

Clinical Trial Protocol

Iranian Registry of Clinical Trials

29 Jun 2026

The effect of mobilization with movement technique on pain, disability and range of motion in athletes with chronic cervicogenic headache

Protocol summary

Study aim

The effect of mobilization along with movement technique and common neck therapeutic exercise on pain, range of motion and disability of athletes with chronic cervicogenic headache

Design

This clinical trial has a control group, with parallel groups, double-blind and randomized, which is performed on 32 patients. Block balanced randomization method was used for randomization.

Settings and conduct

In this study, the required samples are selected from recreational athletes suffering from cervicogenic headache referring to a private physiotherapy clinic.

Participants/Inclusion and exclusion criteria

Recreational athletes between 20 and 50 years old who have headaches of neck origin for more than 3 months and do not have neurological disorders, history of fracture, surgery, radiculopathy, migraine, and congenital malformations

Intervention groups

In the current study, the intervention group will be treated using mobilization with movement technique and the control group will be treated with common exercise therapy for cervicogenic headache. Treatment will be applied in both groups during 12 sessions for 4 weeks, 3 sessions per week.

Main outcome variables

Headache intensity- Headache frequency- Headache duration- Disability- Range of Motion

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230815059155N1**

Registration date: **2023-09-15, 1402/06/24**

Registration timing: **registered_while_recruiting**

Last update: **2023-09-15, 1402/06/24**

Update count: **0**

Registration date

2023-09-15, 1402/06/24

Registrant information

Name

Nima Mirzaaghatabar

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 26 3273 6818

Email address

nima.mirzaaghatabar@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-09-04, 1402/06/13

Expected recruitment end date

2024-02-18, 1402/11/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of mobilization with movement technique on pain, disability and range of motion in athletes with chronic cervicogenic headache

Public title

Effect of mobilization with movement technique in athletes with cervicogenic headache

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Diagnosis of cervicogenic headache with diagnostic index of World Headache Society Positive flexion-rotation test Have headaches for 3 months or more Recreational athletes Between 20 and 50 years old

Exclusion criteria:

Have neurological disorders or neck arthritis History of fracture, injury or surgery in the neck area Congenital malformations Bone infection Cervical disc herniation or upper limb radiculopathy Migraine Performing other therapeutic interventions at the same time Absence in 3 consecutive sessions or more

Age

From **20 years** old to **50 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Outcome assessor

Sample size

Target sample size: **32**

Randomization (investigator's opinion)

Randomized

Randomization description

After entering the study, participants are randomly assigned to two treatment groups, mobilization with movement and control group, using block balanced randomization method. generatorslist.com system is used to determine random numbers (random allocation); This method is done with the help of four-digit blocks including even and odd numbers. For this purpose, 4-digit numbers are chosen, which have 2 even digits and 2 odd digits; Each figure represents each person participating in the study. Even numbers indicate the group of mobilization with movement and odd numbers indicate the treatment group of common exercise therapy.

Blinding (investigator's opinion)

Single blinded

Blinding description

At the end of the random allocation, the numbers will be placed inside the numbered envelopes and after the initial evaluation by the examiner, the numbered envelopes corresponding to the sequential number of each person entered into the study will be given to him. Finally, after each participant enters the treatment sessions, the therapist opens the envelope related to the person in question and applies therapeutic interventions based on the numbers inside the envelope. Also, the evaluator will be unaware of which group each subject is in.

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

No. 1, Shahid Asadi Alley, Haftome tir Ave., Danesh-amuz Blvd., Hafte tir Cross road, Karaj

City

Karaj

Province

Alborz

Postal code

3136697857

Approval date

2023-08-06, 1402/05/15

Ethics committee reference number

IR.IUMS.REC.1402.424

Health conditions studied**1****Description of health condition studied**

Cervicogenic headache

ICD-10 code

G44.86

ICD-10 code description

Cervicogenic headache is a medical classification as listed by WHO under the range - Diseases of the nervous system

Primary outcomes**1****Description**

Headache intensity based on Visual Analog Scale

Timepoint

Before intervention, at the end of intervention & 4 weeks after the end of intervention

Method of measurement

Visual Analog Scale

Secondary outcomes**1****Description**

Disability

Timepoint

Before intervention, at the end of intervention & 4 weeks after the end of intervention

Method of measurement

Henry Ford Hospital Headache Disability Inventory

2

Description

Upper cervical range of motion

Timepoint

Before intervention, at the end of intervention & 4 weeks after the end of intervention

Method of measurement

Flexion-rotation test & Cervical Range of Motion device

3

Description

Headache duration

Timepoint

Before intervention, at the end of intervention & 4 weeks after the end of intervention

Method of measurement

Questionnaire

4

Description

Headache frequency

Timepoint

Before intervention, at the end of intervention & 4 weeks after the end of intervention

Method of measurement

Questionnaire

Intervention groups

1

Description

Intervention group: This group is treated with the Mulligan cervical Sustained Natural Apophyseal Glide technique on the C2 vertebra. This technique is performed for twenty minutes in each session, three times a week for four weeks.

