Clinical Trial Protocol
Iranian Registry of Clinical Trials

10 Jun 2026

Immediate effect of hip abductor muscles kinesio taping on static and dynamic balance before and after muscular fatigue induction in elderly people

Protocol summary

Study aim

According to the role of hip abductor muscles in controlling balance and their function in preventing falls in the elderly, the purpose of this research is to study the immediate effect of hip abductors muscles Kinesio Taping before and after induction of fatigue in elderly population.

Design

a randomized, triple-blinded, sham-controlled clinical trial with a parallel group design of 13 participants in each group which were randomized by concealed cards put in a pocket.

Settings and conduct

The study was carried out in the biomechanic laboratory of Tehran University of medical sciences. Firstly, the balance tests were assessed. Then KT was applied to hip abductor muscles followed by assessing balance tests. Finally, muscle fatigue was induced followed by assessment of balance tests.

Participants/Inclusion and exclusion criteria

eligibility criteria: age between 60 to 75 years old, independence of instrumental walking aids, ability to perform activities of daily living independently. The following are not eligible for the study: decompensated heart failure, neurological or muscular disease, significant visual changes, complaints of dizziness, history of hip or knee arthroplasty, unconsolidated fractures, open wounds or scar tissues in the region of applying KT.

Intervention groups

Intervention group: applied KT with tension Control group: Applied KT without tension26

Main outcome variables

Single leg stance test; maximum gait speed; star excursion balance test

General information

Reason for update

Acronym

KT = kinesiotape

IRCT registration information

IRCT registration number: **IRCT20230205057324N1**
Registration date: **2023-03-11, 1401/12/20**
Registration timing: **registered_while_recruiting**

Last update: **2023-03-11, 1401/12/20**
Update count: **0**

Registration date

2023-03-11, 1401/12/20

Registrant information

Name

Mohsen Rezvani

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

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Email address

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-03-01, 1401/12/10

Expected recruitment end date

2023-05-21, 1402/02/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title
Immediate effect of hip abductor muscles kinesio taping on static and dynamic balance before and after muscular fatigue induction in elderly people

Public title
Immediate effect of hip abductor muscles kinesio taping on static and dynamic balance before and after muscular fatigue induction in elderly people

Purpose
Prevention

Inclusion/Exclusion criteria

Inclusion criteria:
age between 60 and 75 years old independence for using instrumental aids independence for activities of daily living normal or controlled blood pressure with medicine

Exclusion criteria:
decompensated Heart Failure neurologic diseases or conditions such as MSA, TBI, CVA, MS and CP presence of muscular dysfunctions such as myopathies, fibrositis and MG presence of dizziness complains of visual problems which interfere with balance control history of knee or hip arthroplasty surgery presence of unconsolidated fractures diabetes mellitus interfering with detection of application in the soles of the feet presence of open wounds in lower limbs presence of unhealed scar tissues in the region of applying KT

Age
From **60 years** old to **75 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Participant
- Outcome assessor
- Data analyser

Sample size
Target sample size: **26**

Randomization (investigator's opinion)
Randomized

Randomization description
Randomization will be based on a single sequence (simple randomization) and the random number table method will be used, so that the table is read from the above and even numbers are considered for the intervention group (Kinesio taping with tension) and odd numbers are for the control group. allocation concealment will be done using sealed opaque envelopes and each of the random sequences will be recorded on a card and the cards will be placed inside the envelopes. In the end, after gluing the lid of the envelopes they will be placed inside a box. 26 envelopes will be placed inside the box. at the beginning of the study, one of the envelopes will be opened in order and the assigned group for each participant will be revealed.

Blinding (investigator's opinion)
Triple blinded

Blinding description
Participants will be aware of the method of taping being used on them, but they will not be aware of which group they have been allocated to. Participants are not aware of how the KT is used for the other group. Participants will not meet each other. The evaluating researcher does not know which group the participants belong to and a comfortable wearing hides the region in which KT is applied. The data analyzer is blinded for the Sham or Intervention group and knows the groups by the name 1 and 2.

Placebo
Used

Assignment
Other

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics committee of Tehran University of Medical Sciences

Street address
No. 179, Somayyeh Ave, Tehran, Iran

City
Tehran

Province
Tehran

Postal code
۱۵۸۱۷۴۹۷۱۱

Approval date
2023-02-01, 1401/11/12

Ethics committee reference number
IR.TUMS.FNM.REC.1401.159

Health conditions studied

1

Description of health condition studied
-

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description
single leg stance time

Timepoint
Baseline assessment, after applying KT, after inducing muscle fatigue

Method of measurement
stopwatch

2

Description
reached distances in Star Excursion Balance Test
Timepoint
Baseline assessment, after applying KT, after inducing muscle fatigue
Method of measurement
tape measure

3

Description
Maximum gait speed
Timepoint
Baseline assessment, after applying KT, after inducing muscle fatigue
Method of measurement
utilization of speed measurement formula (distance divided by time)

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: Gluteus Medius excitatory taping method was used for the intervention group. 2 I shaped tapes in which only the middle third was held in 35% tension was attached to the skin, one from the anterior part of the Iliac crest to the greater trochanter of the femur, and the other from the posterior part of the iliac crest to the greater trochanter of the femur. tape length was measured for each individual separately. Messon KT made in China was utilized in this study. In this brand of KT, in a 10-centimeter cut of tape, when held in 35% tension, a 2-centimeter increase in length happens.
Category
Rehabilitation

2

Description
Control group: only one I shape piece of KT with no tension in horizontal direction will be placed in the lateral side of hip joint, on the skin of abductor muscles region.
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Rehabilitation school of Tehran University of Medical Sciences
Full name of responsible person
Mohsen Rezvani
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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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research@tums.ir
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
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Mohsen Rezvani

Position
student
Latest degree
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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 will be available after unidentification.
When the data will become available and for how long
The access period starts 3 months after the article is published
To whom data/document is available
For researchers working in academic, scientific and hospital institutions.
Under which criteria data/document could be used
Researchers working in the field of elderly rehabilitation
From where data/document is obtainable
Applicants could contact Mr. Rezvani via E-mail: pt.rezvani@gmail.com
What processes are involved for a request to access data/document
After identification of the aplicant, the data will be sent to their mail.
Comments