Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparison of the effect of ankle exercises with global exercises(ankle and hip)on the navicular drop and postural control of the foot in subjects with flexible flat foot

Protocol summary

Study aim
Determining and comparing the effect of ankle exercises with global exercises (ankle and hip) on navicular drop and postural control in people with flexible flat feet

Design
A clinical trial study, with simple and accessible sampling, without blinding will be performed on 30 people with flexible flat foot.

Settings and conduct
This randomized clinical trial of Zahedan University of Medical Sciences 1400 in Mashhad University of Medical Sciences will be performed without blinding through simple and available sampling

Participants/Inclusion and exclusion criteria
Participants are in the age group of 19 to 30 years, positive navicular drop test , no history of fractures and dislocations in the lower extremities, no history of rheumatoid, neurological, respiratory disorders, cardiovascular disorders, No pregnancy, no history of diabetes , no deformity in the lower extremities, approved by an orthopedist

Intervention groups
Ankle exercises group and Global exercises group (ankle and hip)

Main outcome variables
Determining and comparing the amount of navicular drop and postural control variables (mean center of pressure level, anterior-posterior deviations, internal-external deviations and mean velocity of pressure center fluctuations) in the group of ankle exercises and global exercises (ankle and hip)

General information

Reason for update
Acronym
IRCT registration information

IRCT registration number: **IRCT20090210001675N16**
Registration date: **2021-07-20, 1400/04/29**
Registration timing: **prospective**

Last update: **2021-07-20, 1400/04/29**
Update count: **0**

Registration date
2021-07-20, 1400/04/29

Registrant information
Name
Asghar Akbari
Name of organization / entity
Zahedan University of Medical Sciences
Country
Iran (Islamic Republic of)
Phone
+98 54 1322 8445
Email address
akbaria@zdmu.ac.ir

Recruitment status
Recruitment complete
Funding source

Expected recruitment start date
2021-08-20, 1400/05/29
Expected recruitment end date
2021-12-05, 1400/09/14
Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
Comparison of the effect of ankle exercises with global exercises(ankle and hip)on the navicular drop and

postural control of the foot in subjects with flexible flat foot

Public title
Comparison of the effect of ankle exercises with global exercises(ankle and hip)in subjects with flexible flat foot
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
People in the age group of 19 to 30 years Positive navicular drop test No history of fracture, dislocation of the lower limb No history of lower limb surgery No history of rheumatoid and neurological diseases No history of diabetes No pregnancy No respiratory disorders Lack of deformity in the lower extremities No cardiovascular disorders Approved by an orthopedic specialist
Exclusion criteria:
People with flexible flat foot who have been absent for more than three consecutive treatment sessions Receiving or performing other treatments while studying
Age
From **19 years** old to **30 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
Individuals will be randomly divided into two groups by lottery
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
Ethics Committee of Zahedan University of Medical Sciences
Street address
Dr. Hesabi Square, Janat Blvd., Zahedan University of Medical Sciences
City
Zahedan
Province
Sistan-va-Balouchestan
Postal code
9816843463
Approval date
2021-06-20, 1400/03/30
Ethics committee reference number
IR.ZAUMS.RES.1400.121

Health conditions studied

1

Description of health condition studied
Flexible flatfoot
ICD-10 code
M21.4
ICD-10 code description
Flat foot [pes planus] (acquired)

Primary outcomes

1

Description
Drop Navicular
Timepoint
Before intervention, After the intervention(4 week), 4weeks after finishing of the intervention
Method of measurement
ruler

2

Description
The average area of the center of pressure of the sole of the foot
Timepoint
Before intervention, After the intervention(4 week), 4weeks after finishing of the intervention
Method of measurement
force plate

3

Description
Mean anterior-posterior displacement
Timepoint
Before intervention, After the intervention(4 week), 4weeks after finishing of the intervention
Method of measurement
force plate

4

Description
Mean internal-external displacement
Timepoint
Before intervention, After the intervention(4 week), 4weeks after finishing of the intervention
Method of measurement

force plate

5

Description
Average speed of pressure center oscillations
Timepoint
Before intervention, After the intervention(4 week), 4weeks after finishing of the intervention
Method of measurement
force plate

