Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects Of Chest Expansion Exercises On Pulmonary Function, Chest Expansion, Trunk Control Ability And Quality Of Life Among Stroke Patients

Protocol summary

Study aim
To find the effects of Chest Expansion exercises on pulmonary function, chest expansion, trunk control ability and quality of life among stroke patients.

Design
Two parallel groups, double blinded, randomized controlled trial with pre and post assessment

Settings and conduct
Physiotherapy department of Jinnah Memorial Trust Hospital Gujranwala

Participants/Inclusion and exclusion criteria
Inclusion Criteria: • Patients between age group of 40-55 years • Both genders • Chronic stroke from at least last 6 months-2 years of both forms (ischemic and hemorrhage). • Hemiplegic patients caused by stroke • Patients are able to sit independently • Patients who are able to walk independently with or without walking aid Exclusion Criteria: • Patients with any pulmonary disease before onset of stroke • Patients with thoracic deformity or rib fracture • Patients who received respiratory rehabilitation for stroke • Patients with any neurological disorder other than stroke

Intervention groups
Conventional neurorehabilitation program along with Chest expansion exercises

Main outcome variables
Pulmonary function test by using Diagnostic Spirometry, Assessment of quality of life using SS-QOL (Stroke Specific Quality Of Life) questionnaire, Trunk Impairment Scale used to assess trunk control (TIS), Measurement of Chest Expansion using measuring tape.

General information

Reason for update

Acronym
Effects Of Chest Expansion Exercises Among Stroke Patients

IRCT registration information
IRCT registration number: **IRCT20191117045462N16**
Registration date: **2024-07-20, 1403/04/30**
Registration timing: **prospective**

Last update: **2024-07-20, 1403/04/30**
Update count: **0**

Registration date
2024-07-20, 1403/04/30

Registrant information

Name
Wajeeha Zia

Name of organization / entity
Riphah International University

Country
Pakistan

Phone
+92 42 35126110

Email address
wajeeha_z@yahoo.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2024-08-15, 1403/05/25

Expected recruitment end date
2024-12-15, 1403/09/25

Actual recruitment start date
2024-08-15, 1403/05/25

Actual recruitment end date
2024-12-15, 1403/09/25

Trial completion date
2025-02-15, 1403/11/27

Scientific title

Effects Of Chest Expansion Exercises On Pulmonary Function, Chest Expansion, Trunk Control Ability And Quality Of Life Among Stroke Patients

Public title
Effects Of Chest Expansion Exercises On Pulmonary Function, Chest Expansion, Trunk Control Ability And Quality Of Life Among Stroke Patients

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Patients between age group of 40-55 years Both genders Chronic stroke from at least last 6 months-2 years of both forms (ischemic and hemorrhage) Hemiplegic patients caused by stroke. Patients are able to sit independently Patients who are able to walk independently with or without walking aid

Exclusion criteria:
Patients with any pulmonary disease before onset of stroke. Patients with thoracic deformity or rib fracture. Patients who received respiratory rehabilitation for stroke. Patients with any neurological disorder other than stroke

Age
From **40 years** old to **55 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Participant
- Investigator

Sample size
Target sample size: **42**
Actual sample size reached: **42**

Randomization (investigator's opinion)
Randomized

Randomization description
Taking into account the above mentioned inclusion and exclusion criteria, patients will be recruited in the study through convenient sampling technique and then will be randomly assigned to each group through Random Sampling sealed opaque enveloped. Labeled as 1 Group A and 2 for Group B

Blinding (investigator's opinion)
Double blinded

Blinding description
Both patient and assessor physiotherapist will be blinded. Although the consent form will be taken from the patient. But the patient will not be aware of the study. Accessor physiotherapist will be involved in the study. He or She must have 2- or 3-year experience in relevant domain. He will access the patient by study defined outcome measure tools before the start and at the end of study.

Placebo
Used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Riphah college of rehabilitation & Allied Health Sciences

Street address
25 Raza Saeed Rd, Bhabra Block M Gulberg III, Lahore, Punjab 25-M Block, Lahore

City
Lahore

Postal code
54660

Approval date
2024-07-04, 1403/04/14

Ethics committee reference number
RCS&AHS/REC/MS-CPPT

Health conditions studied

1

Description of health condition studied
Stroke patients

ICD-10 code
G46.4

ICD-10 code description
Cerebellar stroke syndrome

Primary outcomes

1

Description
Pulmonary Function

Timepoint
Pre and Post Treatment

Method of measurement
Diagnostic spirometer

2

Description
Chest Expansion

Timepoint
Pre and post Treatment

Method of measurement
Measuring Tape

3

Description
Trunk control ability

Timepoint
Pre and post Treatment

Method of measurement

Trunk Impairment Scale (TIS)

4

Description
Quality Of Life
Timepoint
Pre and post Treatment
Method of measurement
Stroke Specific Quality Of Life (SS-QOL)

Secondary outcomes

empty

Intervention groups

1

Description
Control group: Conventional neurorehabilitation program
Category
Rehabilitation

2

Description
Intervention group: Conventional neurorehabilitation program along with Chest expansion exercises
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Jinnah Memorial Trust Hospital
Full name of responsible person
Noor ul Zuha
Street address
287/A, Block A Model Town, Gujranwala, Punjab
City
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Postal code
52200
Phone
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Web page address

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Riphah International University
Full name of responsible person
Wajeeha Zia
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Wajeeha.zia@riphah.edu.pk
Grant name
Nill
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
No
Title of funding source
Riphah International University
Proportion provided by this source
15
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
Expert Consultant Clinic
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Muhammad Umer Arshad
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Person responsible for updating data

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Latest degree
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Sharing plan

Deidentified Individual Participant Data Set (IPD)
No - There is not a plan to make this available
Justification/reason for indecision/not sharing IPD
There is no further information
Study Protocol
Undecided - It is not yet known if there will be a plan to make this available
Statistical Analysis Plan
Undecided - It is not yet known if there will be a plan to make this available
Informed Consent Form
Undecided - It is not yet known if there will be a plan to make this available
Clinical Study Report
Undecided - It is not yet known if there will be a plan to make this available
Analytic Code
Undecided - It is not yet known if there will be a plan to make this available
Data Dictionary
Undecided - It is not yet known if there will be a plan to make this available