Clinical Trial Protocol
Iranian Registry of Clinical Trials

04 Nov 2026

The effect of electroacupressure on motor function and muscular power of pelagic upper extremity in patient with stroke

Protocol summary

Summary

Objectives: Determine the effect of electroacupressure on muscular motor function and power of pelagic upper extremity in patient with stroke. Design: Double blind clinical trial. Setting and conduct: The intervention is performed in three groups includes routine care, use of electroacupressure, and placebo. Electroacupressure is applied by wristbands with a metal button attached to the active electrode of TENS devices, on the P6 (Neiguan) point in internal surface of forearm and above internal groove of wrist. When the wristband button is placed on the opposite side of the P6 (Neiguan) point, it is the role of the placebo. Routine treatment includes physiotherapy routine in internal ward and ICU. Participants: Inclusion criteria are: (1) being over 35 years old; (2) upper extremity paralysis due to stroke; (3) having no other musculoskeletal disorders on the upper extremity; (4) patients with cognitive status so that they could have cooperated; (5) having no skin problem such as allergies and ulcers at the wristband site; (6) Physiotherapy is started for them; (7) maximum a week is passed their stroke; (8) having no recurrent stroke; (9) the patient is not received thrombolytic drugs; (10) having no stroke in the area of cerebellum and brain stem; (11) having no revarsible ischemic neurologic deficit (RIND). Exclusion criteria are: (1) patients with cardiac pacemakers; (2) patients with sensory aphasia; (3) patients with a history of narcotics addiction. Intervention: Interventions including routine care, use of electroacupressure, and placebo that are done in three groups. Main outcome measures (variables): motor function and muscular power of pelagic upper extremity.

General information

Acronym

-

IRCT registration information

IRCT registration number: **IRCT201407228717N3**

Registration date: **2014-08-23, 1393/06/01**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2014-08-23, 1393/06/01

Registrant information

Name

Mohammad Reza Asgari

Name of organization / entity

Semnan University of Medical Sciences and Health and Treatment Services

Country

Iran (Islamic Republic of)

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+98 23 1445 3365

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Recruitment status

Recruitment complete

Funding source

Vice chancellor for research and technology, Semnan University of Medical Sciences

Expected recruitment start date

2014-08-23, 1393/06/01

Expected recruitment end date

2015-03-21, 1394/01/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of electroacupressure on motor function and muscular power of pelagic upper extremity in patient

with stroke

Public title
The effect of electroacupressure on motor function and muscular power of pelagic upper extremity in patient with stroke
Purpose
Supportive
Inclusion/Exclusion criteria
Inclusion criteria: (1) being over 35 years old; (2) Upper extremity paralysis due to stroke; (3) No other musculoskeletal disorders on the upper limb; (4) Patients with cognitive status so that they could have cooperated; (5) having no skin problem such as allergies and ulcers at the wrist strap site; (6) physiotherapy should be started for them; (7) maximum a week passed they strokes; (8) no recurrent stroke; (9) the patient did not receive thrombolytic drugs; (10) not in cerebellum and brain stem stroke; (11) is not revarsible ischemic neurologic deficit (RIND). Exclusion criteria: (1) Patients with cardiac pacemakers; (2) Patients with sensory aphasia; (3) Patients with a history of drug addiction.
Age
From **35 years** old to **90 years** old
Gender
Both

Phase
2-3
Groups that have been masked
No information
Sample size
Target sample size: **60**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Double blinded
Blinding description
Placebo
Used
Assignment
Parallel
Other design features
In this study, subjects are assigned randomly and using the randomized block to the experimental, placebo, and controll groups.

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics committee in biomedical researches of Semnan University of Medical Sciences
Street address
Semnan University of Medical Sciences, Semnan, Semnan Province, Iran
City
Semnan
Postal code
3519899951
Approval date
2014-07-08, 1393/04/17
Ethics committee reference number
469710/93

Health conditions studied

1

Description of health condition studied
Stroke
ICD-10 code
164
ICD-10 code description
Stroke

Primary outcomes

1

Description
Motor function of pelagic upper extremity
Timepoint
Before start intervention at the first session and after the intervention at the last session
Method of measurement
Part of evaluation of upper limb motor function and Hand of Fugl Meyer scale

Secondary outcomes

1

Description
Muscular power of pelagic upper extremity
Timepoint
Before start intervention at the first session and After the intervention, at the last session
Method of measurement
By manually dynamometer

Intervention groups

1

Description
First intervention (Routine care): In the control group patients receive routine care, after the doctor's orders to start physiotherapy, routine physiotherapy is performed for all patients. motor function and muscular power of pelagic upper extremity are measured by researcher before start intervention at the first session and after the intervention at the last session by using Fugl Meyer checklist and manually dynamometer.
Category
Other

2

Description

The second intervention (use of electroacupressure): In the intervention group, to applying the electroacupressure, the wristbands is closed on patients' wrists so that its button is placed on the P6 point (Nei guan) on the inner surface of the forearm, about 2 inches (three fingers width) above the internal groove of wrist. Pressure is applied so that the patient does not feel pain or discomfort. Electrical stimulation is applied with wave length 200µs, frequency 20Hz, and intensity 2.5 times the threshold of patient sense by a metal button attached to the active electrode of TENS devices on the P6 (Neiguan) point. The intervention is performed for 10 minutes immediately after physiotherapy, five days per week and during two consecutive weeks. Motor function and muscular power of pelagic upper extremity are measured by researcher before start intervention at the first session and after the intervention at the last session by using Fugl Meyer checklist and manually dynamometer.

Category

Rehabilitation

3

Description

The third intervention (use of placebo): In the intervention group using placebo, wristbands is closed on patients' wrists so that its button is placed on opposite of P6 point (Nei guan) on the back of the forearm. Active electrode (positive) of TENS device is connected to the metal buttons, device is turned on but does not give electrical stimulation. The intervention is performed for 10 minutes immediately after physiotherapy, five days per week and during two consecutive weeks. Motor function and muscular power of pelagic upper extremity are measured by researcher before start intervention at the first session and after the intervention at the last session by using Fugl Meyer checklist and manually dynamometer.

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Internal and ICU wards of Semnan Kowsar hospital

Full name of responsible person

Mohammad Reza Asgari

Street address

Department of Internal and ICU wards, Kowsar hospital, Basij boulevard, Semnan, Iran

City

Semnan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research and technology, Semnan University of Medical Sciences

Full name of responsible person

Dr. Ali Rashidy-Pour

Street address

Research and technology deputy of Semnan University of Medical Sciences, Basij boulevard, Semnan, Iran

City

Semnan

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 and technology, Semnan University of Medical Sciences

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

empty

Person responsible for general inquiries

Contact

Name of organization / entity

Semnan University of Medical Sciences

Full name of responsible person

Dr. Mohammad Reza Asgari

Position

PhD in nursing, Faculty member

Other areas of specialty/work

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
empty

Study Protocol
empty

Statistical Analysis Plan
empty

Informed Consent Form
empty

Clinical Study Report
empty

Analytic Code
empty

Data Dictionary
empty