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: Global exersises(ankle and hip), 12 sessions for 4 consecutive weeks, 3 times a week, 20 to 30 minutes each session, which includes training and exercises.
Category
Rehabilitation

2

Description
Control group: Ankle exercises, 12 training sessions for 4 consecutive weeks, 3 times a week, 20 to 30 minutes each session, which includes training and doing exercises.
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Physiotherapy clinic of Ghaem hospital in Mashhad
Full name of responsible person
Dr. Asghar Akbari
Street address
Ahmadabad St., Ghaem Hospital
City
Mashhad
Province
Razavi Khorasan
Postal code
91766-99199
Phone
+98 51 3845 3239
Fax
Email
Akbari_as@yahoo.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Zahedan University of Medical Sciences
Full name of responsible person
Dr. Noor Mohammad Bakhshaei l
Street address
Dr. Hesabi Square, Gent Boulevard, Zahedan University of Medical Sciences, Vice Chancellor for Research
City
Zahedan
Province
Sistan-va-Balouchestan
Postal code
9816743463
Phone
+98 54 5715 3329
Email
a.akbari@zaums.ac.ir
Web page address
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Zahedan 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
Zahedan University of Medical Sciences
Full name of responsible person
Dr.Asghar Akbari
Position
Phd in Physiotherapy, Associate professor, Director of the Department of physiotherapy Zahedan Unive
Latest degree
Ph.D.
Other areas of specialty/work
Physiotherapy
Street address
Department of Physiotherapy, School of Rehabilitation Sciences, Razmejo-Moghadam Laboratory, Ayatoal
City
Zahedan

Province
Sistan-va-Balouchestan
Postal code
64855-98136
Phone
+98 54 1322 8445
Fax
+98 54 1322 8445
Email
akbaria@zdmu.ac.ir

Person responsible for scientific inquiries

Contact
Name of organization / entity
Zahedan University of Medical Sciences
Full name of responsible person
Asghar Akbari
Position
Associate professor
Latest degree
Ph.D.
Other areas of specialty/work
Physiotherapy
Street address
Department of Physiotherapy, Faculty of Rehabilitation Sciences, Razmojomoghadam Laboratory, Ayatollah Kafami St.
City
Zahedan
Province
Sistan-va-Balouchestan
Postal code
64855-98136
Phone
0098 4675334254
Email
akbari_as@yahoo.com

Person responsible for updating data

Contact
Name of organization / entity
Zahedan University of Medical Sciences
Full name of responsible person
Asghar Akbari
Position
Associate professor
Latest degree
Ph.D.
Other areas of specialty/work
Physiotherapy
Street address
Department of Physiotherapy, Faculty of Rehabilitation Sciences, Razmojomoghadam Laboratory, Ayatollah Kafami St.
City
Zahedan
Province
Sistan-va-Balouchestan
Postal code
64855-98136
Phone
0098 46753342
Email
akbari_as@yahoo.com

Sharing plan

Deidentified Individual Participant Data Set (IPD)
Yes - There is a plan to make this available
Study Protocol
Yes - There is a plan to make this available
Statistical Analysis Plan
Yes - There is a plan to make this available
Informed Consent Form
Yes - There is a plan to make this available
Clinical Study Report
Not applicable
Analytic Code
Not applicable
Data Dictionary
Not applicable
Title and more details about the data/document
All data can be shared after unidentifiable individuals.
When the data will become available and for how long
2 months after the results are published
To whom data/document is available
Researchers working in academic and scientific institutions
Under which criteria data/document could be used
All data can be made available to researchers after unidentifiable the participants, and any other analysis of the data and any use for research and therapeutic purposes of this study is allowed.
From where data/document is obtainable
Dr. Asghar Akbari Address: Ayatollah Kafami St., Razmjomoghaddam Laboratory, Faculty of Rehabilitation Sciences, Department of Physiotherapy. City: Zahedan. Sistan and Baluchestan Province. Country: Islamic Republic of Iran. Postal Code: 6485598136 Tel: 0098 54 46753342
What processes are involved for a request to access data/document
After receiving the message from the applicant and reviewing the application conditions, the required information will be sent to the person at the earliest opportunity.
Comments