Clinical Trial Protocol
Iranian Registry of Clinical Trials

29 Oct 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)

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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
Goniometery

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. Ppatients 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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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