

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### The effect of Kinesio taping with occupational therapy on Range of motion and hand grip strength in stroke patients

#### Protocol summary

##### Study aim

Overall objective: The Effect of Kinesio Taping on Range of motion and hand grip strength in stroke patients  
Specials Objectives: 1- Comparison the Mean grip strength before and after the intervention and between the groups 2- Comparison the Mean Range of motion hand before and after the Intervention and between the groups 3- Comparison the Mean of dexterity and fine motor hand before and after the Intervention and between the groups

##### Design

This study Was a Single-Blind RCT that 34 patients with stroke who referred to rehabilitation stroke centers Tabbasom in Tehran was randomly assigned in two intervention and control group.

##### Settings and conduct

This study was carried out in the Field of Rehabilitation and the effect of Kinesio Taping Techniques on Range of motion and grip strength in stroke patients that was registered at Baqiyatallah University of Medical Sciences and was done at rehabilitation stroke centers Tabbasom in Tehran.

##### Participants/Inclusion and exclusion criteria

1) Diagnosis of stroke with Neurologist 2) Stage 4 of Brunnstrom recovery stages of hand function 3) Considering a minimum of 6 months after their last stroke occurrence, 4) Not being under treatment for spasticity 5) No sensory problems 1. Acute or chronic pain in upper limb when studying 2. Sensitivity to taping 3. Irregular appearance in therapeutic sessions 4. No desire to continue treatment

##### Intervention groups

The intervention group used kinsiotaping for 6 weeks, 24 hours, and changed every three days. Secondary evaluation was performed after 6 weeks. For kinsiotaping, a spring correction technique, which is applied as an I to the extensor muscle of the wrist, is used that The tape is applied with 50 to 100 percent possible tensile strength on the skin.

##### Main outcome variables

Increase range of motion and hand grip strength and Reducing Disability

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20180531039929N1**

Registration date: **2018-08-03, 1397/05/12**

Registration timing: **retrospective**

Last update: **2018-08-03, 1397/05/12**

Update count: **0**

##### Registration date

2018-08-03, 1397/05/12

##### Registrant information

##### Name

Fathollah Qafarizadeh

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 21 7704 7253

##### Email address

f.qafarizadeh@yahoo.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2018-01-05, 1396/10/15

##### Expected recruitment end date

2018-02-19, 1396/11/30

##### Actual recruitment start date

2018-01-05, 1396/10/15

##### Actual recruitment end date

2018-02-19, 1396/11/30

#### **Trial completion date**

empty

#### **Scientific title**

The effect of Kinesio taping with occupational therapy on Range of motion and hand grip strength in stroke patients

#### **Public title**

The effect of Kinesio taping with occupational therapy on Range of motion and hand grip strength in stroke patients

#### **Purpose**

Treatment

#### **Inclusion/Exclusion criteria**

##### **Inclusion criteria:**

1) Diagnosis of stroke with Neurologist specialist 2) Upper limb involvement 3) Satisfaction to participate in the research 4) Ability to follow commands (absence of cognitive deficits) 5) Stage 4 of Brunnstrom recovery stages of hand function 6) Considering a minimum of 6 months after their last stroke occurrence, 7) The absence of other neurological pathologies for example parkinson, MS, ... 8) The absence of orthopedic disorders in the upper limb such as fractures 9) Not being under treatment for spasticity 10) No sensory problems

##### **Exclusion criteria:**

1. Acute or chronic pain in upper limb when studying 2. Sensitivity to taping 3. Irregular appearance in therapeutic sessions 4. No desire to continue treatment

#### **Age**

From **20 years** old to **70 years** old

#### **Gender**

Both

#### **Phase**

N/A

#### **Groups that have been masked**

- Participant

#### **Sample size**

Target sample size: **34**

Actual sample size reached: **34**

#### **Randomization (investigator's opinion)**

Randomized

#### **Randomization description**

A random selection was done by lottery, in which the participant chose one of the two papers (intervention and control).

#### **Blinding (investigator's opinion)**

Single blinded

#### **Blinding description**

Participant was unaware of being in the treatment or control group.

