

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 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 criteria 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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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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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