

Clinical Trial Protocol

Iranian Registry of Clinical Trials

06 Jul 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 heamorrhage 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 Gastrosoleus 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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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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Web page address**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