

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

the effectiveness of early usage of mirror visual feedback on the level of disability and pain in patient with orthopedic injuries in upper limbs.

Protocol summary

Summary

Background: Mirror Visual Feedback is a new method which has yielded good outcomes in various neurological disorders in last decade. This complementary method may positively affect the patients' condition following orthopedic disorders of the upper extremity, because of the effectiveness of neurologic mechanism on outcomes of injuries. The purpose of this study is determining the effect of Mirror Visual Feedback on disability, pain and motor function. This study is a randomized clinical trial that 40 patients with common upper extremity orthopedic disorders (in early phase; 7 days after reconstruction surgery) is selected by convenient sampling, randomized into 2 groups of intervention and control with random numbers table. Both groups receive traditional rehabilitation for 8 weeks and follow up evaluation will be occurred at twelfth week. In addition, the intervention group receive Mirror visual feedback too. Disability (DASH) and pain (MPQ) are assessed before the intervention, in the sixth, eighth and twelfth weeks. Grip strength, pinch strength, and dexterity are assessed in the eighth and twelfth weeks and range of motion in the sixth, eighth, and twelfth weeks. participants won't realise the group which are placed in, and the assessor therapist will be blinded.

General information

Acronym

MVF

IRCT registration information

IRCT registration number: **IRCT2015121923277N3**

Registration date: **2017-10-08, 1396/07/16**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2017-10-08, 1396/07/16

Registrant information

Name

Laleh Lajevardi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

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Email address

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Recruitment status

Recruitment complete

Funding source

research center of Iran University of Medical Sciences-
International Campus

Expected recruitment start date

2017-10-01, 1396/07/09

Expected recruitment end date

2018-07-01, 1397/04/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

the effectiveness of early usage of mirror visual feedback
on the level of disability and pain in patient with
orthopedic injuries in upper limbs.

Public title

the effectiveness of mirror visual feed back on patient
with orthopedic injuries

Purpose

Treatment

Inclusion/Exclusion criteria

inclusion: age limitation between 18-65 being able to

read and write being under common orthopedic operation such as; tendon injury, soft tissue reconstruction, amputation, bone fracture, peripheral nerve injury and crush injury in 10 days ago. getting score 21 and above in MMSE patients shouldn't have inter articular fracture in wrist. exclusion: infection- refuse to continue treatment and evaluation sessions- surgery during intervention period.

Age

From **78 years** old to **31 years** old

Gender

Both

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: **40**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Double 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-international campus

Street address

Iran university of Medical Sciences-international campus; beside Milad tower; Hemmat highway

City

Tehran

Postal code

Approval date

2010-09-23, 1389/07/01

Ethics committee reference number

IR.IUMS.REC.1395.9313681001

Health conditions studied

1

Description of health condition studied

Common neuromusculoskeletal disorders in upper extremities

ICD-10 code

M00-M99

ICD-10 code description

Diseases of the musculoskeletal system and connective tissue

Primary outcomes

1

Description

disability of hand

Timepoint

first, 6th, 8th and 12th week after surgery

Method of measurement

DASH questionnaire

2

Description

pain

Timepoint

first, 6th, 8th and 12th week after surgery

Method of measurement

McGill pain questionnaire

3

Description

Range of motion of fingers

Timepoint

6th, 8th and 12th week after surgery

Method of measurement

goniometry

4

Description

dexterity

Timepoint

8th and 12th after surgery

Method of measurement

Minesotta manual dexterity test

5

Description

grip strength

Timepoint

8th and 12th week after surgery

Method of measurement

dynamometer

6

Description

lateral pinch strength

Timepoint

8th and 12th after surgery

Method of measurement

pinch gauge

Secondary outcomes

empty

Intervention groups

1

Description

intervention: Rehabilitation sessions began during the first week after surgery for patients in the intervention group. each participant sit in front of a 30 by 50 cm mirror locate in a sagittal plane against the body. Then, client placed the uninjured hand in front of the mirror and the injured hand behind it. each patient move his/her uninjured hand in front of the mirror and flex/extend of his/ her hand. Traditional hand rehabilitation programs were provide for the patients in both groups. The intervention last 8 weeks and During each session, they first received MVF exercises for thirty minutes, and then the hand rehabilitation program for 45 minutes.

Category

Rehabilitation

2

Description

control: according to the type of injury, participants in the control group use traditional rehabilitation interventions two times a week for eight weeks. Duration of each session is 45 minutes.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Hazrat fatemeh hospital

Full name of responsible person

Dr Laleh Lajevardi

Street address

school of rehabilitation of Iran University of Medical Sciences; Shahnazari Str; Mother Sqr; Mirdamad Blv

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research, International campus of Iran University of Medical Sciences

Full name of responsible person

Dr Ghasemi

Street address

Iran University of Medical Sciences; beside Milad

tower; Hemmat highway

City

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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, International campus 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

School of Rehabilitation Sciences

Full name of responsible person

DR Laleh Lajevardi

Position

PhD of Occupational Therapy, Assistant professor

Other areas of specialty/work

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Person responsible for scientific inquiries

Contact

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Person responsible for updating data

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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