Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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

+98 21 7753 1442

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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

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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
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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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Position
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Other areas of specialty/work
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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