

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Mirror therapy effects on the hand function in patients with orthopedic injuries

Protocol summary

Summary

(1) Objectives: Aim of the present study is to determine effects of mirror therapy on upper limb function in patients with impaired active range of motion in hand. (2) Design: Prospective Randomized Controlled Trial (3) Setting and conduct: A convenient sample of patients with flexor lag (age range between 18-65) after signing the consent form, are randomized to 2 groups (mirror therapy (n=11) and control (n=11)). All patients were uninformed about which part of their treatment was aim of this study and also, there is not any relation between two groups. In the present study, all patients are treated by an intensive rehabilitation program (tendon gliding exercises, place and holding exercises, dynamic splinting, activities of daily living) for 30-minute a day, 5 days a week for 3-week. Patients in the mirror group receive 30 minutes of mirror therapy in a quiet environment before initiation of the rehabilitation program. During mirror therapy, healthy hand is placed in front of the mirror and affected hand behind the mirror, and as a result patients through looking into the mirror perceived two healthy hand. An occupational therapist is responsible for implementing all of the treatment protocol. (4) Participants: Inclusion Criteria: Patients with flexor lag following different orthopedic conditions; Age between 18 and 65 years. Exclusion Criteria: Patients with crush injuries; Patients with hand deformities; Patients with not treated fractures and tendon ruptures; Patients with complex regional pain syndrome; Patients with psychiatric problems; Patients with neurologic disorders; Patients with impaired motor function because of a nerve lesion; Patients with pain score more than one in visual analog scale (5) Intervention: Mirror Therapy Group: Mirror Therapy with rehabilitation techniques; Control Group: just rehabilitation techniques (6) main outcome measures: A person blinded to the group assignment performed measurement tests including Total Active Motion and Disabilities of the Arm, Shoulder and Hand are evaluated

before and after the treatment period and 3-week after the final treatment session.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201108074945N3**

Registration date: **2012-01-28, 1390/11/08**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2012-01-28, 1390/11/08

Registrant information

Name

Hamid Reza Rostami

Name of organization / entity

Ahvaz Jundishapur University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 61 1374 3101

Email address

rostamih@ajums.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice Chancellor for Research, Ahvaz Jundishapur University of Medical Sciences

Expected recruitment start date

2010-04-21, 1389/02/01

Expected recruitment end date

2011-11-22, 1390/09/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Mirror therapy effects on the hand function in patients with orthopedic injuries

Public title

Mirror therapy effects on the hand function in patients with orthopedic injuries

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion Criteria: Patients with flexor lag following different orthopedic conditions; Age between 18 and 65 years. Exclusion Criteria: Patients with crush injuries; Patients with hand deformities; Patients with not treated fractures and tendon ruptures; Patients with complex regional pain syndrome; Patients with psychiatric problems; Patients with neurologic disorders; Patients with impaired motor function because of a nerve lesion; Patients with pain score more than one in visual analog scale

Age

From **18 years** old to **65 years** old

Gender

Both

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: **22**

Randomization (investigator's opinion)

Randomized

Randomization description**Blinding (investigator's opinion)**

Not blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features**Secondary Ids****1****Registry name**

ClinicalTrials.gov Registration

Secondary trial Id

NCT01503762

Registration date

2012-01-03, 1390/10/13

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics Committee of Ahvaz Jundishapur University of Medical Sciences

Street address

Research Deputy of Ahvaz Jundishapur University of Medical Sciences

City

Ahvaz

Postal code**Approval date**

2011-12-03, 1390/09/12

Ethics committee reference number

ETH-300

Health conditions studied**1****Description of health condition studied**

Upper Limb Orthopedic Injury

ICD-10 code

M60, M62,

ICD-10 code description

Disorders of muscles, Disorders of synovium and tendon, Other soft tissue disorders; Osteopathies and chondropathies, Disorders of bone density and structure, Other osteopathies, Chondropathies

Primary outcomes**1****Description**

Total Active Motion

Timepoint

Session 1: Before the study, Session 2: 3-Week after the initiation of study, Session 3: 3-week after the study

Method of measurement

Goniometry

Secondary outcomes**1****Description**

Upper Limb Performance

Timepoint

Session1: Before the study, Session 2: 3-week after initiation of study, Session3: 3-week after the study

Method of measurement

Disability of the Arm, Shoulder, and Hand Questionnaire (DASH)

Intervention groups**1****Description**

Intervention Group: Mirror therapy + Rehabilitation

program Mirror Therapy: During mirror therapy, healthy hand is placed in front of the mirror and affected hand behind the mirror, and as a result patients through looking into the mirror perceived two healthy hand. Rehabilitation Program: tendon gliding exercises, place and holding exercises, dynamic splinting, activities of daily living, active and passive and resistive exercises. In the present study, all patients are treated by an intensive rehabilitation program (tendon gliding exercises, place and holding exercises, dynamic splinting, activities of daily living) for 30-minute a day, 5 days a week for 3-week. Patients in the mirror group receive 30 minutes of mirror therapy in a quiet environment before initiation of the rehabilitation program.

Category

Rehabilitation

2**Description**

Control Group: Rehabilitation program Rehabilitation Program: tendon gliding exercises, place and holding exercises, dynamic splinting, activities of daily living, active and passive and resistive exercises. Patients in the control group are treated by an intensive rehabilitation program for 30-minute a day, 5 days a week for 3-week.

Category

Rehabilitation

Recruitment centers**1****Recruitment center****Name of recruitment center**

Razi Hospital

Full name of responsible person

Dr. Mohammad Reza Ehsanpour

Street address

First Square of Kianpars, Razi Hospital

City

Ahvaz

Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Vice Chancellor for Research, Ahvaz Jundishapur University of Medical Sciences

Full name of responsible person

Dr. M.R. Abbaspoor

Street address

Vice Chancellor for Research, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

City

Ahvaz

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, Ahvaz Jundishapur 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**

Occupational Therapy Department, School of Rehabilitation Sciences, Ahvaz Jundishapur University of

Full name of responsible person

Hamid Reza Rostami

Position

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Other areas of specialty/work

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City

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