Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

the effect of sacroiliac joint manipulation on balance and knee position sense of patients with patellofemoral pain syndrome

Protocol summary

Summary

Objectives:To examine the effectiveness of sacroiliac joint manipulation to improve balance and knee position sense of patients with patellofemoral pain syndrome. Design of study: 44 persons (men & women) that have anterior knee pain participate in this study. Inclusion criteria consist of: have anterior or retro-patellar knee pain at least as long as 6 month; pain during squat, step up and step down, running and jumping; At least one positive test: eccentric step down test, vastus medialis coordination test, patellar apprehension test. exclusion criteria: pain is due to trauma; acute and subacute neuromuscular disease; history of surgery in the knee. Interventions: volunteers divide in two groups, the first group is received manipulation to the sacroiliac joint and second group is not received manipulation but received manipulation position.position sense and balance at both groups is measured before and after by Biodex Dynamometer and star excursion balance test.Primary outcome measures: knee position sense error For angles 20 and 60 according to degrees. Secondary outcome measures: reach direction measures at anterior, postero-lateral, postero- medial by used of star excursion balance test before and after at both group. One groupthe high-velocity low-amplitude (HVLA) manipulation and the other group receive position(placebo) in a single session. Measurement: using the Biodex dynamometer to evaluate position sense and star execution test to evaluate balance ability and VAS(visual analog scale) to evaluate pain before and after intervention in both groups

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2013061213651N1**
Registration date: **2013-10-13, 1392/07/21**
Registration timing: **retrospective**
Last update:
Update count: **0**

Registration date

2013-10-13, 1392/07/21

Registrant information

Name
Ali Barzegar
Name of organization / entity
Yazd University of Medical Sciences
Country
Iran (Islamic Republic of)
Phone
+98 35 3233 2091
Email address
bafronei@sums.ac.ir

Recruitment status

Recruitment complete

Funding source

Shiraz University of Medical Sciences

Expected recruitment start date

2013-07-20, 1392/04/29

Expected recruitment end date

2013-09-20, 1392/06/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

the effect of sacroiliac joint manipulation on balance and knee position sense of patients with patellofemoral pain syndrome

Public title

knee pain and position sense

Purpose

Treatment

Inclusion/Exclusion criteria
inclusion criteria: they have anterior or retro-patellar and around knee pain; pain at least as long as 6 month; pain during squat, step up and step down, running and jumping; At least one positive test: eccentric step down test, vastus medialis coordination test, patellar apprehension test. exclusion criteria: pain is due to trauma; acute and subacute neuromuscular disease; history of surgery in the knee.
Age
From **18 years** old to **35 years** old
Gender
Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **44**
Randomization (investigator's opinion)
Randomized
Randomization description
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
Shiraz university of Medical Sciences
Street address
Central Building of Shiraz University of Medical Sciences, Zand avenue ,Shiraz
City
Shiraz
Postal code
Approval date
2013-05-14, 1392/02/24
Ethics committee reference number
CT- 92- 6512

Health conditions studied

1

Description of health condition studied
Patellofemoral pain syndrome
ICD-10 code
M22.2 , M2
ICD-10 code description
Patellofemoral disorders, Chondromalacia patellae

Primary outcomes

1

Description
knee Position Sense
Timepoint
Before - After
Method of measurement
by Biodex Dynamometer Based on degrees

Secondary outcomes

1

Description
Balance
Timepoint
Before - After
Method of measurement
by Star Execution Test Based on centimeter by tape meter

Intervention groups

1

Description
Intervention: The patient to be evaluated before intervention.After a fifteen minute rest in the intervention group: the patient is supine and the therapist bends contralateral to the side which is to be manipulated.The patient is passively move into side bending. toward the side to be manipulated. The patient interlock the fingers behind his or her head. The therapist passively rotate the patient, and then deliver a quick thrust to the Anterior Superior Iliac Spine (ASIS) in a posterior and inferior direction. Treatment is one session.Then the patient to br evaluated immediately and the information to be recorded.
Category
Rehabilitation

2

Description
Control group: The patient to be evaluated beforeid given sacroiliac manipulation position.After a fifteen minute rest.the patient is given sacroiliac manipulation position But the technique should not be placed.Then the patient to be evaluated immediately and the information to be recorded
Category
Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center
Rehabilitation Collage of Shiraz Medical Science University

Full name of responsible person
Ali Reza Motealleh

Street address
NO.32, Abiverdi 1 Avenue, Chamran Blvd, Shiraz ,Fars

City
Shiraz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Shiraz University of Medical Sciences

Full name of responsible person
Dr. Hatam

Street address
Central Building of Shiraz University of Medical Sciences ,Zand avenue ,Shiraz

City
Shiraz

Grant name

Grant code / Reference number

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

Title of funding source
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
Shiraz University of Medical Sciences

Full name of responsible person
Ali Barzegar Bafrouei

Position
student

Other areas of specialty/work

Street address
Abiverdi1 avenue, School of Rehabilitation Sciences

City
Shiraz

Postal code

Phone
+98 35 2773 2091

Fax

Email
barzegarali66@gmail.com bafronei@sums.ac.ir

Web page address

Person responsible for scientific inquiries

Contact

Name of organization / entity
Shiraz University of Medical Sciences

Full name of responsible person
Ali Reza Motealleh

Position
ph.D

Other areas of specialty/work

Street address
NO.32, Abiverdi 1 Avenue, Chamran Blvd, Shiraz

City
Shiraz

Postal code

Phone
+98 71 1626 5108

Fax

Email
pmotealeh@yahoo.com

Web page address

Person responsible for updating data

Contact

Name of organization / entity
Shiraz University of Medical Sciences

Full name of responsible person
Ali Barzegar Bafrouei

Position
Master science student of Physical Therapy

Other areas of specialty/work

Street address
NO.32, Abiverdi 1 Avenue, Chamran Blvd, Shiraz

City
Shiraz

Postal code

Phone
+98 35 2773 2091

Fax

Email
barzegarali66@gmail.com bafronei@sums.ac.ir

Web page address

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