

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jul 2026

Comparative effects of Carlo Perfetti Method and Proprioceptive Neuromuscular Facilitation technique on upper limb motor function in patients with subacute stroke

Protocol summary

Study aim

To evaluate the effect of Carlo Perfetti Method on improving the upper extremity motor function in subacute stroke patients.

Design

The study design will be the Randomized clinical trial design

Settings and conduct

Allied Hospital Faisalabad, District Head Quarter Hospital Faisalabad and Faisal Hospital Faisalabad.

Participants/Inclusion and exclusion criteria

The inclusion criteria will be the patient age range from 40 to 80 years, will include both genders: male and female, Patients with Modified Ashworth scale value is 2, patients having Mini-mental scale score >24, the Motricity index score should be < 99 and MCA Stroke confirmed with MRI. The exclusion criteria will be the patients who are already seeking any physiotherapy treatment, Having any wound or inflammation on upper extremity, Unstable medical condition, Any peripheral nerve injury before stroke and Before stroke any upper limb musculoskeletal functional impairments.

Intervention groups

Group A will be treated by the Carlo Perfetti Method and Group B will be treated by the Proprioceptive Neuromuscular Facilitation technique (PNF).

Main outcome variables

Motor function of upper limb, Spasticity

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230530058341N1**

Registration date: **2023-09-27, 1402/07/05**

Registration timing: **prospective**

Last update: **2023-09-27, 1402/07/05**

Update count: **0**

Registration date

2023-09-27, 1402/07/05

Registrant information

Name

Hafsa Naz

Name of organization / entity

The University of Faisalabad

Country

Pakistan

Phone

+92 41 8868326

Email address

clinical.trainer.339@tuf.edu.pk

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-09-28, 1402/07/06

Expected recruitment end date

2023-12-10, 1402/09/19

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparative effects of Carlo Perfetti Method and Proprioceptive Neuromuscular Facilitation technique on upper limb motor function in patients with subacute stroke

Public title

Comparative effects of Carlo Perfetti Method and

Proprioceptive Neuromuscular Facilitation technique on upper limb motor function in patients with subacute stroke

Purpose
Treatment

Inclusion/Exclusion criteria
Inclusion criteria:
Age range from 40 to 80 years Both genders: male and female Modified Ashworth scale 2 Mini-mental scale > 24 Motricity index scale < 99 MCA Stroke confirmed with MRI
Exclusion criteria:
Already seeking any physiotherapy treatment Having any wound or inflammation on upper extremity Unstable medical condition Any peripheral nerve injury Before stroke any upper limb musculoskeletal functional impairments

Age
From **40 years** old to **80 years** old

Gender
Both

Phase
3

Groups that have been masked

- Participant

Sample size
Target sample size: **32**

Randomization (investigator's opinion)
Randomized

Randomization description
Randomization will be done with Lottery method and by the help of computerized generator, allocations will done to randomly allocate the participants in two groups.

Blinding (investigator's opinion)
Single blinded

Blinding description
Participants will not know if they will be allocated in Carlo Perfetti Method group or in Proprioceptive Neuromuscular Facilitation Technique group for the Treatment.

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of The University of Faisalabad

Street address

West Canal Road, Faisalabad

City

Faisalabad

Postal code

37610

Approval date

2023-03-24, 1402/01/04

Ethics committee reference number

TUF/DR/SA/MSPP/2023/242

Health conditions studied

1

Description of health condition studied

Stroke

ICD-10 code

Z82.3

ICD-10 code description

Family history of stroke

Primary outcomes

1

Description

Spasticity

Timepoint

At baseline, after second week of treatment, after fourth week of treatment, after sixth week of treatment, after eighth week of treatment and after tenth week of treatment

Method of measurement

Modified Ashworth Scale

Secondary outcomes

1

Description

Motor function of upper extremity

Timepoint

At baseline, after second week of treatment, after fourth week of treatment, after sixth week of treatment, after eighth week of treatment and after tenth week of treatment

