

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

EFFECTS OF TENDON GLIDING EXERCISES AND NEURODYNAMIC TECHNIQUES ON TWO POINT DISCRIMINATION IN PATIENTS WITH CARPAL TUNNEL SYNDROME

Protocol summary

Study aim

To find the effects of tendon gliding exercises and neurodynamic techniques on two point discrimination in patients with carpal tunnel syndrome (CTS).

Design

Two groups, Single blinded, Randomized Controlled Trial.

Settings and conduct

Riphah College of Rehabilitation & Allied Health Sciences
Fatima Memorial Hospital

Participants/Inclusion and exclusion criteria

Inclusion criteria Age 20-40 years Gender both male and female Numbness and tingling in the area of the median nerve Positive Phalen's test Positive Tinel's sign Pain in the wrist area Exclusion Criteria Prior surgical treatment for carpal tunnel syndrome Tendon sheath inflammation Rheumatoid disease Past trauma to the wrist

Intervention groups

Intervention group A Tendon Gliding Exercises,
Intervention group B Neurodynamic Technique

Main outcome variables

Two Point Discrimination, Boston Carpal Tunnel Questionnaire (BCTQ), Disability of Arm, Shoulder and Hand Questionnaire (DASH)

General information

Reason for update

Acronym

ETGENTPDIPCTS

IRCT registration information

IRCT registration number: **IRCT20160901029636N1**

Registration date: **2019-11-13, 1398/08/22**

Registration timing: **registered_while_recruiting**

Last update: **2019-11-13, 1398/08/22**

Update count: **0**

Registration date

2019-11-13, 1398/08/22

Registrant information

Name

Muhammad Salman Bashir

Name of organization / entity

School of Rehabilitation, Tehran University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 919 831 4562

Email address

chistisalman@yahoo.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-11-01, 1398/08/10

Expected recruitment end date

2020-01-15, 1398/10/25

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

EFFECTS OF TENDON GLIDING EXERCISES AND NEURODYNAMIC TECHNIQUES ON TWO POINT DISCRIMINATION IN PATIENTS WITH CARPAL TUNNEL SYNDROME

Public title

EFFECTS OF TENDON GLIDING EXERCISES AND NEURODYNAMIC TECHNIQUES ON TWO POINT DISCRIMINATION IN PATIENTS WITH CARPAL TUNNEL

SYNDROME

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Age 20-40 years Gender both male and female
Numbness and tingling in the area of the median nerve
Paresthesia at night Positive Phalen's test Positive Tinel's sign Pain in the wrist area

Exclusion criteria:

Prior surgical treatment for carpal tunnel syndrome
Cervical radiculopathy Tendon sheath inflammation
Rheumatoid disease Diabetes Pregnancy Past trauma to the wrist Muscular atrophy of the thenar eminence

Age

From **20 years** old to **40 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Outcome assessor

Sample size

Target sample size: **40**

Randomization (investigator's opinion)

Randomized

Randomization description

Written informed consent will be taken. After enrollment into study, patient will be allocated either to group A or Group B by lottery method. No. of Chits will be equal to total sample size, odd Numbers will be allocated to Group A and even number will be allocated to Group B. Each patient will be requested to draw a chit from the box and after that patient will be recruited into either Group A or Group B

Blinding (investigator's opinion)

Single blinded

Blinding description

Assessor Blind: Data safety will be ensured by assigning Specific Identity numbers and all consent, readings forms will be placed in locker to blind Assessors

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

secretary ethical review committee, Riphah College of Rehabilitation and Allied Health Sciences

Street address

28-M, Quaid-e-Azam Industrial Estate, Kot Lakhpat, Lahore.

City

Lahore

Postal code

54000

Approval date

2019-09-07, 1398/06/16

Ethics committee reference number

Ref. No,RCR & AHS/REC/MS-NMPT/005

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

Two point discrimination

Timepoint

Before treatment and after completing the sessions

Method of measurement

Dellon discriminator tool

Secondary outcomes

1

Description

symptom severity/ functional status, physical functioning

Timepoint

Before and after completing treatment sessions

Method of measurement

Boston Carpal Tunnel Questionnaire (BCTQ), Disability of Arm, SHOULDER and Hand (DASH) Questionnaire

Intervention groups

1

Description

Intervention group A Tendon Gliding Exercises

Category

Treatment - Other

2

Description

Intervention group B Neurodynamic Technique

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Riphah College of Rehabilitation & Allied Health Sciences

Full name of responsible person

Muhammad Salman Bashir

Street address

28-M Quaid-e-Azam, Industrial Estate, Kot Lakhpat, Lahore.

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Phone

+92 42 35126110

Email

chistisalman@yahoo.com

Web page address

2

Recruitment center

Name of recruitment center

Fatima Memorial Hospital

Full name of responsible person

Dr. Farhia Shah

Street address

Main road, Shadman, Lahore.

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Lahore

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54000

Phone

+92 42 35126110

Email

farhia@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Riphah International University

Full name of responsible person

Muhammad Salman Bashir

Street address

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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

Riphah International University

Proportion provided by this source

20

Public or private sector

Private

Domestic or foreign origin

Foreign

Category of foreign source of funding

Sponsor: country of origin

Country of origin

PK

Type of organization providing the funding

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Riphah International University

Full name of responsible person

Muhammad Salman Bashir

Position

Associate professor

Latest degree

Ph.D.

Other areas of specialty/work

Physiotherapy

Street address

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Person responsible for scientific inquiries

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Full name of responsible person

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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Undecided - It is not yet known if there will be a plan to make this available

Study Protocol

Undecided - It is not yet known if there will be 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

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Undecided - It is not yet known if there will be 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