

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

Comparison Between Effects of Tibialis Posterior Kinesio Taping and Fibularis Longus Kinesio Taping on Dynamic Components and Foot Posture in Young Individuals with Flexible Flatfoot

Protocol summary

Study aim

The study aims to evaluate the effects of Kinesio taping on two functional muscles of the foot and its impacts on balance, physical performance, posture, and dynamic components of the foot.

Design

Two arm parallel group randomised single-blinded trial on 30 patients

Settings and conduct

This study will be conducted at the school of rehabilitation, Tehran university of medical sciences. First, people will be evaluated, and then they will undergo single-session Kinesio taping on the mentioned muscles. After 30 minutes, they will be reevaluated. People will be unaware of the group to which they will be allocated.

Participants/Inclusion and exclusion criteria

People who will be included in this study have the required criteria as follows: being eighteen to forty years old; obtaining the desired scores in the navicular drop test and foot posture index; and having flexible foot arch; with a body mass index between 20-25. Also, people with pregnancy; and those who suffer from ankle injury; surgery; pain; foot deformity; difficulty in standing and walking; and Kinesio tape sensitivity will not be included in the study.

Intervention groups

For the tibialis posterior muscle Kinesio taping, the person lies in a supine position and actively dorsiflexes and everts the ankle, and at the same time, Kinesio tape will be applied on the muscle. Accordingly, for the fibularis longus muscle Kinesio taping, the person lies in a supine position and actively plantarflexes and inverts the ankle, and again at the same time, Kinesio tape will be applied on the muscle. A piece of I-shaped tape with 35 percent tension plus no tension at both ends will be used.

Main outcome variables

Navicular drop test score; foot posture index score; Y balance test score; timed up and go score; dynamic components

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20211018052805N1**

Registration date: **2021-11-17, 1400/08/26**

Registration timing: **prospective**

Last update: **2021-11-17, 1400/08/26**

Update count: **0**

Registration date

2021-11-17, 1400/08/26

Registrant information

Name

Alireza Tahmasbi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-12-13, 1400/09/22

Expected recruitment end date

2022-03-21, 1401/01/01

Actual recruitment start date

empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Comparison Between Effects of Tibialis Posterior Kinesio Taping and Fibularis Longus Kinesio Taping on Dynamic Components and Foot Posture in Young Individuals with Flexible Flatfoot

Public title
Evaluation of the effectiveness of Kinesio tape on flexible flatfoot

Purpose
Treatment

Inclusion/Exclusion criteria
Inclusion criteria:
 18-40 year old people Navicular drop test ≥ 10 mm
 Foot posture index score between +6 to +12 Positive toe raise test BMI between 20-25
Exclusion criteria:
 Ankle injury in the last six months History of foot surgery
 Foot injury due to systemic, inflammatory and infectious diseases
 Foot deformities include hallux valgus, hammer toe, claw toe
 Pregnancy Ankle pain during the study
 Static standing and walking problems Kinesio tape sensitivity
 Refuse to participate in the study or cancel continuing treatment

Age
From **18 years** old to **40 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Participant

Sample size
Target sample size: **30**

Randomization (investigator's opinion)
Randomized

Randomization description
After the initial assessments, the people will be randomly assigned to one of the two groups of tibialis posterior Kinesio taping and fibularis longus Kinesio taping (method: simple randomization - unit: individual). An envelope containing blue paper and another envelope containing red paper (randomization tool: sealed envelope) will be given to each person. Each person choosing the envelope containing blue or red paper will be assigned to the tibialis posterior Kinesio taping group or fibularis longus Kinesio taping group, respectively.

Blinding (investigator's opinion)
Single blinded

Blinding description
The study will be single-blinded. In this way, the participants do not know to which group they will be allocated. However, the therapist assessing the outcome measures and the data analyzer know each participant's group.

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Research Ethics Committees of School of Medicine, Tehran University of Medical Sciences

Street address

Vice Chancellor for Research, 6th Floor, Central University Organization, Corner of Ghods St., Keshavarz Blvd.

