Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects of eccentric exercises with and without Proprioceptive neuromuscular facilitation on pain, Range of motion and function in cricketers with Glenohumeral Internal Rotation Deficit

Protocol summary

Study aim
to compare the effects of eccentric exercises with and without proprioceptive neuromuscular facilitation on pain, Range of motion and function in cricketers with glenohumeral Internal Rotation Deficit

Design
Randomized Controlled Trial, Parallel Group, Single Blind

Settings and conduct
The study will be conducted in Pakistan sports Board (PSB), Lahore Pakistan. Football players visiting PSB will be consented to participate in the study. The study will be single blind and the outcome accessor will be blinded by not knowing the details of the study groups. The Investigator will determine the information by the medical record number, assigned to each participant.

Participants/Inclusion and exclusion criteria
inclusion criteria: Male Cricketers (age ≥15 years), Current participation on cricketer team as a bowler or fielders, Presence of GIRD, IR ROM greater than 18° with a corresponding loss of total rotational motion greater than 5° and will be marked as GIRD exclusion criteria: History of GH dislocation in the past year, Fracture of upper limb, Cervical injuries, Thoracic outlet syndrome, Any surgery in the upper limb region in the past two years , Participating in shoulder rehabilitation in the past year, Neurological and musculoskeletal disorders that limit movement, and pain in the upper limb prior to and after the tests.

Intervention groups
Group 1: This group will follow eccentric exercise, stretches along with PNF training. Group 2: This group will follow only eccentric exercise and stretches only.

Main outcome variables
Improvement in pain, Range of motion and function in cricketers with Glenohumeral Internal Rotation Deficit

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20220216054033N3**
Registration date: **2022-05-17, 1401/02/27**
Registration timing: **prospective**

Last update: **2022-05-17, 1401/02/27**
Update count: **0**

Registration date
2022-05-17, 1401/02/27

Registrant information

Name
Sufian Ahmed

Name of organization / entity
Riphah International University Islamabad Pakistan

Country
Pakistan

Phone
+92 334 4272734

Email address
sufianahmedghuman@gmail.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2022-06-15, 1401/03/25

Expected recruitment end date
2022-12-01, 1401/09/10

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date

empty

Scientific title
Effects of eccentric exercises with and without Proprioceptive neuromuscular facilitation on pain, Range of motion and function in cricketers with Glenohumeral Internal Rotation Deficit

Public title
Effects of eccentric exercises with and without Proprioceptive neuromuscular facilitation on pain, Range of motion and function in cricketers with Glenohumeral Internal Rotation Deficit

Purpose
Health service research

Inclusion/Exclusion criteria

Inclusion criteria:
male cricketers (age ≥15 years) current participation on cricketer team as a bowler or fielders . presence of glenohumeral internal rotation deficit internal rotation range of motion greater than 18° with a corresponding loss of total rotational motion greater than 5° and will be marked as glenohumeral internal rotation deficit

Exclusion criteria:
history of glenohumeral dislocation in the past year fracture of upper limb cervical injuries thoracic outlet syndrome. any surgery in the upper limb region in the past two years participating in shoulder rehabilitation in the past year neurological and musculoskeletal disorders that limit movement, and pain in the upper limb prior to and after the tests

Age
From **15 years** old

Gender
Male

Phase
N/A

Groups that have been masked

- Outcome assessor

Sample size
Target sample size: **40**

Randomization (investigator's opinion)
Randomized

Randomization description
After selecting the subjects using Purposive sampling the included cases will randomly allocated into two groups by simple random sampling using Gold Fish bowl method. Participants will be informed about their registration Number. The participants group will be masked as A & B by the Trainer/Assessor. Pre and post Data will be collected and analyzed by the data analyst. After analysis the Groups will be unmasked.

Blinding (investigator's opinion)
Single blinded

Blinding description
40 Participants will be involved in my study using Purposive Sampling Technique. 2 groups of 20 participants each will be made and will be randomized using systematic sampling. Outcome accessor will be blinded by not knowing the information about the groups of the study. The Investigator will determine the information by the medical record number, assigned to each participant.

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Riphah International University

Street address
Quaid e Azam Industrial State

City
Lahore

Postal code
40050

Approval date
2021-12-27, 1400/10/06

Ethics committee reference number
029269

Health conditions studied

1

Description of health condition studied
Glenohumeral Internal Rotation Deficit

ICD-10 code
M24. 811

ICD-10 code description
Glenohumeral Internal Rotation Deficit

Primary outcomes

1

Description
Reduction in pain in cricketers with Glenohumeral Internal Rotation Deficit

Timepoint
Before intervention and 6 weeks after intervention

Method of measurement
for pain assessment: numeric pain rating scale for functional assessment

Secondary outcomes

1

Description
Improvement in Range of motion in cricketers with Glenohumeral Internal Rotation Deficit

Timepoint
Before intervention and 6 weeks after intervention
Method of measurement
Goniometer

2

Description
Improvement in function in cricketers with Glenohumeral Internal Rotation Deficit
Timepoint
Before intervention and 6 weeks after intervention
Method of measurement
Kerlan-Jobe Orthopaedic Clinic Shoulder & Elbow Score

Intervention groups

1

Description
Intervention group: ● The experimental group will perform throwing exercise with a Thera Band for approximately 20 min per session, three sessions a week lasted six weeks ● Eccentric exercises ● Sleeper Stretch in the prone position ● PNF (hold relax).
Category
Rehabilitation

2

Description
Control group: This group will follow only eccentric exercise and stretches only
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Pakistan Sports Board
Full name of responsible person
Dr. Muhammad Hashim
Street address
Kalma Chowk
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Riphah International University
Full name of responsible person
Muhammad Hashim
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Phone
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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
1
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
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Full name of responsible person
Muhammad Hashim
Position
Assistant Professor
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Sharing plan

Deidentified Individual Participant Data Set (IPD)
No - There is not a plan to make this available
Justification/reason for indecision/not sharing IPD
There is no further information
Study Protocol
No - There is not a plan to make this available
Statistical Analysis Plan
No - There is not a plan to make this available
Informed Consent Form
No - There is not a plan to make this available
Clinical Study Report
No - There is not a plan to make this available
Analytic Code
No - There is not a plan to make this available
Data Dictionary
No - There is not a plan to make this available