Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects of progressive resistance training program of wrist extensors and supinators on pain, strength and function in athletes with chronic tennis elbow

Protocol summary

Study aim
Comparison of the effectiveness of progressive resistance training of wrist extensors and progressive resistance training of wrist extensors combined with supinator strengthening in athletes with chronic tennis elbow in reducing pain, increasing grip strength and function.

Design
The subjects (n=16) fulfilling inclusion criteria will be enrolled after independent outcome assessment. Randomization will be performed by using 16 number cards, folded and placed in a box, cards will be mixed thoroughly. The labeled cards 1-8 will be assigned to group A. Participants who will draw cards number 9-16 will be assigned to group B.

Settings and conduct
Pakistan sports board and usman clinic

Participants/Inclusion and exclusion criteria
Inclusion Criteria: Patients diagnosed with Chronic tennis elbow patients (3 months or more); Both gender; Subjects with age group 20-45 years; Willingness to participate in the study; Positive special test. Exclusion Criteria: Recent injury to elbow; History of Rheumatoid disease; Any deformity in the elbow or upper limb; Athletes with recent Corticosteroid injections; Skin infection; Peripheral nerve involvement in upper extremity; Dislocation of elbow joint.

Intervention groups
group A; this group will receive progressive resistance eccentric exercise training for wrist extensors. group B; this group will receive progressive resistance eccentric exercise training for wrist extensors along with supinator strengthening.

Main outcome variables
pain, grip strength, function.

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20210628051731N1**
Registration date: **2021-07-13, 1400/04/22**
Registration timing: **prospective**

Last update: **2021-07-13, 1400/04/22**
Update count: **0**

Registration date
2021-07-13, 1400/04/22

Registrant information

Name
Yakoot Saleemi

Name of organization / entity
Riphah international university

Country
Pakistan

Phone
+92 42 37802222

Email address
yakootsaleemi8@gmail.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2021-07-15, 1400/04/24

Expected recruitment end date
2021-11-15, 1400/08/24

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date

empty

Scientific title
Effects of progressive resistance training program of wrist extensors and supinators on pain, strength and function in athletes with chronic tennis elbow

Public title
Progressive resistance training of wrist extensors along with supinators strengthening in tennis elbow

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Patients diagnosed with Chronic tennis elbow patients (3 months or more) Both gender Subjects with age group 20-45 years Willingness to participate in the study Positive special test

Exclusion criteria:
Recent elbow injury Rheumatoid disease history Any elbow or upper limb deformity Athletes with recent corticosteroid injections Skin infection Peripheral nerve involvement in upper extremity Dislocation of elbow joint

Age
From **20 years** old to **45 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Outcome assessor

Sample size
Target sample size: **16**

Randomization (investigator's opinion)
Randomized

Randomization description
It will be performed by using 16 numbered cards,folded and placed in a box. group A will assigned to the cards labeled as 1-8,will be owed to received Progressive resistance eccentric exercise of wrist extensors alone. Group B will be assigned to participants with draw result showed number 9-16 and it will decide to receive progressive resistance eccentric exercise of wrist extensors along with supinators strengthening. At the time of each subject randomization, it will be assured that cards will mixed together thoroughly. the randomization procedure is often replaced by computer techniques, but manual randomization is suitable for small sample size.

Blinding (investigator's opinion)
Single blinded

Blinding description
the study would be single blinded as assessor of the study will be kept blind of treatment group to which the patient will be allocated

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
research & ethics committee

Street address
street n0 14,house no 2p,rab rab colony Lahore.

City
Lahore

Postal code
54500

Approval date
2021-06-25, 1400/04/04

Ethics committee reference number
REC/RCR & AHS/21/0402

Health conditions studied

1

Description of health condition studied
LET or tennis elbow is a disease of origin of common extensor muscles at elbow.it is presenting with pain over the lateral epicondyle at elbow.

ICD-10 code
M77.10

ICD-10 code description
Lateral epicondylitis, unspecified elbow, grip strength , wrist extensors strengthening ,supinator strengthening ,tennis elbow, eccentric exercises

Primary outcomes

1

Description
pain

Timepoint
before intervention and after 1 , 2 and 3 months

Method of measurement
pain by VAS , grip strength by hand dynamometer , functional status by PRTEEQ

Secondary outcomes

1

Description
Grip strength and functional disability

Timepoint
Baseline, after 1 month, after 2 months and after 3 months of treatment

Method of measurement
Hand grip will be measured by using hand dynamometer and functional disability will be measured by using PETEEQ(Patient rating tennis elbow evaluation

questionnaire)

Intervention groups

1

Description
Intervention group: Group B, This group will perform progressive resistance eccentric exercise training for wrist extensors along with supinator strengthening.
Category
Rehabilitation

2

Description
Control group: Group A, this group will perform progressive resistance eccentric exercise training for wrist extensors only.
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Pakistan Sports board and Usman clinic
Full name of responsible person
Yakoot Saleemi
Street address
street n0 14,house no 2p,rab rab colony Lahore.
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Riphah international university
Full name of responsible person
dr. Muzna Munir
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street n0 14,house no 2p,rab rab colony Lahore.
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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
no source
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
Riphah International University
Full name of responsible person
Yakoot Saleemi
Position
Student
Latest degree
Master
Other areas of specialty/work
Physiotherapy
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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Yes - There is 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
Not applicable
Informed Consent Form
Undecided - It is not yet known if there will be a plan to make this available
Clinical Study Report
Not applicable
Analytic Code
Not applicable
Data Dictionary
Not applicable
Title and more details about the data/document
EFFECTS OF PROGRSSIVE RESISTANCE TRAINING PROGRAM OF WRIST EXTENSORS AND SUPINATORS ON PAIN,STRENGTH AND FUNCTION IN ATHLETES WITH CHRONIC TENNIS ELBOW.
When the data will become available and for how long
at the end of 2021
To whom data/document is available
to all
Under which criteria data/document could be used
in form of article
From where data/document is obtainable
from email
What processes are involved for a request to access data/document
through email address
Comments