Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The effects of scapular non-elastic taping on upper limb performance and muscle strength, between overhead athletes with and without scapular dyskinesia

Protocol summary

Study aim

Evaluation of the effects of scapular taping on scapular muscles strength, upper limb performance and external/ internal rotation range of motion in overhead athletes with scapular dyskinesia

Design

This is a one -way blinded randomized controlled trial study.

Settings and conduct

This study will be done in athlete clubs; participants will be randomly divided into intervention or control groups. At first, participant's height, weight and age will be recorded, then taping will be done. Strength of upper and lower trapezius, serratus anterior and infraspinatus muscles will be evaluated with a hand held dynamometer. Upper limb performance will be assessed with upper quarter y balance test, external/ internal rotation ROM will be measured with using goniometer then between and within groups differences will be compared

Participants/Inclusion and exclusion criteria

Inclusion criteria: Scapular dyskinesia, age between 18-30 y/o, more than 3 years' overhead sport experience and having overhead exercise at least 3 sessions per week; History of shoulder injury, surgery or repeated shoulder dislocation, History of neck pain or neck injury, History of systemic, rheumatologic and neurologic disease, obvious deformity, visible muscular atrophy, history of nerve involvement in neck area

Intervention groups

Intervention group: For mechanical correction of scapula, the non-elastic tape will be attached from the anterior aspect of coracoid process of scapula, near to upper clavicular region to upper trapezius muscle's bulk, for posterior aspect of trunk, the tape will be attached in parallel to the lower trapezius muscle fibers, to the terminal parts of thoracic vertebras Control group: Taping will be placebo with no mechanical correction.

Main outcome variables

Upper limb performance and muscles strength

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20180805040702N1**
Registration date: **2018-10-25, 1397/08/03**
Registration timing: **prospective**

Last update: **2018-10-25, 1397/08/03**
Update count: **0**

Registration date

2018-10-25, 1397/08/03

Registrant information

Name
Zahra Mollaei
Name of organization / entity
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Iran (Islamic Republic of)
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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-11-06, 1397/08/15

Expected recruitment end date

2018-11-26, 1397/09/05

Actual recruitment start date

empty

Actual recruitment end date
empty
Trial completion date
empty

Scientific title
The effects of scapular non-elastic taping on upper limb performance and muscle strength, between overhead athletes with and without scapular dyskinesia

Public title
The effect of scapular taping on upper limb performance and muscle strength
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Scapular dyskinesia Age between 18- 30 y/o More than 3 years' overhead sport experience Having overhead exercise at least 3 sessions per week
Exclusion criteria:
History of shoulder injury, surgery and repeated shoulder dislocation History of neck pain or neck injury History of systemic, rheumatologic , neurologic diseases Obvious deformity Visible muscular atrophy History of nerve involvement in neck area
Age
From **18 years** old to **30 years** old
Gender
Female

Phase
N/A
Groups that have been masked

- Participant

Sample size
Target sample size: **36**
Randomization (investigator's opinion)
Randomized
Randomization description
Randomization would be simple and performed by the use of the coin flipping technique. The tail side would be assigned to the intervention group and the head side to the control group.
Blinding (investigator's opinion)
Single blinded
Blinding description
Blindness is one-way, and the participants will not know which group (control-intervention) they belong in.
Placebo
Used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics Committee at Iran University of Medical Sciences
Street address
Iran University Campus, Hemmat freeway, next to Milad tower
City
Tehran
Province
Tehran
Postal code
1449614535
Approval date
2017-08-28, 1396/06/06
Ethics committee reference number
IR.IUMS.FMD.REC 1396.9411452006

Health conditions studied

1

Description of health condition studied
Scapular dyskinesis
ICD-10 code
M62.9
ICD-10 code description
Disorder of muscle, unspecified

Primary outcomes

1

Description
Upper limb performance
Timepoint
Before and 20 minutes later
Method of measurement
Upper quarter y balance test

2

Description
Muscle strength
Timepoint
Before and 20 minutes later
Method of measurement
Hand dynamometer

Secondary outcomes

1

Description
Passive range of motion shoulder external and internal rotation
Timepoint
Before and 20 minutes later
Method of measurement
Goniometer

Intervention groups

1

Description
Intervention group: For mechanical correction of scapula for each athlete, non-elastic taping will be used from anterior aspect of coracoid process of scapula to the thoracic vertebras. Muscles strength, range of motion and upper limb performance will be measured before and 20 minutes after intervention.
Category
Treatment - Devices

2

Description
Control group: Taping will be placebo with no mechanical correction in this group.
Category
Placebo

Recruitment centers

1

Recruitment center
Name of recruitment center
Shirodi sport complex
Full name of responsible person
Nikzad Shiri
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Sponsors / Funding sources

1

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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
Iran University of Medical Sciences
Proportion provided by this source
100
Public or private sector
Public
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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Position
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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