Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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
ETGENTTPDIPCTS

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
Muhmmad 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.

City
Lahore

Postal code
54000

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.

City
Lahore

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

City
Lahore

Postal code
54000

Phone
+92 42 35126110

Email
chistisalman@yahoo.com

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

City
Lahore

Province
Punjab

Postal code
54000

Phone
+92 333 4497959

Email
chistisalman@yahoo.com

Person responsible for scientific 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
28-M Quaid-e-Azam, Industrial Estate, Kot Lakhpat,

Lahore

City
Lahore

Province
Punjab

Postal code
54000

Phone
+92 42 35126110

Email
chistisalman@yahoo.com

Person responsible for updating data

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

City
Lahore

Province
Punjab

Postal code
54000

Phone
+92 333 4497959

Email
chistisalman@yahoo.com

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