

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jul 2026

Therapeutic effects of neurodynamic and active release technique in carpal tunnel syndrome

Protocol summary

Study aim

To compare the Therapeutic Effects of Neurodynamic and Active Release Techniques in Carpal Tunnel Syndrome.

Design

It was a concealed, randomized, single blinded, sham controlled clinical trial with a parallel group design of 12 patients.

Settings and conduct

Study was conducted at Layyah city hospital of govt college university Faisalabad Layyah campus. The study population was consisted of patients with carpal tunnel syndrome. The study was single blinded. The participants didn't know while they were receiving experimental or conventional treatment

Participants/Inclusion and exclusion criteria

Inclusion Criteria: Age is between 25-50 years, both gender, complaints of pain, numbness or tingling in the first three digits, positive Phalen's Sign and unilateral Compression of Nerve Exclusion Criteria: History of Carpal Tunnel Release Surgery, Patients with median nerve involvement in proximal areas such as thoracic outlet syndrome, cervical radiculopathy, Steroid injection in the carpal tunnel, thenar muscle atrophy, metabolic diseases such as diabetes, severe thyroid disorders, anemia and pregnancy

Intervention groups

Participants will be randomly allocated into two groups (Group A: Neurodynamic group, Group B active release technique group). The participants randomly allocated in Group A will be received neural mobilizations. Participants will execute this training after 10 minutes of infrared. This approach requires three sessions per week for eight weeks. Group B participants will have received treatment includes infrared for 10 min and active release technique.

Main outcome variables

Disabilities of upper extremity (Disabilities of the arm, shoulder and hand questionnaire), Severity (Symptom

Severity Scale)

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230731058990N4**

Registration date: **2024-03-18, 1402/12/28**

Registration timing: **retrospective**

Last update: **2024-03-18, 1402/12/28**

Update count: **0**

Registration date

2024-03-18, 1402/12/28

Registrant information

Name

Kashaf Faraz

Name of organization / entity

University of Lahore

Country

Pakistan

Phone

+92 304 6541357

Email address

kashaf.fraz@uipt.uol.edu.pk

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2024-01-04, 1402/10/14

Expected recruitment end date

2024-01-24, 1402/11/04

Actual recruitment start date

2024-01-11, 1402/10/21

Actual recruitment end date

2024-01-28, 1402/11/08

Trial completion date

2024-02-21, 1402/12/02

Scientific title

Therapeutic effects of neurodynamic and active release technique in carpal tunnel syndrome

Public title

Neurodynamic and active release technique effects in carpal tunnel syndrome

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Age is between 25-50 years Both gender Complaints of pain, numbness or tingling in the first three digits
Positive Phalen's Sign Unilateral Compression of Nerve

Exclusion criteria:

History of Carpal Tunnel Release Surgery Patients with median nerve involvement in proximal areas such as thoracic outlet syndrome, cervical radiculopathy Steroid injection in the carpal tunnel, thenar muscle atrophy
Metabolic diseases such as diabetes, severe thyroid disorders, anemia and pregnancy

Age

From **25 years** old to **50 years** old

Gender

Both

Phase

3

Groups that have been masked

No information

Sample size

Target sample size: **18**

Actual sample size reached: **12**

Randomization (investigator's opinion)

Randomized

Randomization description

Participants were randomized by using concealed envelope method. In this, sealed opaque envelopes with treatment regimen written were provided to the participants. Once a patient had consented to enter a trial room, an envelope was opened, and the patient was then offered the allocated treatment.

Blinding (investigator's opinion)

Single blinded

Blinding description

Assessor will only assess the patient at baseline, 4th week and at 8th week for treatment outcomes. Assessor safe the data for follow-up and will not share it with any therapist or patient. At any stage, the assessor is unaware of the treatment and control group. The study was single-blinded. The assessor was unaware of the treatment given to either groups 1 or 2

Placebo

Not used

Assignment

Parallel

Other design features

Carpal tunnel syndrome, symptom severity index, disabilities of arm, shoulder and hand questionnaire, Phalen's test

Secondary Ids

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Research Ethics Committee (REC)

