Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

A comparison between two protocol, whole body vibration and exercise therapy, on pain, performance and balance among 20-40 years-old athletes with patellofemoral pain syndrome

Protocol summary

Summary

In this study we want to exam the effect of whole body vibration training on pain, balance and performance.The aim of this study was to compare the effect of WBV Training and exercise therapy on pain, performance and balance in athletics person with patellofemoral pain syndrom. To this end, 28 athletes between the ages of 20-40 years with a diagnosis of patellofemoral pain syndrome attended to orthopedic and physiotherapy clinics affiliated to Shiraz University of Medical Sciences were selected and Randomly divided into the intervention and the control groups.Blocked randomization method was used for randomization. Treatment in the intervention group included 4 weeks WBV Training(12 sessions), each session included 5 sets of one minute duration with one minute rest between each set. The position of person was squat with 30 degree knee flextion. Frequency and amplifier is 30HZ and 3 mm. In control group, treatment included 4 weeks exercise therapy (12 sessions). The pain, performance and balance were measured before starting the treatment sessions, immediately after the end of sessions and and two weeks after completion of treatment and compared between both groups. Visual analogue scale Used to measure the pain intensity, leg press test and Kujala Questionnaire were used to measure the performance and Balance error scoring system and SEBT (Star Excursion Balance Test) were used to measure the balance.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016020624149N6**
Registration date: **2016-06-16, 1395/03/27**
Registration timing: **retrospective**
Last update:
Update count: **0**

Registration date

2016-06-16, 1395/03/27

Registrant information

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Shiraz University of Medical Sciences
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Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Shiraz University of Medical Sciences

Expected recruitment start date

2016-01-21, 1394/11/01

Expected recruitment end date

2016-05-21, 1395/03/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

A comparison between two protocol, whole body vibration and exercise therapy, on pain, performance and balance among 20-40 years-old athletes with patellofemoral pain syndrome

Public title
Effect of whole body vibration training on pain, performance and balance in athletes with patellofemoral pain syndrome
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria: antro or retropatellar pain that is induced during step up and down, jumping up and running, squat, prolonged sitting; onset of symptoms has not been associated with traumatic factors; pain induction during patellar palpation; onset of symptom less than one year; the age range between 20-40years; only one leg involvement; at least one of below tests being positive: patellar apprehension test, vastus Medialis coordination test, step down eccentric test. exclusion criteria: symptoms duration for less than one month; existence of other lesions in the lower limb; surgery and fractures of lower extremity; history of patellar dislocation; usage of NSAIDs; signification injuries which affect other lower extremities joints; people who must not use WBV including acute fracture, lower limb amputation, acute damage of soft tissue, osteoporosis with vertebral fracture, acute disc herniation, recent surgery, acute edema, hip and knee endoprothesis, urinary incontinence, headache, epilepsy.
Age
From **20 years** old to **40 years** old
Gender
Both

Phase
2
Groups that have been masked
No information
Sample size
Target sample size: **28**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Single blinded
Blinding description
Placebo
Not used
Assignment
Parallel
Other design features
Blocked randomization method is used for randomization

Secondary Ids

1

Registry name
-
Secondary trial Id
-
Registration date
empty

Ethics committees

1

Ethics committee
Name of ethics committee
Sciences Ethics committee of Shiraz University of Medical Sciences
Street address
Central Building of Shiraz University of Medical Sciences, Zand Blvd, Shiraz
City
Shiraz
Postal code
Approval date
2015-12-13, 1394/09/22
Ethics committee reference number
IR.SUMS.REC.1394.168

Health conditions studied

1

Description of health condition studied
patellofamoral pain syndrom
ICD-10 code
M70.8
ICD-10 code description
Other soft tissue disorders related to use, overuse and pressure

Primary outcomes

1

Description
pain
Timepoint
Before the onset of the treatment, at the end of the treatment period, two weeks after the end of the treatment period
Method of measurement
VAS (visual analog scale)

2

Description
Balance
Timepoint
Before the onset of the treatment, at the end of the treatment period, two weeks after the end of the treatment period
Method of measurement
Balance error scoring system; SEBT(star excursion balance test)

3

Description
Performance
Timepoint
Before the onset of the treatment, at the end of the

treatment period, two weeks after the end of the treatment period

Method of measurement

Leg press, Kujala Questionnaire

Secondary outcomes

1

Description

-

Timepoint

-

Method of measurement

-

Intervention groups

1

Description

control group:exercise therapy .. included: patellar mobilization,rasistance training, flexibility, stretching and balance exercise

Category

Treatment - Other

2

Description

Intervention group: Whole body vibration Training Treatment was done 4 sessions per week for 4 weeks .Each session includes 5 sets of one minute duration with one minute rest between each two sets.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Orthopedic and Phisiotherapy Clinics affiliated to Shiraz University of Medical Sciences

Full name of responsible person

Najmeh Shadlou

Street address

Shiraz

City

Shiraz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research, Shiraz University of Medical Sciences

Full name of responsible person

Basir Hashemi

Street address

Central Building of Shiraz University of Medical Science, Zand Blvd, Shiraz

City

Shiraz

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Vice chancellor for research, Shiraz University of Medical Sciences

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

empty

Person responsible for general inquiries

Contact

Name of organization / entity

School of Rehabilitation Science

Full name of responsible person

Najmeh Shadloo

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
empty
Study Protocol
empty
Statistical Analysis Plan
empty
Informed Consent Form
empty
Clinical Study Report
empty
Analytic Code
empty
Data Dictionary
empty