Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

Investigating the effect of acupressure on pain Severity in patients undergoing coronary artery graft surgery hospitalized in cardiac intensive care unit

Protocol summary

Study aim

Determining the effect of acupressure on the severity of pain in patients undergoing coronary artery bypass graft, hospitalized in Shahid Chamran cardiac intensive care unit in Isfahan, 2017

Design

This study is a randomized clinical trial. The sampling will done by stratified randomization method, so that the two studied groups are matched in terms of gender and pain severity.

Settings and conduct

This study will be performed on patients undergoing coronary artery bypass graft surgery in the Cardiology Department of Shahid Chamran Hospital affiliated to Isfahan University of Medical Sciences, Iran. Patients who have the inclusion criteria will be randomly assigned into two intervention(by acupressure) and control (touch) groups. The severity of pain in two groups will be compared before and after the intervention. The person who will assess the severity of pain will be blind in identifying the type of sample group.

Participants/Inclusion and exclusion criteria

The participants included all patients undergoing coronary artery bypass grafting that hospitalized in Shahid Chamran cardiac intensive care unit in Isfahan, who have the cognitive, psychological and physical ability to answer research questions and collaborate with the researcher and also informed consent to participate in the study. Patients with deformity at the LI4 acupressure point or with advanced neuropathy, as well as a history of open heart surgery or the history of using acupressure will not be included in the study.

Intervention groups

In the intervention group, after complete consciousness, extubation and the stability of the vital signs, the bilateral pressure at the LI4 point, will be applied for 20 seconds.In the control group, at the same points and within the same time, the touch without the pressure will be carried out.

Main outcome variables

pain severity

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20170826035913N2**
Registration date: **2018-04-24, 1397/02/04**
Registration timing: **retrospective**

Last update: **2018-04-24, 1397/02/04**
Update count: **0**

Registration date

2018-04-24, 1397/02/04

Registrant information

Name

Tayebe Negahban Bonabi

Name of organization / entity

Rafsanjan University of Medical Sciences, School of Nursing and Midwifery

Country

Iran (Islamic Republic of)

Phone

+98 34 3425 5900

Email address

negahbant@rums.ac.ir

Recruitment status

Recruitment complete

Funding source

The financial source of the Rafsanjan University of Medical Sciences project.

Expected recruitment start date

2017-09-23, 1396/07/01

Expected recruitment end date

2017-11-22, 1396/09/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Investigating the effect of acupressure on pain Severity in patients undergoing coronary artery graft surgery hospitalized in cardiac intensive care unit

Public title

The effect of acupressure on postoperative pain in coronary artery bypass graft surgery

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

In this study, patients will be enrolled in the study with the following conditions : Stability of vital signs, no history of using acupressure for any purpose ,no scars, scratches and deformities at the point LI4 , ability to speak and understand Persian language, absence of hearing impairment, no connection to the ventilator , complete consciousness ,no tracheal tube , no history of open heart surgery ,no history of mental illness ,having informed consent to participate in the study absence of advanced neuropathy, no addicted

Exclusion criteria:

Hearing Impairment Connecting to the Ventilator Having tracheal Intubation History of Open Heart Surgery History of Mental Illness Advanced Nephropathy Addiction Scars, scratches and deformities at the point LI4 history of using acupressure for any purpose

Age

From **30 years** old to **80 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Outcome assessor

Sample size

Target sample size: **70**

Randomization (investigator's opinion)

Randomized

Randomization description

In this study, sampling will be carried out by the stratified random sampling. The strata will be formed based on the severity of pain (in three mild, moderate and severe classes) and sex (in two male and female classes) for both groups(intervention and control). Entering the first sample in each of the classes will be by the simple randomization. For subsequent samples, the sum of the samples in the groups will be considered, so that the sample is assigned to a group that that has less sample size. Sampling will continue until the sample size reaches the target.

Blinding (investigator's opinion)

Single blinded

Blinding description

A person who assesses the severity of pain does not know about belonging to the groups

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Rafsanjan University of Medical Sciences

Street address

Central Office of Rafsanjan University of Medical Sciences, Imam Ali Blvd, Rafsanjan, Kerman Province, Iran

City

Rafsanjan

Province

Kerman

Postal code

7717933777

Approval date

2017-08-06, 1396/05/15

Ethics committee reference number

IR.RUMS.REC.1396.73

Health conditions studied

1

Description of health condition studied

Coronary Artery Bypass

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

the pain

Timepoint

Before the intervention - immediately after the intervention -30 minutes after the intervention

Method of measurement

Using the VAS scale

Secondary outcomes

1

Description
The frequency of patient's need for pain relief
Timepoint
The first 24 hours after the intervention
Method of measurement
Record the frequency of analgesic use for the patient

Intervention groups

1

Description
In the intervention group: after the patient's complete consciousness and extubation of the trachea, which is routinely 6 to 7 hours after the surgery.The severity of the pain will be measured by the researcher's colleague before the intervention. Then one of the researchers who have enough training in acupressure will face the patient and in the LI4 point will be applied acupressure bilaterally for 20 minute period, so that in each minute, 5 pressure periods will be applied at the LI4 point. Each cycle will consist of 10 seconds of pressure and 2 seconds of rest. The applied pressure will be about 3-5 kg, so that the patient feel warmth, pressure and have numbness at that pressure point.
Category
Other

2

Description
Control group: In the control group, after complete consciousness and ex-tubation of the patient, the severity of pain before the intervention will be measured by the researcher's colleague. Then the researcher will face the patient. At the same pressure point, same as the intervention group, by the same time, the touch without pressure will be applied.
Category
Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Shahid Chamran Hospital
Full name of responsible person
Maryam Narimani
Street address
Salman Farsi Street after the City Bridge-Shahid Chamran Hospital. