Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 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

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Iran (Islamic Republic of)

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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
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Iran University of Medical Sciences
Full name of responsible person
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School of Rehabilitation Science of Iran University, Madadkaran Alley, Shahnazari Ave, Madar Square, Mirdamad
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ebrahimitakamjani.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
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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