Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects of Core Muscles Strengthening Exercises With Routine Physical Therapy on Trunk Balance and Functional Mobility in Stroke Patients: A Randomized Controlled Trial

Protocol summary

Study aim
To compare the effects of core muscles strengthening exercises with routine physical therapy on trunk balance and functional mobility in stroke patients.

Design
Single blinded, Randomized controlled trial

Settings and conduct
Mubarak Medical Complex

Participants/Inclusion and exclusion criteria
Inclusion Criteria: 1) Patients who has the first on set of ischemic stroke.2)Age between 40-60 years. 3) Medically stable, understand and follow simple verbal instructions. 4) Both male and female with chronic stroke (6 months post stroke). 5) MMSE > 24 Exclusion Criteria: 1) Patients who could not communicate (severe aphasia). 2) Participants having neglect of paretic limb 3) Participants with severe spasticity (modified ash worth scale score >3). 4)Patient having visual and sensory deficit. 5)If patient had a neurological disease affecting balance other than stroke, such as cerebellar disease, Parkinson's disease or vestibule disease.

Intervention groups
All the participant who came to physiotherapy department was considered and screened for chronic phase of stroke.74 patients were allotted in two groups i.e.; group A(RPT) and group B(RPT+ Core strengthening exercises) via lottery method, 37 in each group. Consider the inclusion and exclusion criteria before concerning them in study. Both groups will receive the routine physical therapy. Patient in A group will be treated by routine physical therapy and in B group with routine physical therapy plus core strengthening exercises. Dosage:- 30 minutes RPT in both groups and core strengthening exercises with 7-10 repetitions for 15-20 minutes with adequate rest interval in experimental group. Duration: - Four sessions/week (alternative days) and treatment last for 8 weeks.

Main outcome variables
1: Trunk Balance 2: Functional Mobility

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20211116053070N1**
Registration date: **2021-12-20, 1400/09/29**
Registration timing: **registered_while_recruiting**

Last update: **2021-12-20, 1400/09/29**
Update count: **0**

Registration date
2021-12-20, 1400/09/29

Registrant information

Name
Iqra Nadeem

Name of organization / entity
University of Sargodha

Country
Pakistan

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2021-10-28, 1400/08/06

Expected recruitment end date
2022-04-28, 1401/02/08

Actual recruitment start date
empty

Actual recruitment end date
empty
Trial completion date
empty

Scientific title
Effects of Core Muscles Strengthening Exercises With Routine Physical Therapy on Trunk Balance and Functional Mobility in Stroke Patients: A Randomized Controlled Trial

Public title
Effects of Core Muscles Strengthening Exercises With Routine Physical Therapy on Trunk Balance and Functional Mobility in Stroke Patients: A Randomized Controlled Trial
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Patients who has the first on set of ischemic stroke Age between 40-60 years. Medically stable, understand and follow simple verbal instructions Both male and female with chronic stroke (6 months post stroke). MMSE > 24
Exclusion criteria:
Patients who could not communicate (severe aphasia). Participants having neglect of paretic limb Participants with severe spasticity (modified ash worth scale score >3) Patient having visual and sensory deficit If patient had a neurological disease affecting balance other than stroke, such as cerebellar disease, Parkinson's disease or vestibular disease
Age
From **40 years** old to **60 years** old
Gender
Both

Phase
N/A
Groups that have been masked

- Participant
- Outcome assessor

Sample size
Target sample size: **74**
Randomization (investigator's opinion)
Randomized
Randomization description
A total no. of 74 participants suffering from stroke fulfilling the inclusion criteria will be recruited to volunteer in this randomized controlled study.Subjects will be randomized into two groups using lottery method.
Blinding (investigator's opinion)
Single blinded
Blinding description
it will be a single blinded study in which participant/ patients are kept blind for treatment techniques and patients are blind about which group they belong either intervention or control group.
Placebo
Not used
Assignment
Single

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics committee of University of Lahore
Street address
House no.85, Umer block Sargodha homes main Fsd road near 49 tail Sargodha
City
Sargodha
Postal code
40100
Approval date
2021-10-27, 1400/08/05
Ethics committee reference number
IRB-UOL-FAHS/1007/2021

Health conditions studied

1

Description of health condition studied
Stroke population
ICD-10 code
ICD-10 code description
ischemic stroke, core strengthening exercise, trunk balance, functional mobility

Primary outcomes

1

Description
Trunk balance
Timepoint
8 weeks
Method of measurement
Trunk Impairment Scale

Secondary outcomes

1

Description
Functional Mobility
Timepoint
8 weeks
Method of measurement
Timed up and Go Test

Intervention groups

1

Description
Intervention group: Routine physical therapy + core muscle strengthening exercises for 15-20 minutes (4 sessions per week) for 8 weeks
Category
Rehabilitation

2

Description
Control group: group A : Routine physical therapy for 30 minutes (4 sessions per week) for 8 weeks
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Mubarak medical complex, Sargodha
Full name of responsible person
Iqra Nadeem
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Sponsors / Funding sources

1

Sponsor
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Defense Road Campus University College of Medicine & Dentistry: 1-Km, Defence Road, Bhupatian Chowk, Off Raiwind Road, Lahore
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Grant name
iqra nadeem
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
No
Title of funding source
academic support only
Proportion provided by this source
20
Public or private sector
Private
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
Mubarak medical complex, Sargodha
Full name of responsible person
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Physiotherapist
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University of Lahore, Lahore
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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Yes - There is a plan to make this available

Study Protocol
Undecided - It is not yet known if there will be 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
Undecided - It is not yet known if there will be a plan to make this available

Title and more details about the data/document
EFFECTS OF CORE MUSCLES STRENGTHENING EXERCISES WITH ROUTINE PHYSICAL THERAPY ON TRUNK BALANCE AND FUNCTIONAL MOBILITY IN STROKE PATIENTS: A RANDOMIZED CONTROLLED TRIAL

When the data will become available and for how long
Study is completed after 6 months and become available after its publication

To whom data/document is available
person in academic institute. Patient data will not be shown

Under which criteria data/document could be used
under the usage with terms in which journal is accessed /processed for publication it could be used in request

From where data/document is obtainable
+923246461428 from the University office and Responsible supervisor and from journal we will process in future

What processes are involved for a request to access data/document
can be on call or mail It will be only used in confidential way for improving research and benefit of humanity

Comments
data can bee provided on request