Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Investigating effects of balance training with virtual reality system in patients with chronic ankle instability

Protocol summary

Summary

Ankle sprain is one of the most common injuries among the athletes. Recurrence rate of this injury is about 70%. 85% of all ankle sprains are lateral ankle sprains. According to some reports 74% of patients with ankle sprain would have some symptoms which are known as chronic ankle instability. Today virtual rehabilitation systems are used to improve patients motivation and their engagements in therapy sessions and also to get better results of interventions. Virtual reality system provide the ability of controlling duration and intensity of interventions and the environment modification. In our study 30 patients with chronic ankle instability will be allocated to 3 groups of 1:regular training 2:training with virtual reality system using Nintendo Wii balance board and 3:control group. 10 sessions of training in 3 weeks are designed for two groups of interventions. Patients balance will be measured 3 times: 1-before 1st session 2-after 5th session 3-after the last session

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2013081214331N1**
Registration date: **2013-09-14, 1392/06/23**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2013-09-14, 1392/06/23

Registrant information

Name

Kazem Hessampour

Name of organization / entity

Shiraz University of Medical Sciences

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Vice chancellor of research affairs of Shiraz University Of Medical Sciences

Expected recruitment start date

2013-09-01, 1392/06/10

Expected recruitment end date

2013-10-17, 1392/07/25

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Investigating effects of balance training with virtual reality system in patients with chronic ankle instability

Public title

Balance training in patients with chronic ankle instability

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: 1- history of lateral ankle sprain which has happened at least three month ago 2- giving way or instability feeling 3- no pain in the first intervention session Exclusion criteria: 1- history of any neurological diseases which affect the balance 2- patients with signs of imbalance or dizziness 3-patients who have taken Anti-histamines, Anticholinergics, Hypnotics or Sedatives 4-patients with hearing problems 5-patients with a history of diabetes, heart arrhythmia, ventricular

problems or any dysesthesia 6-professional athletes

Age
From **18 years** old to **45 years** old

Gender
Both

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
Ethics committee of Shiraz University Of Medical Sciences

Street address
vice chancellor of reserch affairs,7th floor,central building of Shiraz University Of Medical Science,Zand avenue,Shiraz

City
Shiraz

Postal code

Approval date
2012-10-02, 1391/07/11

Ethics committee reference number
CT-P-91-3609

Health conditions studied

1

Description of health condition studied
ankle sprain

ICD-10 code
S93.4

ICD-10 code description
Sprain and strain of ankle

Primary outcomes

1

Description
displacement of Center Of Pressure(COP)

Timepoint
1-before intervention 2-5th session of intervention 3-10th session of intervention

Method of measurement
in order to measure the balance of the patients we use force platform with 120 HZ of frequency

Secondary outcomes

empty

Intervention groups

1

Description
1-Intervention group 1(Usual balance exercises): The subjects will participate in 10 sessions of exercises during 4 weeks. In each session they will have 5 minutes of warm up, 15 minutes of balance exercises on tilt board and 5 minutes of cool down.

Category
Rehabilitation

2

Description
2-Intervention group 2(Balance exercises with Nintendo Wii): The subjects will participate in 10 sessions of exercises during 4 weeks. In each session they will have 5 minutes of warm up, 15 minutes of balance exercises with Nintendo Wii balance board (ski game) and 5 minutes of cool down.

Category
Rehabilitation

3

Description
3- Control group: No intervention will be used for this group and we will only assess balance of this group's subjects at the beginning of our study and 4 weeks later.

Category
Diagnosis

Recruitment centers

1

Recruitment center

Name of recruitment center
Physical Therapy and Medical Centers of Shiraz University Of Medical Sciences

Full name of responsible person

Street address

City
Shiraz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Vice chancellor of research affairs of Shiraz University Of Medical Sciences

Full name of responsible person
Dr Poustforoosh

Street address
Vice chancellor of research affairs,7th floor,centeral building of Shiraz University Of Medical Sciences ,Zand avenue

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 of research affairs of 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
Student Research Committee,Shiraz University Of Medical Sciences

Full name of responsible person
Kazem Hessampour

Position
Ms candidate of Physical therapy

Other areas of specialty/work

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Person responsible for scientific inquiries

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Name of organization / entity
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Full name of responsible person
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Assistant professor of department of physical therapy

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Person responsible for updating data

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Position
Ms candidate of Physical therapy

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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