

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 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

2017-10-08, 1396/07/16

#### 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.

#### Registrant information

##### Name

Laleh Lajevardi

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 21 2222 8051

##### Email address

lajevardi.l@iums.ac.ir

#### 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 feedback on patient with orthopedic injuries

#### Purpose

Treatment

#### Inclusion/Exclusion criteria

inclusion: age limitation between 18-65 being able to

### 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

read and write being under common orthopedic operation such as;tendon injury,soft tissue reconstruction,amputation,bone fracture,pripheral nerve injury and crush injury in 10 days ago. getting score 21 and above in MMSE patients shouldnt 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 12 th week after surgery

##### **Method of measurement**

goniometry

#### **4**

##### **Description**

dexterity

##### **Timepoint**

8th and 12 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 12 after surgery

##### **Method of measurement**

pinch guage

## 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 sits in front of a 30 by 50 cm mirror located in a sagittal plane against the body. Then, the client placed the uninjured hand in front of the mirror and the injured hand behind it. Each patient moves his/her uninjured hand in front of the mirror and flex/extends his/her hand. Traditional hand rehabilitation programs were provided for the patients in both groups. The intervention lasted 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

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, 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

##### Street address

School of Rehabilitation Sciences, Maddadkaran Alley, Shahnazari Street, Mirdamad Avenue.

##### City

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## Person responsible for scientific inquiries

#### Contact

##### Name of organization / entity

School of Rehabilitation of Iran University of Medical Sciences

##### Full name of responsible person

Dr Laleh Lajevardi

##### Position

PhD of Occupational Therapy, Assistant Professor

##### Other areas of specialty/work

##### Street address

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## Person responsible for updating data

### Contact

**Name of organization / entity**  
Hazrat fateme hospital  
**Full name of responsible person**  
Mahsa Abolfazli  
**Position**  
BSc. of occupational therapy/MSc. student of  
occupational therapy  
**Other areas of specialty/work**  
**Street address**  
Hazrat fateme hospital;21 Str; Seyed Jamaedin  
Asadabadi avenue  
**City**  
Tehran

## 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*