Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The effect of balance board training on balance parameters in children with Spastic Paraparesis of cerebral palsy

Protocol summary

Study aim
To evaluate the effects of balance board on the balance parameters in children with spastic cerebral palsy
Design
single-group before-after clinical trial.
Settings and conduct
The study was conducted in the Department of Physical Medicine and Rehabilitation at a teaching hospital.
Participants/Inclusion and exclusion criteria
children with a diagnosis of spastic CP if they were between 5 and 15 years of age. They were required to have bilateral spastic CP based on the Modified Ashworth Scale of 1+ or 2
Intervention groups
we place the patients on a force plate and examine the balance and balance parameters (Body Sway, Maximum Overshoot, CoP Distance, and CoP Velocity). Patients were then trained in 20 sessions of 45 minutes for 3 times a week with a balance plate.
Main outcome variables
distance, velocity, and overshoot of the center of pressure displacement with eyes open and closed

General information

Reason for update
Acronym
IRCT registration information
IRCT registration number: **IRCT20140306016865N3**
Registration date: **2020-09-24, 1399/07/03**
Registration timing: **retrospective**

Last update: **2020-09-24, 1399/07/03**
Update count: **0**
Registration date
2020-09-24, 1399/07/03

Registrant information

Name
Mahsa Asheghan
Name of organization / entity
Baqiatallah University of Medical Sciences
Country
Iran (Islamic Republic of)
Phone
+98 21 8805 8837
Email address
m_asheghan@bmsu.ac.ir

Recruitment status
Recruitment complete
Funding source

Expected recruitment start date
2019-09-23, 1398/07/01
Expected recruitment end date
2020-05-21, 1399/03/01
Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
The effect of balance board training on balance parameters in children with Spastic Paraparesis of cerebral palsy

Public title
The effect of balance board training in children with cerebral palsy
Purpose
Health service research
Inclusion/Exclusion criteria
Inclusion criteria:
Patients with CP type spastic diplegia (SDI), aged 5 to 15 years
Exclusion criteria:
Other causes for sapsticity concomitant medica ldiseases

Botox injection during 6 months ago

Age

From **5 years** old to **15 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **15**

Randomization (investigator's opinion)

N/A

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Single

Other design features

No comment

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Baqiyatallah University of Medical Sciences

Street address

Mollasadra Street

City

Tehran

Province

Tehran

Postal code

1436913511

Approval date

2017-12-11, 1396/09/20

Ethics committee reference number

ir.bmsu.rec.1396.481

Health conditions studied

1

Description of health condition studied

cerebral palsy

ICD-10 code

G80.1

ICD-10 code description

Spastic diplegic cerebral palsy

Primary outcomes

1

Description

The amount of center of the pressure displacement on the balance board in centimeters with the eyes open and closed

Timepoint

At the baseline and one week after the end of the intervention

Method of measurement

Using force plate and graphic software

2

Description

Speed of center of gravity movement with eyes open and closed

Timepoint

At the baseline and one week after the end of the intervention

Method of measurement

Using force plate and graphic software

Secondary outcomes

empty

Intervention groups

1

Description

We placed the patients on a force plate (using the force plate plate of the Kistler model 2812A and version 4.0 X with a frequency of 1200 Hz) We examined the balance position and balance parameters (CoP Velocity max, Overshoot COP, CoP Displacemente and CoP Velocity. Then, the patients were trained in 20 sessions of 45 minutes 3 times a week with a balance plate (balance board device made by Pegah Parseh Research Institute). At the end of the work (one week after the end of the treatment sessions), they were placed on the force plate again as before and their balance status and balance parameters were checked.

Category

Treatment - Devices

Recruitment centers

1

Recruitment center

Name of recruitment center

Baqyiatallah Hospital

Full name of responsible person

Mahsa Asheghan

Street address

Mollasadra Street

City

Tehran

Province
Tehran
Postal code
1436913511
Phone
+98 21 8805 8837
Email
m_asheghan@bmsu.ac.ir

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Bagheiat-allah University of Medical Sciences
Full name of responsible person
Morteza Izadi
Street address
Mollasadra street
City
Tehran
Province
Tehran
Postal code
1435916471
Phone
+98 21 8482 4353
Email
research2@gmail.com
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Bagheiat-allah 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
Bagheiat-allah University of Medical Sciences
Full name of responsible person
Mahsa Asheghan
Position
Assistant Professor
Latest degree
Specialist
Other areas of specialty/work
Physical Medicine
Street address
Mollasadra street
City
Tehran
Province
Tehran
Postal code
1436913511
Phone
+98 21 8805 8837
Email
m_asheghan@bmsu.ac.ir

Person responsible for scientific inquiries

Contact
Name of organization / entity
Bagheiat-allah University of Medical Sciences
Full name of responsible person
Mahsa Asheghan
Position
Assistant Professor
Latest degree
Specialist
Other areas of specialty/work
Physical Medicine
Street address
Mollasadra Street
City
Tehran
Province
Tehran
Postal code
1436913511
Phone
+98 21 8805 8837
Email
m_asheghan@bmsu.ac.ir

Person responsible for updating data

Contact
Name of organization / entity
Bagheiat-allah University of Medical Sciences
Full name of responsible person
Mahsa Asheghan
Position
Assistant Professor
Latest degree
Specialist
Other areas of specialty/work
Physical Medicine
Street address
Mollasadra Street
City
Tehran
Province
Tehran
Postal code
1436913511
Phone

+98 21 8805 8837
Email
m_asheghan@bmsu.ac.ir

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
Not applicable
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
The study will be published in an article
When the data will become available and for how long
just after publication
To whom data/document is available
researchers
Under which criteria data/document could be used
for research purpose
From where data/document is obtainable
from the indexing journal website
What processes are involved for a request to access data/document
The researcher must download the article
Comments