City

Tehran

Province

Tehran

Postal code

1417653761

Approval date

2021-10-18, 1400/07/26

Ethics committee reference number

IR.TUMS.MEDICINE.REC.1400.771

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

Navicular drop test score

Timepoint

At the beginning of the study and after 30 minutes of intervention

Method of measurement

Index card and ruler

2

Description

foot posture index score

Timepoint

At the beginning of the study and after 30 minutes of

intervention
Method of measurement
Observation

3

Description
Y balance test score
Timepoint
At the beginning of the study and after 30 minutes of intervention
Method of measurement
Meter

4

Description
Timed up and go test score
Timepoint
At the beginning of the study and after 30 minutes of intervention
Method of measurement
stopwatch

5

Description
mean length/width of gait line
Timepoint
At the beginning of the study and after 30 minutes of intervention
Method of measurement
Moticon insole and software

6

Description
mean and maximum total force of stance phase
Timepoint
At the beginning of the study and after 30 minutes of intervention
Method of measurement
Moticon insole and software

7

Description
mean double support time
Timepoint
At the beginning of the study and after 30 minutes of intervention
Method of measurement
Moticon insole and software

8

Description
mean stance and swing duration
Timepoint
At the beginning of the study and after 30 minutes of intervention
Method of measurement
Moticon insole and software

9

Description
Center of pressure amplitude in mediolateral direction
Timepoint
At the beginning of the study and after 30 minutes of intervention
Method of measurement
Moticon insole and software

10

Description
Center of pressure amplitude in anteroposterior direction
Timepoint
At the beginning of the study and after 30 minutes of intervention
Method of measurement
Moticon insole and software

11

Description
Center of pressure standard deviation in mediolateral direction
Timepoint
At the beginning of the study and after 30 minutes of intervention
Method of measurement
Moticon insole and software

12

Description
Center of pressure standard deviation in anteroposterior direction
Timepoint
At the beginning of the study and after 30 minutes of intervention
Method of measurement
Moticon insole and software

13

Description
mean center of pressure velocity
Timepoint
At the beginning of the study and after 30 minutes of intervention
Method of measurement
Moticon insole and software

14

Description
Center of pressure trace length
Timepoint
At the beginning of the study and after 30 minutes of intervention
Method of measurement
Moticon insole and software

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group 1: For the tibialis posterior muscle Kinesio taping, the person lies in a supine position and actively dorsiflexes and everts the ankle, and at the same time, Kinesio tape will be applied on the muscle. Kinesio taping will be started from the half of the tibia bone, passing behind the medial malleolus. Ultimately the Kinesio taping process will be finished at the fifth metatarsal head after passing over the navicular bone. A piece of I-shaped tape (TEMTEX, South Korea) with 35 percent tension plus no tension at both ends will be used. Then, people will rest for 30 minutes in a sitting position. After 30 minutes, reevaluation will be performed. A physical therapist will apply Kinesio tape for all of the people.

Category

Rehabilitation

2

Description

Intervention group 2: For the fibularis longus muscle Kinesio taping, the person lies in a supine position and actively plantarflexes and inverts the ankle, and at the same time, Kinesio tape will be applied on the muscle. Kinesio taping will be started from the fibular head, passing behind the lateral malleolus. Ultimately the Kinesio taping process will be finished at the first metatarsal base. A piece of I-shaped tape (TEMTEX, South Korea) with 35 percent tension plus no tension at both ends will be used. Then, people will rest for 30 minutes in a sitting position. After 30 minutes, reevaluation will be performed. A physical therapist will apply Kinesio tape for all of the people.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Tehran University of Medical Sciences

Full name of responsible person

Alireza Tahmasbi

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Tehran University of Medical Sciences

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

Tehran 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

Tehran University of Medical Sciences

Full name of responsible person

Alireza Tahmasbi

Position

Master of science student

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

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Person responsible for scientific inquiries

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Name of organization / entity
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Person responsible for updating data

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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

Yes - There is a plan to make this available

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available

Title and more details about the data/document

All data is potentially shareable after making individuals unidentified.

When the data will become available and for how long

The access period starts three months after the articles are published.

To whom data/document is available

For researchers working in academic, scientific, and hospital institutions

Under which criteria data/document could be used

It's for researchers who work in the field of lower limb biomechanical impairments and the field of Kinesio tape.

From where data/document is obtainable

Applicants for documentation can contact Mr. Alireza Tahmasbi via email: ar-tahmasebi@razi.tums.ac.ir

What processes are involved for a request to access data/document

Once they have the necessary criteria, the information will be provided to them within a month.

Comments