

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jul 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

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Name of organization / entity

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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

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Research of Iran University of Medical Sciences

Full name of responsible person

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Street address

Shahnazari St, Madar Sq, Mirdamad Blvd, Tehran

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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

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***Postal code****Phone**

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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*