Method of measurement

Motricity Index Scale

2

Description

Arm motor performance and movement quality

Timepoint

At baseline, after second week of treatment, after fourth week of treatment, after sixth week of treatment, after eighth week of treatment and after tenth week of treatment

Method of measurement

Motor Evaluation Scale for Upper Extremity

Intervention groups

1

Description

Intervention group: Carlo Perfetti Method; As part of the treatment process, the patient will be blindfolded and the physical therapist will begin to passively move the patient's involved limb. The therapist will then ask the patient to sense and guess the movement of the limb that will be performed by the therapist. To further enhance the rehabilitation process, the therapist will use a pattern of lines drawn on a page and will ask the patient to trace those lines with their hand, either actively or passively. This exercise will help to improve the patient's proprioception, which is their sense of body position and movement. By tracing the lines with their hand, the patient will be able to get a better sense of their limb's position and movement, which can be helpful in improving their coordination and motor function.

Category

Rehabilitation

2

Description

Intervention group: Proprioceptive Neuromuscular Facilitation Technique; In this group, the participants will be given the Rhythmic Initiation technique of Proprioceptive Neuromuscular Facilitation (PNF) technique. This technique will involve progressively transitioning from passive range of motion to active resisted movements of the limb. During the rehabilitation process, a series of movements will be performed, starting with voluntary relaxation and progressing to passive movements, active assisted and active resisted movements before finally transitioning to active movements. Verbal commands will be used to set the pace and rhythm of the movements, and light tracking will be incorporated during the resistive phase to facilitate movement. These exercises are designed to improve motor function and range of motion and are customized to meet the specific needs of the patient. Rhythmic initiation helps in the initiation of the motion and improve the coordination and sense of the motion.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Allied Hospital Faisalabad

Full name of responsible person

Hafsa Naz

Street address

Jail Road adjacent to Faisalabad Medical University,
Near Sargodha Road, Faisalabad.

City

Faisalabad

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38800

Phone

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+92 41 9210079

Email

vcfmuf@gmail.com

Web page address

<https://pmc.edu.pk/S-Result.aspx>

2

Recruitment center

Name of recruitment center

District Headquarter Hospital

Full name of responsible person

Hafsa Naz

Street address

Mall road Faisalabad

City

Faisalabad

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38800

Phone

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+92 41 9200141

Email

vcfmuf@gmail.com

Web page address

<https://www.businesslist.pk/company/189531/dhq-hospital-civil-hospital>

3

Recruitment center

Name of recruitment center

Faisal Hospital

Full name of responsible person

Hafsa Naz

Street address

673-A Lower Canal Rd E, Block A People's Colony No
1, Faisalabad

City

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03822

Phone

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Email

info@faisalhospital.com

Web page address

<https://www.faisalhospital.com/>

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

The University of Faisalabad

Full name of responsible person

Hafsa Naz

Street address

P-526, St no 2, Aslam market, Hajveri town, millat road, Faisalabad

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38500

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hafsanaz020@gmail.com

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

The University of Faisalabad

Proportion provided by this source

100

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**

The University of Faisalabad

Full name of responsible person

Hafsa Naz

Position

Student

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

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P-526, St no 2, Aslam market, Hajveri town, millat road, Faisalabad

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Person responsible for scientific**inquiries****Contact****Name of organization / entity**

The University of Faisalabad

Full name of responsible person

Hafsa Naz

Position

Student

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

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Person responsible for updating data**Contact****Name of organization / entity**

The University of Faisalabad

Full name of responsible person

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Position

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Latest degree

Bachelor

Other areas of specialty/work

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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

Yes - There is 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

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

Title and more details about the data/document

The Study Protocol will be followed, The Statistical Analysis Plan will be used, Informed Consent Form will be

taken from participants, it will be a Clinical Study Report.

When the data will become available and for how long

The data will be available after six months.

To whom data/document is available

The data will be available for all the researchers and the Institutes.

Under which criteria data/document could be used

Data will be shared for more clinical research.

From where data/document is obtainable

The Data will be shared via Email addresses.

What processes are involved for a request to access data/document

After the Research is being published.

Comments