

Clinical Trial Protocol

Iranian Registry of Clinical Trials

13 Sep 2026

Comparing the effect of hand reflexology with foot reflexology on chest pain and anxiety in patients after primary coronary angioplasty.

Protocol summary

Study aim

Comparing the effect of hand reflexology with foot reflexology on chest pain and anxiety in patients after primary angioplasty.

Design

The randomized trial has two intervention groups and a control group using sealed envelopes for randomization on 114 patients.

Settings and conduct

Location: CCU department of Ayatollah Mousavi Zanjan Hospital. Foot reflexology: foot massage with massage oil, then reflexology with both thumbs from the center of the foot to the outside of the foot and finally massaging the center of the ball of the foot with the thumb. Hand reflexology: hand massage with massage oil, the soft area under the ring finger and little finger will be massaged 14 times in a row in a clockwise direction. In the control group, reflexology of the right foot will be performed.

Participants/Inclusion and exclusion criteria

Inclusion criteria: People who have undergone angiography for the first time; Age between 30 and 70 years; Transfemoral angiography; Normal pulse on the leg and posterior tibial pulse; Full consciousness. Exclusion criteria: Having a history of diabetes; Having addiction; People who received thrombolytic drugs (retplase) after MI and then underwent angiography 4) Any physiological or hemodynamic instability during and after angiography, such as cardiac dysrhythmia; Active bleeding at the catheter site.

Intervention groups

In this study, the samples will be divided into 3 groups: hand reflexology, foot reflexology and control group. In the control group, reflexology will be performed on the right foot of the patients.

Main outcome variables

Chest pain; anxiety

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230221057475N1**

Registration date: **2023-03-02, 1401/12/11**

Registration timing: **registered_while_recruiting**

Last update: **2023-03-02, 1401/12/11**

Update count: **0**

Registration date

2023-03-02, 1401/12/11

Registrant information

Name

Sahar Asali

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 24 3378 6806

Email address

sasali075@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-03-01, 1401/12/10

Expected recruitment end date

2023-09-23, 1402/07/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparing the effect of hand reflexology with foot reflexology on chest pain and anxiety in patients after primary coronary angioplasty.	
Public title	Investigating the effect of hand and foot reflexology on chest pain and anxiety in patients after primary coronary angioplasty
Purpose	Treatment
Inclusion/Exclusion criteria	
Inclusion criteria:	People who have been subjected to angioplasty for the first time Trans femoral angiography Having a pulse on the leg and a normal posterior tibial pulse Age between 30 and 70 years Having healthy hands and feet Full consciousness
Exclusion criteria:	Having a history of diabetes Having an addiction Having mental problems People who have received thrombolytic drugs (retplase) after MI and then underwent angiography. 5) Any physiological or hemodynamic instability during and after angiography, such as cardiac dysrhythmia. Active bleeding at the catheter site People who have already been subjected to angiography DVT history The presence of wounds, scars on the leg Use of anti-anxiety drugs Peripheral neuropathy Tickling feeling in hands and feet The presence of coagulation problems in the patient hypertension
Age	From 30 years old to 70 years old
Gender	Both
Phase	N/A
Groups that have been masked	No information
Sample size	Target sample size: 114
Randomization (investigator's opinion)	Randomized
Randomization description	Allocating the samples to the study groups randomly, the random permutation block design with six blocks will be used; Then the website https://www.sealedenvelope.com will be used to determine the required random blocks and their sequence. Sealed envelopes will be used for concealment. Thus, based on the sequence of randomly determined blocks, cards with the letters A (for the hand reflexology group), B (for the foot reflexology group) and C (for the control group) will be placed inside the envelope, which shows the allocation sequence. became. Then an envelope will be opened for each participant in the study, and based on the card inside the envelope, the participant will be assigned to the control or test group.
Blinding (investigator's opinion)	Not blinded
Blinding description	
Placebo	Used
Assignment	Parallel
Other design features	
Secondary Ids	empty
Ethics committees	
<u>1</u>	
Ethics committee	
Name of ethics committee	Ethics Committee of Zanjan University of Medical Sciences
Street address	No.1154, West second Eshragh Ave., Shahryar Town
City	Zanjan
Province	Zanjan
Postal code	4515917897
Approval date	2023-02-14, 1401/11/25
Ethics committee reference number	IR.ZUMS.REC.1401.348
Health conditions studied	
<u>1</u>	
Description of health condition studied	acute myocardial infraction
ICD-10 code	I21
ICD-10 code description	ST elevation (STEMI) and non-ST elevation (NSTEMI) myocardial infarction
Primary outcomes	
<u>1</u>	
Description	chest pain
Timepoint	Before the start of the intervention, 15 minutes, 3 hours and 6 hours after the end of the intervention
Method of measurement	Visual Analogue Scale
<u>2</u>	
Description	Anxiety
Timepoint	Before the start of the intervention, 15 minutes, 3 hours and 6 hours after the end of the intervention
Method of measurement	Visual Analogue Scale

