

Clinical Trial Protocol

Iranian Registry of Clinical Trials

23 Aug 2026

The effects of postural training with cerebellar a-tDCS on balance, static and dynamic postural stability and fear of falling in patients with Multiple Sclerosis

Protocol summary

Study aim

The effects of postural training with cerebellar a-tDCS on balance, static and dynamic postural stability and fear of falling in patients with Multiple Sclerosis

Design

Clinical trials with control group, with parallel groups, Blind two-sided, randomized, without control with placebo, single center trial.

Settings and conduct

Neuromuscular Rehabilitation Research Center.
Participants are divided into 3 groups. Individuals receive postural training on the biodex balance machine during two weeks and each week during 3 therapeutic sessions (20 minutes).

Participants/Inclusion and exclusion criteria

People with MS. Inclusion criteria: 18-40 years; Expanded Disability Status Scale (EDSS) < 4. Exclusion criteria: Severe visual field defect; Severe weakness in limb movement; Other neurologic disorders and neurological.

Intervention groups

Intervention group 1: According to the protocol, postural exercises are performed on the biodex machine with tDCS of the cerebellum. Intervention group 2: According to the protocol, they perform postural exercises on the biodex machine with unrealistic cerebellar tDCS. Control group: People will only receive postural exercises without receiving any electrical stimulation.

Main outcome variables

Fear Of Falling.

General information

Reason for update

According to the registration of the clinical trial on 2019/08/10, sampling started on 2019/08/23.

Acronym

IRCT registration information

IRCT registration number: **IRCT20151228025732N43**

Registration date: **2019-08-10, 1398/05/19**

Registration timing: **prospective**

Last update: **2021-05-11, 1400/02/21**

Update count: **1**

Registration date

2019-08-10, 1398/05/19

Registrant information

Name

Alireza Emadi

Name of organization / entity

Semnan University of Medical Sciences, Semnan, Iran

Country

Iran (Islamic Republic of)

Phone

+98 23 3345 1336

Email address

are20935@semums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-08-23, 1398/06/01

Expected recruitment end date

2020-01-15, 1398/10/25

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effects of postural training with cerebellar a-tDCS on balance, static and dynamic postural stability and fear of

falling in patients with Multiple Sclerosis

Public title

The effects of postural training with cerebellar a-tDCS on balance, static and dynamic postural stability and fear of falling in patients with Multiple Sclerosis

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

18-40 years Expanded Disability Status Scale (EDSS) < 4

Exclusion criteria:

Severe visual field defect Severe weakness in limb movement Other neurologic disorders and neurological

Age

From **18 years** old to **40 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant
- Outcome assessor

Sample size

Target sample size: **66**

Randomization (investigator's opinion)

Randomized

Randomization description

Block randomization; Individual; Random Number Tables. Randomized permutation blocks (block 3). Using Excel software to generate random number tables.

Blinding (investigator's opinion)

Double blinded

Blinding description

Study participants and evaluators are unaware of the allocation of study groups.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Semnan University of Medical Sciences

Street address

Semnan University of Medical Sciences, Basij Blvd, Semnan

City

Semnan

Province

Semnan

Postal code

3514799442

Approval date

2019-01-15, 1397/10/25

Ethics committee reference number

IR.SEMUMS.REC.1397.233

Health conditions studied

1

Description of health condition studied

Multiple sclerosis

ICD-10 code

G35

ICD-10 code description

Multiple sclerosis

Primary outcomes

1

Description

Fear Of Falling

Timepoint

Before, after and one month after intervention

Method of measurement

Falls Self-Efficacy Scale (FES-I) Questionnaire

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group 1: According to the protocol, postural exercises are performed on the biodex machine with tDCS of the cerebellum.

Category

Diagnosis

2

Description

Intervention group 2: According to the protocol, they perform postural exercises on the biodex machine with unrealistic cerebellar tDCS.

Category

Diagnosis

3

Description

Control group: People will only receive postural exercises without receiving any electrical stimulation.

Category

Diagnosis

Recruitment centers

1

Recruitment center

Name of recruitment center

Neuromuscular Rehabilitation Research Center

Full name of responsible person

Fatemeh Ehsani

Street address

Neuromuscular Rehabilitation Research Center, Qods Blvd, Mashahir Aven.

City

Semnan

Province

Semnan

Postal code

3513138111

Phone

+98 23 3365 4180

Email

fatemehehsani59@yahoo.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Semnan University of Medical Sciences

Full name of responsible person

Parviz Kokhaei

Street address

Semnan University of Medical Sciences, Basij Blvd, Semnan.

City

Semnan

Province

Semnan

Postal code

3514799442

Phone

+98 23 3345 1336

Email

P_kokha@yahoo.com

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Semnan 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

Semnan University of Medical Sciences

Full name of responsible person

Fatemeh Ehsani

Position

Associate professor

Latest degree

Ph.D.

Other areas of specialty/work

Physiotherapy

Street address

Neuromuscular Rehabilitation Research Center, Qods Blvd, Mashahir Aven.

City

Semnan

Province

Semnan

Postal code

3513138111

Phone

+98 23 3365 4180

Email

fatemehehsani59@yahoo.com

Person responsible for scientific inquiries

Contact

Name of organization / entity

Semnan University of Medical Sciences

Full name of responsible person

Fatemeh Ehsani

Position

Associate professor

Latest degree

Ph.D.

Other areas of specialty/work

Physiotherapy

Street address

Neuromuscular Rehabilitation Research Center, Qods Blvd, Mashahir Aven.

City

Semnan

Province

Semnan

Postal code

3513138111

Phone

+98 23 3365 4180

Email

fatemehehsani59@yahoo.com

Person responsible for updating data

Contact

Name of organization / entity

Semnan University of Medical Sciences

Full name of responsible person

Morteza Ahmadi

Position

Student

Latest degree

Master

Other areas of specialty/work

Physiotherapy

Street address

Neuromuscular Rehabilitation Research Center, Qods Blvd, Mashahir Aven.

City

Semnan

Province

Semnan

Postal code

3513138111

Phone

+98 23 3365 4180

Email

are20935@gmail.com

Sharing plan**Deidentified Individual Participant Data Set (IPD)**

Yes - There is a plan to make this available

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

No - There is not a plan to make this available

Informed Consent Form

No - There is not a plan to make this available

Clinical Study Report

No - There is not a plan to make this available

Analytic Code

No - There is not a plan to make this available

Data Dictionary

No - There is not a plan to make this available

Title and more details about the data/document

-

When the data will become available and for how long

-

To whom data/document is available

Only available to scholars working in academic institutions.

Under which criteria data/document could be used

In case of relevant studies.

From where data/document is obtainable

Fatemeh Ehsani Neuromuscular Rehabilitation Research Center, Ghods Blvd. +98 9191310755

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

-

Comments