Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 2026

The effect of sensory- motor training on hand and upper extremity sensory and motor function in patients with Parkinson's disease

Protocol summary

Summary

The aim of this study is to investigate the effect of sensory- motor training on hand and upper extremity sensory and motor function in patients with Parkinson's disease. In this clinical trial study, 40 patients with idiopathic Parkinson's disease are randomly assigned to two groups: group receiving sensory-motor training and control group. The main inclusion criteria include having Parkinson's disease according to neurologist diagnosis, the disease progression level of 1 to 3 according to Hoehn and Yahr Scale, an acceptable level of cognitive function, i.e. score of more than 21 on the Mini Mental Status Examination (MMSE) and being eligible for sensory-motor retraining (having the light touch sensation at the level of acceptable mono-filaments, i.e. 4.31 and above in the fingertips and no severe problems of proprioception and discrimination sensation). In case of no cooperation during training and exercises and not returing for testing after the interventions, subjects are excluded. Sensory- motor training group receives 10 sessions of sensory-motor training (5 sessions per week, 3 to 5 hours per session). Control group does not receive any sensory-motor training. Both groups are evaluated in terms of sensory and motor functions of hand and upper extremity before and after 2 weeks.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015020816830N2**
Registration date: **2015-05-10, 1394/02/20**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2015-05-10, 1394/02/20

Registrant information

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Recruitment status

Recruitment complete

Funding source

Iran University of Medical Sciences, School of Rehabilitation

Expected recruitment start date

2015-04-19, 1394/01/30

Expected recruitment end date

2016-01-20, 1394/10/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of sensory- motor training on hand and upper extremity sensory and motor function in patients with Parkinson's disease

Public title

Effect of sensory motor training on the upper limb function of patients with Parkinson's disease

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion Criteria:Having Parkinson's disease according to

neurologist diagnosis; Having the disease progression level of 1 to 3 according to Hoehn and Yahr Scale; Having an acceptable level of cognitive function, i.e. score of more than 24 on the Mini Mental Status Examination (MMSE); To be eligible for sensory-motor retraining (Having the light touch sensation at the level of acceptable mono-filaments, i.e. 4.31 and above in the fingertips and no severe problems of proprioception and discrimination sensation); Not having orthopedic problems (neurologic damages, fracture, tendon injuries), rheumatologic diseases (rheumatoid arthritis, osteoarthritis), neurologic diseases (stroke, multiple sclerosis) and other diseases such as diabetes, hepatitis and burns; Having the ability to read and write. Exclusion Criteria: Lack of patient cooperation during the test; Not return for the testing after the intervention; Entering to the nonpharmacologic on-off phase of the disease during the study according to neurologist diagnosis; Change in the pharmacologic regimen of the patient during the study; Inability to complete the activities of treatment interventions and progress to the harder levels of the intervention up to 70% of the protocol

Age
From **55 years** old to **65 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **40**

Randomization (investigator's opinion)
Randomized

Randomization description

Blinding (investigator's opinion)
Single 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 Iran University of Medical Sciences

Street address
Hemmat Highway, Tehran

City
Tehran

Postal code

Approval date
2014-12-24, 1393/10/03

Ethics committee reference number
93-03-125-25100-106950

Health conditions studied

1

Description of health condition studied
Parkinson's disease

ICD-10 code
G20

ICD-10 code description
Extrapyramidal and movement disorders

Primary outcomes

1

Description
Motor function of hand and upper extremity

Timepoint
before and after intervention

Method of measurement
Box and Block, and Purdue Pegboard tests

2

Description
Extroceptive and proprioceptive sense of hand and upper extremity

Timepoint
before and after intervention

Method of measurement
Weinsten Enhanced Sensory test, Properioception and Kinesthesia test, Wrist Position test

Secondary outcomes

1

Description
Discrimative sense of hand and upper extremity

Timepoint
before and after intervention

Method of measurement
Two-point discrimination test, Haptic Recognition Object test,Hand Active Sensation test, Stregnosis test

Intervention groups

1

Description
Intervention group: receives 10 sessions of sensory-motor training (5 sessions per week, 3 to 5 hours per session).

Category
Rehabilitation

2

Description
Control group: does not receive this training.
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Occupational therapy clinic, School of Rehabilitation, Iran University of Medical Sciences
Full name of responsible person
Street address
City
Tehran

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Vice Chancellor for research of Iran University of Medical Sciences,
Full name of responsible person
Dr. Seyed Ali Javad Moosavi
Street address
Iran University of Medical Sciences
City
Tehran
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 of Iran 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
Iran University of Medical Sciences
Full name of responsible person
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Person responsible for updating data

Contact

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