

Clinical Trial Protocol

Iranian Registry of Clinical Trials

19 Sep 2026

Clinical trial effectiveness of Mirror Visual feedback on sensory relearning outcomes in patients following Median/Ulnar nerve repair in the upper limbs.

Protocol summary

Study aim

The present randomized clinical trial conducted to determine the effect of Mirror Visual Feedback (MVF) on sensory relearning outcomes in patients with median/ulnar nerve repairs

Design

In this clinical trial, 20 eligible patients referring to Hazrate Fatemeh Hospital and Sina Hospital were chosen purposefully. Then, patients were randomly divided into two control and intervention groups.

Settings and conduct

In Hazrate Fatemeh Hospital and Sina Hospital, traditional rehabilitation program conducted by a therapist for both intervention and control groups for eight weeks. The intervention group also received MVF sessions.

Participants/Inclusion and exclusion criteria

The study inclusion criteria consisted of having undergone median or ulnar nerve surgery or both, age 18 to 60 years, four to six weeks interval after surgery and the Non-compliance criteria include diabetes or other peripheral neuropathy and other orthopedic or neurological injuries other than tendon and arterial injury.

Intervention groups

Traditional rehabilitation program conducted by a therapist for both intervention and control groups including sessions about 40 minutes, three days per week, for eight weeks. The intervention group also received MVF about 15 minutes per day, five days per week, for eight weeks.

Main outcome variables

The state of superficial sensation and sensory function.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20150721023277N5**

Registration date: **2018-02-25, 1396/12/06**

Registration timing: **retrospective**

Last update: **2018-02-25, 1396/12/06**

Update count: **0**

Registration date

2018-02-25, 1396/12/06

Registrant information

Name

Laleh Lajevardi

Name of organization / entity

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Iran University of Medical Sciences

Expected recruitment start date

2014-06-22, 1393/04/01

Expected recruitment end date

2015-06-22, 1394/04/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Clinical trial effectiveness of Mirror Visual feedback on sensory relearning outcomes in patients following Median/Ulnar nerve repair in the upper limbs.

Public title

effectiveness of Mirror Visual Feedback on sensory relearning outcomes

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

having median or ulnar nerve surgery or both age 18 to 60 years a minimum score of 21 in the Mini-Mental State Examination Four to six weeks interval after surgery (i.e. epineural repair)

Exclusion criteria:

Diabetes or other peripheral neuropathy The presence of other orthopedic or neurological damage other than tendon and arterial injury

Age

From **18 years** old to **60 years** old

Gender

Both

Phase

2

Groups that have been masked

No information

Sample size

Target sample size: **20**

Randomization (investigator's opinion)

Randomized

Randomization description

Sealed Envelope

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 Iran University of Medical Sciences

Street address

Iran University of Medical Sciences, Between the intersection of Sheikh Fazlollah Noori and Shahid Chamran, Shahid Hemmat Highway, Tehran.

City

Tehran

Province

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Postal code

1449614535

Approval date

2015-02-14, 1393/11/25

Ethics committee reference number

93/D/105/5530

Health conditions studied

1

Description of health condition studied

Injury of median nerve at wrist of upper extremity

ICD-10 code

G56.1

ICD-10 code description

other lesions of median nerve

2

Description of health condition studied

Injury of ulnar nerve at wrist of upper extremity

ICD-10 code

G56.2

ICD-10 code description

lesions of ulnar nerve

Primary outcomes

1

Description

The threshold of cutaneous touch/pressure

Timepoint

before the intervention and After the end of the intervention (two months)

Method of measurement

pocket version of Semmes Weinstein Monofilaments (SWMs)

2

Description

two points discrimination

Timepoint

before the intervention and After the end of the intervention (two months)

Method of measurement

(two points discrimination with using a caliper

3

Description

Tactile gnosis

Timepoint

before the intervention and After the end of the intervention (two months)

Method of measurement

Stereognosis

Secondary outcomes

empty

Intervention groups

1

Description

Treatment group: A therapist will be performed a traditional rehabilitation program of 40 minutes, three days per week, for eight weeks. In addition to the traditional rehabilitation program, the treatment group also will receive mirror therapy sessions 15 minutes per day, five days per week, for eight weeks; three of the mirror therapy sessions are done in a clinic under the supervision by a therapist every week, and the other two sessions will perform by the patients themselves at home using a mirror therapy box with the help of a booklet with instructions. The mirror box contain a 35x45cm mirror set at an 80-degree angle that will construct by the researchers and will distribute among the patients. During their mirror therapy sessions, the patients sit in front of a table that had a mirror box placed at its center and hold their intact hand in front and their injured hand at the back of the mirror with an equal distance from the mirror. The mirror therapy sessions consist of three stages. Stage one involves performing of movements such as pronation, supination, opposition, etc. for five minutes. Stage two include the patient touching objects with various degrees of coarseness in front of the mirror for five minutes. Stage three involve the performance of activities with the intact hand in front of the mirror; in this stage, the patient will be asked to perform actions such as wiping the table with a cloth, grabbing a book, plate, cell phone, pen, spoon, glass and coin or keys with the intact hand and focus on the image of the intact hand in the mirror throughout the entire activity

Category

Rehabilitation

2

Description

control group: traditional rehabilitation program of 40 minutes, three days per week, for eight weeks, which included rehabilitation techniques such as proprioceptive neuromuscular facilitation, individual blocking exercise, gliding exercise, sensory precaution training, the use of different splints, functional activities and daily life activities

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center
Hospital of Hazrat Fatemeh

Full name of responsible person

Farzane Saberi

Street address

Hazrat Fatemeh Hospital, 21st Street, Yousef Abad, Tehran.

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2

Recruitment center

Name of recruitment center

Sina Hospital

Full name of responsible person

Farzane Saberi

Street address

Sina Hospital, not reaching Hassan Abad Square, Imam Khomeini Avenue (RA), Tehran.

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research, Iran University of Medical Sciences

Full name of responsible person

Mrs. Hossein Mardi

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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, Iran 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

Latest degree

Ph.D.

Other areas of specialty/work**Street address**

Iran University of Medical Sciences, Faculty of Rehabilitation Sciences, Nezam Street, Shahid Shah Nazari Street, Mother Square, Mirdamad Boulevard, Tehran.

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Faculty of Rehabilitation Sciences, Iran University of Medical Sciences

Full name of responsible person

Dr Laleh Lajevardi

Position

PhD of Occupational Therapy, Assistant Professor, Department of Occupational Therapy

Latest degree

Ph.D.

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Faculty of Rehabilitation, Isfahan University of Medical Sciences

Full name of responsible person

Farzane Saberi

Position

Master of Occupational Therapy, Associate Professor, Department of Occupational Therapy, Isfahan Reh

Latest degree

Master

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Faculty of Rehabilitation, Iran University of Medical Sciences

Full name of responsible person

Dr Laleh Lajevardi

Position

Ph.D. Occupational Therapy

Sharing plan**Deidentified Individual Participant Data Set (IPD)**

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

no more information

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

No - There is not a plan to make this available

Informed Consent Form

No - There is not a plan to make this available
Clinical Study Report
No - There is not a plan to make this available
Analytic Code

No - There is not a plan to make this available
Data Dictionary
No - There is not a plan to make this available