Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

clinical effectiveness of functional training versus strengthening exercise on pain and function in people with patellofemoral pain syndrome

Protocol summary

Summary

Objective: To investigate the effectiveness of functional training versus strengthening exercise on pain and function in people with patellofemoral pain syndrome Design of study: Double blind randomized controlled clinical trial Subjects: People with patellofemoral pain syndrome Inclusion criteria: Subjects of 18-45 y age; insidious onset of symptoms not related to trauma; peripatellar or retropatellar knee pain during at least 2 of activities of stair climbing, hopping, running, squatting, kneelingand prolonged sitting; presence of pain at least 4 weeks; presense of pain at least 30 minutes per day most days of week; pain with compression on the patella; pain on palpation of patellar facet; pain level 3 of a 10-cm visual analog scale Exclusion criteria: Meniscal, ligamentus or cartilage injury; patellar tendon, ilotibial band or pesanserine tenderness; evidence of effusion; hip or lumbar referred pain; history of recurrent patellar subluxation or dislocation; patellar fracture; prolonged use of anti inflammatory drug or corticosteroid; history of head injury or vestibular disorder within the last 6 months; pregnancy; trauma to knee joint; history of lower extremity surgery; osgood-schlatter or sinding-larsen-johanssen syndromes sample size:30 subjects withl patellofemoral pain syndrome Interventions: The subjects is randomly assigned to strengthening exercise group and functional training group main outcome measures:pain, subjective and objective function is measured before and after intervention. pain intensity is quantified using a 10-cm visual analog scale, subjective function is assessed using kujala patellofemoral scale and objective function is also examined using performance functional tests

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT138809092793N1**

Registration date: **2015-07-20, 1394/04/29**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2015-07-20, 1394/04/29

Registrant information

Name

Shahla Zahednejad

Name of organization / entity

School Of Rehabilitation Sciences

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Recruitment status

Recruitment complete

Funding source

Ahvaz Jundishapur University Of Medical Sciences

Expected recruitment start date

2015-05-22, 1394/03/01

Expected recruitment end date

2016-01-20, 1394/10/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

clinical effectiveness of functional training versus strengthening exercise on pain and function in people with patellofemoral pain syndrome

Public title
The influence of exercise on pain and function in people with knee pain
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria: subjects 18-45 y age; insidious onset of symptoms not related to trauma; peripatellar or retropatellar knee pain during at least 2 of activities of stair climbing, hopping, running, squatting, kneeling and prolonged sitting; presence of pain at least 4 weeks; presense of pain at least 30 minutes per day most days of week; pain with compression on the patella; pain on palpation of patellar facets; pain level 3 of a 10-cm visual analog scale Exclusion criteria: meniscal, ligamentus or cartilage injury; patellar tendon, ilotibial band or pesanserine tenderness; evidence of effusion; hip or lumbar referred pain; history of recurrent patellar subluxation or dislocation; patellar fracture; prolonged use of anti inflammatory drug or corticosteroid; history of head injury or vestibular disorder within the last 6 months; pregnancy; trauma to knee joint; history of lower extremity surgery; osgood-schlatter or sinding-larsen-johanssen syndromes
Age
From **18 years** old to **45 years** old
Gender
Female

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **30**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Double blinded
Blinding description
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Musculoskeletal Rehabilitation Research Center
Street address
Musculoskeletal Rehabilitation Research Center, School Of Rehabilitation Sciences, Ahvaz Jundishapur University Of Medical Sciences, Golestan, Ahvaz, Iran
City
Ahvaz
Postal code
00986135733133
Approval date
2015-04-29, 1394/02/09
Ethics committee reference number
Ir.ajums.rec.1394.27

Health conditions studied

1

Description of health condition studied
patellofemoral pain syndrome
ICD-10 code
M22.8
ICD-10 code description
other disorders of patella

Primary outcomes

1

Description
pain
Timepoint
before and after intervention
Method of measurement
visual analog scale

2

Description
subjective function
Timepoint
before and after intervention
Method of measurement
kujala scale

3

Description
objective function
Timepoint
before and after intervetion
Method of measurement
performance functional test

Secondary outcomes

empty

Intervention groups

1

Description
intervetion 1: hip and knee strengthening exercise include strengthening of quadriceps muscle and abductor and external rotator hip muscles
Category
Treatment - Other

2

Description
intervention 2: functional training include fast walking, ascending and descending of stair platform, ascending and descending on ramp,lateral step down and single leg anterior reach task
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Muscloskeletal Rehabilitation Research Center
Full name of responsible person
Zohre Ghomayshi
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Ahvaz Jundishapur University Of Medical Sciences, Research Development
Full name of responsible person
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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
Ahvaz Jundishapur University Of Medical Sciences, Research Development
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

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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