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: The patient lies on the bed in a quiet environment. We place a pillow under the patient's feet, after removing the ornaments and washing the hands, the masseur begins to perform the intervention. Foot reflexology is performed on the patient's left foot for 15 minutes. Massage oil, which has no therapeutic value, is used to perform reflexology. Pressure will be applied for 30 seconds with the tip of the thumb to the center of the sole of the foot at the point of the solar plexus at the junction of the ball of the foot and the arch of the foot. Reflexology will be done with a circular movement with both thumbs from the center of the foot to the outside of the foot. Finally, the heart area (the center of the ball of the foot) will be massaged with the thumb in one movement.

Category

Treatment - Other

2

Description

Intervention group: The patient lies on the bed in a quiet environment. After removing the jewelry and washing the hands, the masseuse starts to perform the intervention. Hand reflexology is performed on the patient's left hand for 15 minutes. To perform reflexology, massage oil is used, which has no therapeutic value. To perform hand reflexology, the researcher will start massaging the hand from the sides of the hand and move towards the palm, the back of the hand, and finally the fingers. This process will be repeated eight to ten times until the hand is completely relaxed and ready for reflexology. The reflex point for the cardiovascular system includes: the heart point located on the palm, under the soft area at the bottom of the ring and little fingers, the massager will press the reflexology point with his thumb. Reflexology points will be massaged 14 times in a row clockwise and with circular movements.

Category

Treatment - Other

3

Description

Control group: The patient lies on the bed in a quiet environment, we place a pillow under the patient's feet, after removing the ornaments and washing the hands, the masseuse begins to perform the intervention. Foot reflexology is performed on the patient's right foot for 15 minutes. Massage oil, which has no therapeutic value, is used to perform reflexology. Pressure will be applied for 30 seconds with the tip of the thumb to the center of the sole of the foot at the point of the solar plexus at the

junction of the ball of the foot and the arch of the foot. Reflexology will be done with a circular movement with both thumbs from the center of the foot to the outside of the foot. Finally, the heart area (the center of the ball of the foot) will be massaged with the thumb in one movement.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Ayatollah Mousavi Zanzan Hospital

Full name of responsible person

Sahar Asali

Street address

Gavazang Street., Zanzan

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Zanzan

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Phone

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Fax

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Email

Mousavihospital@zums.ac.ir

Web page address

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Zanzan University of Medical Sciences

Full name of responsible person

Dr. Hossein Mostafavi

Street address

Mahdavi Blvd, Zanzan University of Medical Sciences

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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

Zanjan 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

Person responsible for general inquiries**Contact****Name of organization / entity**

Zanjan University of Medical Sciences

Full name of responsible person

Sahar Asali

Position

Master student of emergency nursing

Latest degree

Bachelor

Other areas of specialty/work

Nursery

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Person responsible for scientific inquiries**Contact****Name of organization / entity**

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Full name of responsible person

Sahar Asali

Position

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Latest degree

Bachelor

Other areas of specialty/work

Nursery

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Person responsible for updating data**Contact****Name of organization / entity**

Zanjan University of Medical Sciences

Full name of responsible person

Sahar Asali

Position

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Latest degree

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Sharing plan**Deidentified Individual Participant Data Set (IPD)**Undecided - It is not yet known if there will be a plan to
make this available**Study Protocol**Undecided - It is not yet known if there will be a plan to
make this available**Statistical Analysis Plan**Undecided - It is not yet known if there will be a plan to
make this available**Informed Consent Form**Undecided - It is not yet known if there will be a plan to
make this available**Clinical Study Report**Undecided - It is not yet known if there will be a plan to
make this available**Analytic Code**Undecided - It is not yet known if there will be a plan to
make this available**Data Dictionary**Undecided - It is not yet known if there will be a plan to
make this available