Street address

1-Km defense road Lahore, Pakistan

City

Lahore

Postal code

54000

Approval date

2023-12-22, 1402/10/01

Ethics committee reference number

REC-UOL-723-12-2024

Health conditions studied**1****Description of health condition studied**

Carpal tunnel syndrome

ICD-10 code

G56.0

ICD-10 code description

Carpal tunnel syndrome

Primary outcomes**1****Description**

Upper-extremity disability and symptoms

Timepoint

Baseline, 4th week and 8th week of treatment

Method of measurement

Disabilities of the arm, shoulder and hand (DASH) questionnaire

2**Description**

Symptom severity

Timepoint

Baseline, 4th week and 8th week of treatment

Method of measurement

Symptoms Severity Scale

Secondary outcomes**1****Description**

Quality of Life

Timepoint

Baseline, 4th and 8th week of treatment

Method of measurement

Short Form-12

mehmokhram8@gmail.com

Web page address

<https://dhqlayyah.punjab.gov.pk/>

Intervention groups

1

Description

Intervention group: Group A received routine physical therapy included infrared. Infrared will be used for 10 minutes in each session. Total duration for each session with intervention will be 25-30 minutes. After baseline treatment, special techniques used for median nerve mobilization include gliding and tension maneuvers with duration of 5 minutes (8 repetitions in which we apply manual technique for 20s and rest for 10s) in each session. 1. Stand with your elbow resting at your side with the hand and fingers pulled back as far as pain allows. Keeping the hand and fingers pulled back gently straighten your elbow. 2. While standing, move the arm slightly out to the side and bring your wrist and hand backwards so your palm is facing outwards.

Category

Rehabilitation

2

Description

Intervention group: Group B received routine physical therapy included infrared. Infrared will be used for 10 minutes in each session. Total duration for each session with intervention will be 25-30 minutes. After baseline treatment, active release technique will be used which is a manual soft-tissue mobilization therapy, means that we use our hands to identify muscle adhesions. Patient will be in sitting position and we will approach to patient on his/her affected side and apply gentle pressure on adhesion point and move thumb on patient Flexor retinaculum clockwise and anticlockwise direction for 5 minutes.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Department of Physical Therapy, DHQ Hospital Layyah

Full name of responsible person

Dr Khurram mahmood

Street address

DHQ Hospital Layyah

City

Layyah

Postal code

31200

Phone

+92 304 4407035

Email

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

University of Lahore, Lahore

Full name of responsible person

Dr Ashfaq Ahmad

Street address

1-Km defense road Lahore, Pakistan

City

Lahore

Postal code

54000

Phone

+92 344 4535304

Email

ashfaaqpt@gmail.com

Web page address

<https://uol.edu.pk/>

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

No

Title of funding source

University of Lahore, Lahore

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

University of Lahore, Lahore

Full name of responsible person

Dr Sania Naz

Position

Professor

Latest degree

Medical doctor

Other areas of specialty/work

Physiotherapy

Street address

1-Km defense road Lahore, Pakistan

City

Lahore

Province

Punjab
Postal code
54000
Phone
+92 304 4407035
Email
sania.naz642@gmail.com
Web page address
<https://uol.edu.pk/>

Person responsible for scientific inquiries

Contact

Name of organization / entity
University of Lahore, Lahore
Full name of responsible person
Dr Kashaf Faraz
Position
Professor
Latest degree
Medical doctor
Other areas of specialty/work
Physiotherapy
Street address
1-Km defense road Lahore, Pakistan
City
Lahore
Province
Punjab
Postal code
54000
Phone
+92 304 6541357
Email
kashaffraz@gmail.com
Web page address
<https://uol.edu.pk/>

Person responsible for updating data

Contact

Name of organization / entity
University of Lahore, Lahore
Full name of responsible person
Dr Iqra Islam
Position
Professor
Latest degree
Medical doctor
Other areas of specialty/work
Physiotherapy
Street address
1-Km defense road Lahore, Pakistan
City
Lahore
Province
Punjab
Postal code

54000
Phone
+92 313 4260161
Email
iqrawislam@gmail.com
Web page address
<https://uol.edu.pk/>

Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

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

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

Demographic data and data related to final outcome will be shared by maintaining the confidentiality.

When the data will become available and for how long

Data will be available from August 2024 to November 2024 after the 6 months of publication. The data sharing plan for a clinical trial (i.e., what data will be shared when and under what conditions) will be publicly available at a third-party site that shares data with and meets the data requirements of WHO's International Clinical Trials Registry Platform; this occur before the first participant is enrolled.

To whom data/document is available

Deidentified IPD and any additional information will be shared for the people working in academic institution and clinical research writers.

Under which criteria data/document could be used for research purpose

From where data/document is obtainable

To the corresponding author of the study, Dr Sania Naz and can contact on +923044407035 saaniaanaz@gmail.com can visit these search engines, you can find my study easily here <https://www.researchgate.net/> <https://scholar.google.com/>

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

Open-access and there is the traditional public data release where anyone can get access to the data with no registration or conditions. The request will be reviewed by Director in Charge and in case of eligibility, it would be shared in two weeks.

Comments

I want randomized clinical trial registration.