#### **Placebo**

Not used

#### **Assignment**

Parallel

#### **Other design features**

## **Secondary Ids**

empty

## **Ethics committees**

### **1**

#### **Ethics committee**

##### **Name of ethics committee**

Ethics committee of Bagheiatallah University of Medical Sciences

##### **Street address**

Shekh Bahayi street, Blvd Molasadra

##### **City**

Tehran

##### **Province**

Tehran

##### **Postal code**

1435917341

#### **Approval date**

2017-12-06, 1396/09/15

#### **Ethics committee reference number**

IR.BMSU.REC.1395.34

## **Health conditions studied**

### **1**

#### **Description of health condition studied**

Stroke

#### **ICD-10 code**

G46.4

#### **ICD-10 code description**

Cerebellar stroke syndrome

## **Primary outcomes**

### **1**

#### **Description**

Range of motion

#### **Timepoint**

Before the intervention, Immediately after the intervention, 6 weeks after the intervention

#### **Method of measurement**

Goniometer, Degree

### **2**

#### **Description**

Hand grip strength

#### **Timepoint**

Before the intervention, Immediately after the intervention, 6 weeks after the intervention

#### **Method of measurement**

Vigorimeter, Kilopascal

### **3**

#### **Description**

Dexterity hand function (Box and block test, Nine hole

peg test)

### **Timepoint**

Before the intervention, Immediately after the intervention, 6 weeks after the intervention

### **Method of measurement**

Number of nail and block movement

## **Secondary outcomes**

empty

## **Intervention groups**

### **1**

#### **Description**

Intervention group: Kinesiotaping We considered three times assessments to collect data: 1- initial assessment before KT, 2- secondary assessment one month after KT. After obtaining signed consent forms and initial assessment, Taping was performed by the OT. The subjects were taped in accordance with Kenzo Kase's Kinesiotaping Manual (Kase, 2016). We use a piece of the TEM TEX brand tape that has five Centimeter width and fifteen Centimeter length. Taping was applied in the sitting position in which wrist muscles were in resting position and forearm was in natural pronated. A 1- strip of tape was placed on the extensor muscles of the forearm from proximal to distal (origin of extensor muscles to distal of metacarpals) and stretched approximately to 50% of its maximum length. Tape was changed each three days or in necessary situation.

#### **Category**

Rehabilitation

### **2**

#### **Description**

Control group: Occupationaltherapy without Kinesiotaping

#### **Category**

Rehabilitation

## **Recruitment centers**

### **1**

#### **Recruitment center**

##### **Name of recruitment center**

Rehabilitation stroke center Tabbasom

##### **Full name of responsible person**

Dr. Roozbeh Kazemi

##### **Street address**

No. 26, Bagher khan gharbi street, Sattar khan street

##### **City**

Tehran

##### **Province**

Tehran

##### **Postal code**

1435917341

##### **Phone**

+98 21 6656 4674

##### **Email**

F.qafarizadeh@yahoo.com

## **Sponsors / Funding sources**

### **1**

#### **Sponsor**

##### **Name of organization / entity**

Bagheiat-allah University of Medical Sciences

##### **Full name of responsible person**

Dr.Alireza Shamsodini

##### **Street address**

shekh bahayi streat, molasadra Blvd

##### **City**

Tehran

##### **Province**

Tehran

##### **Postal code**

1435917341

##### **Phone**

+98 21 8248 2402

##### **Email**

f.qafarizadeh@yahoo.com

#### **Grant name**

#### **Grant code / Reference number**

#### **Is the source of funding the same sponsor organization/entity?**

Yes

#### **Title of funding source**

Bagheiat-allah University of Medical Sciences

#### **Proportion provided by this source**

100

#### **Public or private sector**

Private

#### **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**

Bagheiat-allah University of Medical Sciences

##### **Full name of responsible person**

Fathollah Qafarizadeh

##### **Position**

Occupational Therapy

##### **Latest degree**

Master

##### **Other areas of specialty/work**

Occupational Therapy

##### **Street address**

No. 44, Patris Lumumba street, Sattarkhan street

##### **City**

Tehran

##### **Province**

Tehran

##### **Postal code**

1435917341

**Phone**

+98 21 6656 4674

**Email**

F.qafarizadeh@yahoo.com

**Person responsible for scientific inquiries**

**Contact**

**Name of organization / entity**

Bagheiat-allah University of Medical Sciences

**Full name of responsible person**

Fathollah Qafarizadeh

**Position**

Occupational therapy

**Latest degree**

Master

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Tehran

**Province**

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1435917341

**Phone**

+98 21 6656 4674

**Email**

F.qafarizadeh@yahoo.com

**Person responsible for updating data**

**Contact**

**Name of organization / entity**

Bagheiat-allah University of Medical Sciences

**Full name of responsible person**

Fathollah Qafarizadeh

**Position**

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**Email**

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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**

Not applicable

**Informed Consent Form**

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

**Clinical Study Report**

Not applicable

**Analytic Code**

Not applicable

**Data Dictionary**

Not applicable