# Clinical Trial Protocol
# Iranian Registry of Clinical Trials

22 Nov 2026

## Effect of Kinesiotaping on motor neuron excitability and spasticity in chronic stroke patients

### Protocol summary

**Study aim**
The aim of this study is to investigate the effect of inhibitory kinesiotaping on motor neuron excitability and spasticity of plantar flexor muscles in the affected limb of patients with chronic cerebrovascular attack

**Design**
In this pilot study 30 chronic patient that have the inclusion criteria are selected and randomly divided into control and intervention groups.

**Settings and conduct**
The Hmax/Mmax ratio (as a measure of motor neuron excitability) of the Gastrosoleous and the Modified Ashworth Scale (MAS)(as a measure of muscle spasticity) will be calculated before, 30 minutes after and 48 hours after taping. To control the effect of Anxiety on H reflex , SpilbergerState-Trait Anxiety Inventory will be used.

**Participants/Inclusion and exclusion criteria**
Patient with first attack of stroke and Modified Ashworth Scale (MAS) of paretic ankle plantar flexor more than 1 with no history of neuromuscular disease and neuropathy and radiculopathy will be selected to enter the study.

**Intervention groups**
The experimental group receives Kinesiotaping on Gastrosoleous muscles of affected limb and the control group receives no intervention.

**Main outcome variables**
The Hmax/Mmax ratio (as a measure of motor neuron excitability) of the Gastrosoleous; The Modified Ashworth Scale (MAS) will be used(as a measure of muscle spasticity)

### General information

**Reason for update**

**Acronym**

**IRCT registration information**
IRCT registration number: **IRCT20090831002391N17**
Registration date: **2018-01-04, 1396/10/14**
Registration timing: **prospective**
Last update: **2018-01-04, 1396/10/14**
Update count: **0**

**Registration date**
2018-01-04, 1396/10/14

**Registrant information**

**Name**
Zahra Rojhani Shirazi

**Name of organization / entity**
Shiraz University of Medical Sciences, School of Rehabilitation Sciences

**Country**
Iran (Islamic Republic of)

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**Recruitment status**
**Recruitment complete**

**Funding source**
School of Rehabilitation Sciences, Shiraz University of Medical Sciences

**Expected recruitment start date**
2018-01-06, 1396/10/16

**Expected recruitment end date**
2018-02-19, 1396/11/30

**Actual recruitment start date**
empty

**Actual recruitment end date**
empty

**Trial completion date**
empty

**Scientific title**
Effect of Kinesiotaping on motor neuron excitability and spasticity in chronic stroke patients

**Public title**
Effect of Kinesiotaping on motor neuron excitability and spasticity

**Purpose**
Treatment
**Inclusion/Exclusion criteria**
**Inclusion criteria:**
Patient with first attack of stroke Patient with Modified Ashworth scale (MAS) of paretic ankle plantar flexor more than 1 No history of neuromuscular disease No history of a previous neurological disorder Chronic stroke patient (at least 6 months after stroke attack) Patient do not receive any physical therapy in last month Patient with low grade in Spilberger State-Trait Anxiety Inventory
**Exclusion criteria:**
Patient who have fixed muscle contractures at the ankle joint (grade 4 in MAS score) Patients that receiving antispasticity drugs Patients that had hemiplegia due to traumatic brain injury Any history of lower limb surgery Fracture or joint dislocation in the lower limb Diabetes mellitus Neuropathy S_1 Radiculopathy Allergy to the Kinesiotape Normal absence of H reflex in some people
**Age**
No age limit
**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**
In this study, block randomization method will be used for random allocation of individuals to intervention and control groups.
**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 research in Shiraz University of Medical Science
**Street address**
Central building of Shiraz University of Medical Science, Zand Blvd.
**City**
Shiraz
**Province**
Fars
**Postal code**
7134814336
**Approval date**
2017-03-12, 1395/12/22
**Ethics committee reference number**
IR.SUMS.REC.1395.197

## Health conditions studied

### 1

**Description of health condition studied**
stroke
**ICD-10 code**
I64
**ICD-10 code description**
stroke, not specified as heamorrage or infarction

## Primary outcomes

### 1

**Description**
H max/M max ratio
**Timepoint**
Before intervention, 30 minute and 48 hours after intervention
**Method of measurement**
With electromyography The Hmax/Mmax ratio of gastrosoleus will be calculated

### 2

**Description**
Modified Ashworth Scale
**Timepoint**
Before intervention, 30 minute and 48 hours after intervention
**Method of measurement**
To investigate the muscle spasticity we will used the Modified Ashworth Scale.

## Secondary outcomes

empty

## Intervention groups

### 1

**Description**
The experimental group receives Kinesiotaping on Gastrosoleous muscles of affected limb the control group receives no intervention
**Category**
Other

## Recruitment centers

**1**

**Recruitment center**

**Name of recruitment center**
Yazd shahid sadooghi hospital

**Full name of responsible person**
Mahdad Mehraein

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Shahid ghandy Blvd, Ebne Sina Ave, Yazd

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## Sponsors / Funding sources

**1**

**Sponsor**

**Name of organization / entity**
Vice chancellor for research, Shiraz University of Medical Sciences

**Full name of responsible person**
Seyed Basir Hashemi

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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**
Vice chancellor for research, Shiraz 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**
School of Rehabilitation Sciences

**Full name of responsible person**
Mahdad Mehraein

**Position**
Master student

**Latest degree**
Bachelor

**Other areas of specialty/work**
Physiotherapy

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## Person responsible for scientific inquiries

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**Position**
consultant professor

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Ph.D.

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## Sharing plan

**Deidentified Individual Participant Data Set (IPD)**
Undecided - It is not yet known if there will be a plan to make this available
**Study Protocol**
Undecided - It is not yet known if there will be a plan to make this available
**Statistical Analysis Plan**
Undecided - It is not yet known if there will be a plan to make this available
**Informed Consent Form**
Undecided - It is not yet known if there will be a plan to make this available
**Clinical Study Report**
Undecided - It is not yet known if there will be a plan to make this available
**Analytic Code**
Undecided - It is not yet known if there will be a plan to make this available
**Data Dictionary**
Undecided - It is not yet known if there will be a plan to make this available