Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effectiveness of routine physical therapy with and without neuromobilization technique on range of motion and functional mobility of upper extremity in sub-acute stroke patients

Protocol summary

Study aim
To evaluate the effectiveness of routine physical therapy with and without neuromobilization technique on range of motion and functional mobility of upper extremity in sub-acute stroke patients.

Design
Randomized clinical trial, parallel groups, no blinding

Settings and conduct
The participants fulfilling criterea were allocated from Omer medical centre, Yaseen medical centre, UOL teaching hospital, Pakistan.

Participants/Inclusion and exclusion criteria
sub-acute stroke patients, aged 40-60 years with spasticity (modified Ashworth Scale with Grade 1, 2 spasticity) were included in this study. While the patients with any other disorder such as cognitive impairment, joint deformity, visual impairment, any other neurological or muscular disorder were excluded.

Intervention groups
Control group received the routine physical therapy treatment that included Tens, hot pack, muscles stretching and range of motion exercises. Each session was given for almost 45-60 minutes thrice a week for 8 weeks. Experimental group received routine physical therapy with neuromobilization of median, radial and ulnar nerve for 8 weeks. Each session was given for almost 45-60 minutes.

Main outcome variables
Range of motion of upper limb Functional mobility of upper limb

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20200225046616N1**
Registration date: **2020-09-28, 1399/07/07**
Registration timing: **retrospective**

Last update: **2020-09-28, 1399/07/07**
Update count: **0**

Registration date
2020-09-28, 1399/07/07

Registrant information

Name
Fariha Khalid

Name of organization / entity
University of Lahore

Country
Pakistan

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+92 42 35220878

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2019-05-15, 1398/02/25

Expected recruitment end date
2020-05-15, 1399/02/26

Actual recruitment start date
2019-05-21, 1398/02/31

Actual recruitment end date
2020-06-03, 1399/03/14

Trial completion date
2020-08-07, 1399/05/17

Scientific title
Effectiveness of routine physical therapy with and without neuromobilization technique on range of motion and functional mobility of upper extremity in sub-acute

stroke patients

Public title
Effects of neuromobilization on upper extremity in stroke patients
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Sub-acute stage (3 weeks to 6 months after onset) Spastic paralysis (according to the modified Ashworth Scale with Grade 1, 2 spasticity) age 40-60 years both male and female
Exclusion criteria:
Cognitive deficiency that would impede the testing procedures Surgical history of upper limb Joint deformities of the upper limb Hemi neglect, visual problem Any neurological or orthopedic diseases affecting their Upper Limb
Age
From **40 years** old to **60 years** old
Gender
Female

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **30**
Actual sample size reached: **26**
Randomization (investigator's opinion)
Randomized
Randomization description
30 participant will allocated equally in control or experimental group by simple randomization. A random number table was generated using computer. All random numbers were kept in a sealed envelope. For each patient a sealed envelope was opened and according to mentioned number, group was allocated.
Blinding (investigator's opinion)
Not blinded
Blinding description
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethic's committee of University of Lahore
Street address
1-Km, Defence Road, Bhupatian Chowk, Off Raiwind Road
City
Lahore
Postal code
54590
Approval date
2019-05-14, 1398/02/24
Ethics committee reference number
IRB-UOL-FAHS/473/2019

Health conditions studied

1

Description of health condition studied
Stroke
ICD-10 code
I63.50
ICD-10 code description
Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebral artery

Primary outcomes

1

Description
Range of Motion
Timepoint
Before intervention, 4th week of intervention, 8th week of intervention
Method of measurement
Goniometry

2

Description
Functional Mobility
Timepoint
Before intervention, 4th week of intervention, 8th week of intervention
Method of measurement
Wolf motor functional scale

Secondary outcomes

empty

Intervention groups

1

Description
Control Group: received the routine physical therapy treatment that included TENS, hot pack, muscles stretching and range of motion exercises. Each session was given for almost 45-50 minutes. In a session, TENS and hot pack was given for 15 minutes. Static stretching of affected muscles was performed according to the participant requirement. The range of motion exercises included arm cradling, table top position, while sitting leans forward and reaches both hands down to the floor and in Supine hands are clasped together and placed

behind the head, the elbows fall flat to the mat. For muscles strengthening, exercises with free weight and elastic bands were performed, resistance depending upon patients muscle strength. Fifteen repetitions of each exercise was given with a resting period of 1 minute between exercises

Category

Rehabilitation

2

Description

Intervention group: received routine physical therapy with 2 sessions of neuromobilization of median, radial and ulnar nerve per weeks for 8 weeks. Each session was given for almost 45-50 minutes. In one session, routine physiotherapy mentioned above was given with dynamic neuromobilization (20 rep).

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

UOL-teaching hospital

Full name of responsible person

Dr Muhammad hussain Iqbal

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1-Km, Defence Road, Bhupatian Chowk, Off Raiwind Road, Lahore.

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2

Recruitment center

Name of recruitment center

Omer medical centre

Full name of responsible person

Fariha Khalid

Street address

JOHAR TOWN 42 A/III , College Road, near AL JANNAT MARRIAGE HALL, Lahore, Pakistan

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3

Recruitment center

Name of recruitment center

Yaseen Medical Centre

Full name of responsible person

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Street address

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

The university of Lahore

Full name of responsible person

Dr Ashfaq Ahmad

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University of Lahore, Main Campus, Lahore

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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

The university of Lahore

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

The university of Lahore

Full name of responsible person

Dr Fariha Khalid

Position
Lecturer

Latest degree
Master

Other areas of specialty/work
Physiotherapy

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Person responsible for updating data

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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
Undecided - It is not yet known if there will be 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
Not applicable

Data Dictionary
Not applicable

Title and more details about the data/document
All collected deidentified IPD

When the data will become available and for how long
Data will be available to other people after the completion of study and remained available till 3 months

To whom data/document is available
Data will be available to people working in academic institutions

Under which criteria data/document could be used
"Fariha Khalid" Institutional email address: fariha.khalid@dhpt.uol.edu.pk

From where data/document is obtainable
"Fariha Khalid" Institutional email address: fariha.khalid@dhpt.uol.edu.pk

What processes are involved for a request to access data/document
Data can be accessed by communicating with principle investigator "Fariha Khalid" through institutional email address: fariha.khalid@dhpt.uol.edu.pk

Comments