Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects of Pectoralis minor stretch with and without Myofascial release on pain, range of motion and functional performance in Tennis players with Sub-acromial impingement

Protocol summary

Study aim

To compare the effects of pectoralis minor stretch with and without myofascial release on pain, range of motion and functional performance in Tennis players with sub-acromial impingement.

Design

Randomized Clinical Trial (RCT), Parallel group, Convenient sampling and sample size is 54. Simple randomization involves using a random process to allocate participants to different groups, ensuring that each participant has an equal chance of being assigned to any group. Multi centre study.

Settings and conduct

Data will be collected from different tennis clubs and allocated into two groups randomly. 1. Pakistan Sports Board and coaching center. 2. K21 Sports Academy, Model town.

Participants/Inclusion and exclusion criteria

Inclusion criteria Males & Females, Age group between 15-28, ROM reduced 10 degrees IR., NPRS indicating 4-6 Shoulder pain and discomfort due to overhead activities, Patients who show positive Neer sign, Hawkins-Kennedy test, Empty can test. Exclusion criteria Non-athletes, Players having any systemic and musculoskeletal disease or any recent trauma or dislocation, Excluded if they had Ligament laxity based on Positive Sulcus Test, had Apprehension during Apprehension Test, Bilateral shoulder pain, History of Intra-articular injection.

Intervention groups

After the baseline treatment given to all subjects, Group A: Pectoralis minor stretch Group B: Pectoralis minor stretch with myofascial release Common Treatment: The baseline treatment for subacromial impingement is to apply heating pad for warming the shoulder joint to reduce pain.

Main outcome variables

Pain (Numeric Pain rating scale) Range of motion (Goniometer) Functional performance (SPADI)

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20210811052138N5**
Registration date: **2023-04-15, 1402/01/26**
Registration timing: **registered_while_recruiting**

Last update: **2023-04-15, 1402/01/26**
Update count: **0**

Registration date

2023-04-15, 1402/01/26

Registrant information

Name

Halima Shoukat

Name of organization / entity

Riphah international university, Lahore

Country

Pakistan

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+92 55 4284121

Email address

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-03-15, 1401/12/24

Expected recruitment end date

2023-09-13, 1402/06/22

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effects of Pectoralis minor stretch with and without Myofascial release on pain, range of motion and functional performance in Tennis players with Sub-acromial impingement

Public title

Comparison of pectoralis minor stretch and myofascial release in shoulder impingement in tennis players

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Patients who show positive Neer sign, Hawkins-Kennedy test, Empty can test. ROM reduced 10 degrees IR. NPRS indicating 4-6 Shoulder pain and discomfort due to overhead Activities Males & females both

Exclusion criteria:

Non athletes Players having any systemic and musculoskeletal disease or any recent trauma or dislocation Excluded if they had Ligament laxity based on Positive Sulcus Test, had Apprehension during Apprehension Test Bilateral shoulder pain History of Intra-articular injection

Age

From **15 years** old to **28 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **54**

Randomization (investigator's opinion)

Randomized

Randomization description

The random allocation in this study was done using a simple randomization method. To allocate the participants to the two groups, a random table method was used. This involved using a table of random numbers to assign participants to either group, ensuring that each participant had an equal chance of being allocated to either group. By identifying a range of numbers that corresponds to the total number of participants then select a starting point in the table of random numbers and read the digits in pairs, matching each pair with a participant number until all participants have been allocated to a group.

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Riphah College of Rehabilitation and Allied Health Sciences

Street address

Madar-e-Millat Road, Quaid-e-Azam Industrial Estate Quaid e Azam Industrial Estate, Lahore, Punjab

City

Lahore

Postal code

54770

Approval date

2022-11-07, 1401/08/16

Ethics committee reference number

REC/RCR & AHS/22

Health conditions studied

1

Description of health condition studied

Sub-acromial Impingement

ICD-10 code

M75.4

ICD-10 code description

Impingement syndrome of shoulder

Primary outcomes

1

Description

Pain

Timepoint

Baseline treatment - 6 weeks regimen

Method of measurement

Numeric Pain rating scale

2

Description

Range of motion

Timepoint

Baseline treatment - 6 weeks regimen

Method of measurement

Goniometer

3

Description

Functional performance

Timepoint

Baseline treatment - 6 weeks regimen

Method of measurement

SPADI

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group 1: Pectoralis minor stretch after baseline treatment of hot pack. Subject begin in a standing upright position in the center of a doorway. With the elbow bent, place forearm on the side of doorway at a 90 degree angle from a side, then a small step forward and slightly rotate the body. Hold this position for 30 sec in 3 sets for 3 days a week.
Category
Treatment - Other

2

Description
Intervention group 2: Pectoralis minor stretch with myofascial release alongwith hot pack. Myofascial release technique can be applied to the subject manually or by myofascial gun for 90 sec thrice a week. Pectoralis minor stretch will applied instantly after MFR.
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Pakistan Sports Board and Coaching Centre (PSB)
Full name of responsible person
Iraj Athar
Street address
Ferozepur Rd, Block E 2 Gulberg III, Lahore, Punjab
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Email
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Web page address
http://www.sports.gov.pk/Detail/ODNmZDljYTMtNmIyOS00YzU3LWFhNmMtZjcxNGM5NjI4NzZm

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Riphah International University
Full name of responsible person
Halima Shoukat
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Web page address
https://www.riphah.edu.pk/lahore
Grant name
Educational
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
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
Iraj Athar
Position
Student
Latest degree
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Other areas of specialty/work
Physiotherapy
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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