Category

Rehabilitation

2

Description

Control group: This group is trained to strengthen deep neck flexors using a pressure biofeedback device in such a way that the exercises are repeated for 3 sets, and 2 mm of mercury is added to the pressure in each set. The pressure increases from 22 to 32 mmHg during 4 weeks of treatment. Each exercise set is held for 10 seconds and repeated 10 times; 5 seconds rest between each repetition and 2 minutes rest between each set. Also, stretching of the suboccipital, scalene, upper trapezius, levator scapula and sternocleidomastoid muscles is also done for these patients. The duration of stretching for each muscle is 10 seconds and 5 seconds of rest with the number of repetitions of 10 repetitions in the form of a training set.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Shayesteh clinic of physiotherapy

Full name of responsible person

Hajar Shayesteh Abbasi

Street address

No 4, Third Alley, Ferdos Blvd, Sadeghieh

City

Tehran

Province

Tehran

Postal code

1481895861

Phone

+98 21 4497 4686

Fax

Email

Misssdandelion@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Iran University of Medical Sciences

Full name of responsible person

Afsoon Mehraban

Street address

School of Rehabilitation Science of Iran University, Madadkaran Alley, Shahnazari Ave, Madar Square, Mirdamad

City

Tehran

Province

Tehran

Postal code

1545913487

Phone

+98 21 2222 2059

Email

ebrahimidakamjani.e@iums.ac.ir

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

Other

Person responsible for general inquiries

Contact

Name of organization / entity

Iran University of Medical Sciences

Full name of responsible person

Sanaz Shanbehzade

Position

Assistant professor

Latest degree

Ph.D.

Other areas of specialty/work

Physiotherapy

Street address

School of Rehabilitation Science of Iran University,
Madadkaran Alley, Shahnazari Ave, Madar Square,
Mirdamad

City

Tehran

Province

Tehran

Postal code

1545913487

Phone

+98 21 2222 8051

Email

sanazshanbehzadeh@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity

Iran University of Medical Sciences

Full name of responsible person

Sanaz Shanbehzadeh

Position

Assistant professor

Latest degree

Ph.D.

Other areas of specialty/work

Physiotherapy

Street address

School of Rehabilitation Science of Iran University,
Madadkaran Alley, Shahnazari Ave, Madar Square,
Mirdamad

City

Tehran

Province

Tehran

Postal code

1545913487

Phone

+98 21 2222 8051

Email

sanazshanbehzadeh@gmail.com

Person responsible for updating data

Contact

Name of organization / entity

Iran University of Medical Sciences

Full name of responsible person

Nima Mirzaaghatabar

Position

Physiotherapist

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

Street address

No. 1, Shahid Asadi Alley, Haftome tir Ave., Danesh-
amuz Blvd., Hafte tir Cross road, Karaj

City

Karaj

Province

Alborz

Postal code

3136697857

Phone

+98 26 3274 6817

Email

Nima.mirzaaghatabar@gmail.com

Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

All data collected from participants after de-identification, study protocol, statistical analysis plan, designed forms for informed consent and questionnaires, clinical report of the study, codes used in the analysis and information about data classification after can be published upon request from the researcher after the of the study.

When the data will become available and for how long

The period of access to data documentation begins 6 months after the results are published.

To whom data/document is available

These documents will be accessible to researchers related to academic and scientific institutions and physiotherapists working in other centers.

Under which criteria data/document could be used

These data are accessible if they are not used for the purpose of analysis, conclusion and statistical review in

another study (except for review and systematic studies).

From where data/document is obtainable

Nima Mirzaaghatabar: nima.mirzaaghatabar@gmail.com

Sanaz Shanbehzadeh: sanazshanbehzadeh@gmail.com

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

By sending a message to the given email addresses, the

person must first mention the name, degree and field of study and the related center or institution and present the data he needs and what it will be used for. Then after checking and if the necessary conditions are met, the requested documents will be sent to the person within a week.

Comments