Clinical Trial Protocol
Iranian Registry of Clinical Trials

10 Jun 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

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Pakistan

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+92 304 6541357

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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 envelops 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

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
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
University of Lahore, Lahore
Full name of responsible person
Dr Ashfaq Ahmad
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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
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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.