jun 2026

Effects of upper trapezius active trigger points dry needling on postural control and clinical signs in women with chronic non-specific neck pain (a single blind randomized clinical trial)

Protocol summary

Study aim

examining effects of upper trapezius active trigger points dry needling on postural control and clinical signs in women with chronic non-specific neck pain

Design

A blocking randomized, blinded, controlled clinical trial with a parallel group design of 30 patients.

Settings and conduct

The study is performed in rehabilitation faculty of Iran university of medical sciences. Eligible participants sign consent form and are randomly assigned in intervention or control group by blocking. Pain, pain pressure threshold, cervical side bending and rotation range of motion to both sides, center of pressure displacement and functional disability are assessed at first session before, 2 days and 2 months after intervention. Treatment and assessment is done by separate persons and assessor is blind about participants' groups.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Age range from 18-35 years, history of neck pain in the last 3 months, presence of at least 3 and not more than 6 neck pain based on visual analogue scale, presence of at last 3 active trigger points in upper Trapezius muscle. Exclusion criteria: History of surgery or trauma in cervical spine or upper limb , neurological disorders, vestibular disorders, acute cognitive disorders, acute psychopathy

Intervention groups

In intervention group, participants receive dry needling with upper trapezius passive stretch and postural correction education. In control group, stretch and education will be done.

Main outcome variables

pain; pain pressure threshold; side bending & rotation range of motion; postural control; functional rating scale

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20191208045652N1**
Registration date: **2020-03-03, 1398/12/13**
Registration timing: **registered_while_recruiting**

Last update: **2020-03-03, 1398/12/13**
Update count: **0**

Registration date

2020-03-03, 1398/12/13

Registrant information

Name

marzieh Yassin

Name of organization / entity

Country

Iran (Islamic Republic of)

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+98 21 2222 8052

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-11-22, 1398/09/01

Expected recruitment end date

2020-05-19, 1399/02/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title
Effects of upper trapezius active trigger points dry needling on postural control and clinical signs in women with chronic non-specific neck pain (a single blind randomized clinical trial)

Public title
Effects of upper trapezius active trigger points dry needling in women with chronic non-specific neck pain

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Age range from 18-35 years History of neck pain in the last 3 months Presence of neck pain at least 3 and not more than 6 based on visual analogue scale during last week Presence of at last 3 active trigger points in upper Trapezius muscle, based on Simons et al criteria: 1) presence of palpable taut band 2) presence of hyperirritable spots in a taut band based on participants' history 3) presence of referral pain in a specific pattern during compression or stretch 4) Patient’s recognition of current pain complaint by pressure on the tender nodule 5) jump sign during palpation of spot

Exclusion criteria:
History of cervical spine or upper limb surgery during the last year History of traumatic injuries in cervical region including fracture, wiplash during the last year Presence of radiculopathic signs Presence of pain in hip, knee & ankle during the last 3 months Presence of neurological disorders including Neuropathy, Myopathy, Parkinson & Cerebellar lesion Presence of vestibular disorders Presence of uncorrected visual & hearing disorders Presence of acute cognitive disorders (result number < 23 from MMSE questionnaire) Presence of acute psychopathy (based on acquired number from DASS-21 questionnaire) History of rheumatic disorders History of fibromyalgia syndrome based on Rheumatology faculty of USA (1990) History of coagulopathy Pregnancy Diabetes History of any treatment or injection of trigger points during the last 3 months Visible severe postural disorders including kyphosis or scoliosis Skin infection or inflammation History of anti coagulant or immuno suppressive drugs Fear of needle

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

Gender
Female

Phase
N/A

Groups that have been masked

- Care provider
- Outcome assessor
- Data analyser

Sample size
Target sample size: **30**

Randomization (investigator's opinion)
Randomized

Randomization description
In this study, a simple block random allocation method will be used. In order to balance the number of samples in each group, a blocking method with random sizes of 6 will be used and non-transparent envelopes will be used to hide the random assignment. It should be noted that steps are taken to create a randomization sequence by a person who is not involved in any other stage of the research

Blinding (investigator's opinion)
Single blinded

Blinding description
treatment and assessment will be done by separate persons. Analyzer and assessor will be blind.

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
ethics committee of Iran university of medical sciences

Street address
Iran university of medical sciences, next to Milad tower, Hemmat highway

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Tehran

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Tehran

Postal code
۱۴۴۹۶۱۴۵۳۵

Approval date
2019-11-05, 1398/08/14

Ethics committee reference number
IR.IUMS.REC.1398.848

Health conditions studied

1

Description of health condition studied
nonspecific neck pain

ICD-10 code
M70.9

ICD-10 code description
Unspecified soft tissue disorder related to use, overuse and pressure

Primary outcomes

1

Description
postural control

Timepoint

Before intervention, 2 days and 2 months after intervention

Method of measurement

Force plate, kistler, Germany

Secondary outcomes

1

Description

Pain

Timepoint

Before intervention, 2 days and 2 months after intervention

Method of measurement

visual analogue scale

2

Description

pain pressure threshold

Timepoint

Before intervention, 2 days and 2 months after intervention

Method of measurement

Algometer, JTECK, USA

3

Description

side bending & rotation range of motion

Timepoint

Before intervention, 2 days and 2 months after intervention

Method of measurement

iPhone 8 application, goniometer

4

Description

functional rating scale

Timepoint

Before intervention, 2 days and 2 months after intervention

Method of measurement

Persian version of functional rating scale questionnaire

Intervention groups

1

Description

Intervention group:dry needling (Dang bang South Korea, 50*0.3 millimeter) with upper trapezius passive stretch and postural correction education based on pamphlet during 5 sessions, 2 times in a week.

Category

Rehabilitation

2

Description

Control group: upper trapezius passive stretch and postural correction education based on pamphlet during 5 sessions, 2 times in a week.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

physiotherapy clinic of rehabilitation faculty of Iran university of medical sciences

Full name of responsible person

Marzieh Yassin

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Recruitment center

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Sponsors / Funding sources

1

Sponsor

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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
Public

Domestic or foreign origin
Domestic

Category of foreign source of funding
empty

Country of origin

Type of organization providing the funding
Academic

Person responsible for general inquiries

Contact

Name of organization / entity
Iran University of Medical Sciences

Full name of responsible person
Fereshteh Navaee

Position
student

Latest degree
Bachelor

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Yes - There is a plan to make this available

Study Protocol
Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan

Not applicable

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Undecided - It is not yet known if there will be a plan to make this available

Analytic Code

Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available

Title and more details about the data/document

all data will be shared after unidentified persons

When the data will become available and for how long

accessibility will be 6 months after printing the result

To whom data/document is available

all researchers and scientists, working in academic and scientific institutions, can access to data

Under which criteria data/document could be used

Use of data is only possible by mentioning the name and organizational affiliation of the correspond and co-author of the project and the published article.

From where data/document is obtainable

connect to Fereshteh Navaee by email: fereshte.navaei@gmail.com

What processes are involved for a request to access data/document

if data is used in scientific and therapeutic activities, information will be provided as soon as possible.

Comments