Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects of galvanic vestibular stimulation and cervical proprioception training on postural control behavior in chronic neck pain

Protocol summary

Summary

The aim of this study is to determine the effects of galvanic vestibular stimulation and cervical proprioception training on postural control behavior in chronic neck pain. inclusion criteria for patient group: complaint of neck pain for 3 months or more; no history of head and neck trauma; without referral to upper limb; with a neck disability index score greater than 10%, Visual analogue scale more than 3. Exclusion criteria : Neurological disorders; cervical spine root compression; radiculopathy; preexisting vestibular pathology; connective tissue disease; cervical fracture and dislocation; Ankylosing spondylitis; myelopathy; cervical spine surgery. this study is a randomized controlled clinical trial. 48 patients with nontraumatic neck pain, age between 20 - 50 will participate in this study. Patients will divide in 4 groups of 12 subjects. 12 healthy subjects will participate in study.Galvanic vestibular stimulation will perform 3 times a week for 6 weeks. Cervical proprioception training twice daily will perform for 6 weeks. pressure pain threshold, joint position sense, pain intensity, speed of cop, mean and maximum excursion of center of pressure, rambling , trembling of Center of pressure, frequency component of center of pressure signal will measure before and after of interventions.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016060121459N2**
Registration date: **2016-09-26, 1395/07/05**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2016-09-26, 1395/07/05

Registrant information

Name
Mohammad Akbari
Name of organization / entity
Dept. of Physical therapy, School of Rehabilitation,Iran University of Medical Sciences.
Country
Iran (Islamic Republic of)
Phone
+98 21 2222 8051
Email address
akbari.mo@iums.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice Research of Iran University of Medical Sciences

Expected recruitment start date

2016-08-24, 1395/06/03

Expected recruitment end date

2017-06-21, 1396/03/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effects of galvanic vestibular stimulation and cervical proprioception training on postural control behavior in chronic neck pain

Public title

Effects of balance stimulation and cervical training on balance performance in chronic neck pain

Purpose

Treatment

Inclusion/Exclusion criteria

inclusion criteria for patient group: complaint of neck pain for 3 months or more without referral to upper limb; age between 20 - 50;; no history of head and neck trauma; with a neck disability index score greater than 10%, VAS more than 3 ; neck pain at least twice during the last twelve months; not participation in exercise training during past 3 months. healthy subjects have not any musculoskeletal disorders. Exclusion criteria : Neurological disorders; cervical spine root compression; radiculopathy; preexisting vestibular pathology; connective tissue disease; cervical fracture and dislocation; Ankylosing spondylitis; mylopathy; cervical spine surgery; history of head and neck trauma, systemic disease; pregnancy; peripheral neuropathy; diabetes; inner ear disease; Rheumatic and inflammatory disease;fibromyalgia; respiratory / metabolic and cardiovascular disorders.

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

Gender
Both

Phase
2-3

Groups that have been masked
No information

Sample size
Target sample size: **60**

Randomization (investigator's opinion)
Randomized

Randomization description

Blinding (investigator's opinion)
Single blinded

Blinding description

Placebo
Used

Assignment
Factorial

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, Hemmat highway,Thran, Iran

City
Tehran

Postal code

Approval date
2016-08-08, 1395/05/18

Ethics committee reference number
IR.IUMS.REC 1395.9211342210

Health conditions studied

1

Description of health condition studied
Chronic neck pain

ICD-10 code
M99

ICD-10 code description
Biomechanical lesions, not elsewhere classified

Primary outcomes

1

Description
mean excursion of COP

Timepoint
Before ,immediate after and 6weeks after intervention

Method of measurement
Force plate

2

Description
maximum excursion of COP

Timepoint
Before ,immediate after and 6weeks after intervention

Method of measurement
Force plate

3

Description
Mean speed of COP

Timepoint
Before ,immediate after and 6weeks after intervention

Method of measurement
Force plate

4

Description
Rambling

Timepoint
Before ,immediate after and 6weeks after intervention

Method of measurement
Force plate

5

Description
Trembling

Timepoint
Before ,immediate after and 6weeks after intervention

Method of measurement
Force plate

6

Description
Frequency band of COP

Timepoint

Before ,immediate after and 6weeks after intervention

Method of measurement

Force plate

Secondary outcomes

1

Description

Pain intensity

Timepoint

Before, immediate after and 6 weeks after intervention

Method of measurement

VAS

2

Description

Pressure pain threshold

Timepoint

Before, immediate after and 6 weeks after intervention

Method of measurement

Algometer

3

Description

Joint position sense

Timepoint

Before, immediate after and 6 weeks after intervention

Method of measurement

Laser pointer and distance to reference point during cervical rotation and extension

4

Description

Neck disability level

Timepoint

Before and 6 weeks after intervention

Method of measurement

Neck disability Index

5

Description

Quality of life

Timepoint

Before and 6 weeks after intervention

Method of measurement

Short form12 questionnaire

Intervention groups

1

Description

Galvanic vestibular stimulation will perform3 times a week for 6 weeks.

Category

Rehabilitation

2

Description

cervical proprioception training twice daily will perform for 6 weeks.

Category

Rehabilitation

3

Description

TENS will perform3 times a week for 6 weeks.

Category

Rehabilitation

4

Description

Galvanic vestibular stimulation will perform3 times a week for 6 weeks and cervical proprioception training twice daily will perform for 6 weeks.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

motion analysis Lab of school of rehabilitation sciences

Full name of responsible person

Sayyed Hamed Fazeli

Street address

Shahnazari St, Madar Sq, Mirdamad Blv, Tehran

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Research of Iran University of Medical Sciences

Full name of responsible person

Mohammad Akbari

Street address

Shahnazari St, Madar Sq, Mirdamad Blvd, Tehran

City

Tehran

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Vice Research of 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

Person responsible for general inquiries

Contact
Name of organization / entity
Dept. of physical therapy, school of rehabilitation sciences,Iran university of medical sciences
Full name of responsible person
Mohammad Akbari
Position
Ph.D of physical therapy
Other areas of specialty/work
Street address
Shahnazari St, Madar Sq, Mirdamad Blvd
City
Tehran
Postal code
Phone
+98 21 2222 2059
Fax
Email
akbari.mo@iums.ac.ir; Akbarimo43@yahoo.com
Web page address

Person responsible for scientific inquiries

Contact
Name of organization / entity
School of rehabilitation sciences
Full name of responsible person
Mohammad Akbari
Position
Ph.D of Physical therapy
Other areas of specialty/work
Street address
Shahnazari St, Madar Sq, Mirdamad Blvd
City
Tehran
Postal code
Phone
+98 21 2222 2059
Fax
Email
akbari.mo@iums.ac.ir akbarimo43@yahoo.com
Web page address

Person responsible for updating data

Contact
Name of organization / entity
School of rehabilitation sciences, iran university of medical sciences
Full name of responsible person
Sayyed hamed fazeli
Position
Ph.D candidate in physical therapy
Other areas of specialty/work
Street address
Shahnazari St, Mirdamad Sq, Mirdamad Blvd
City
Tehran
Postal code
Phone
+98 21 2222 2059
Fax
Email
hamed_fazeli62@yahoo.com
Web page address

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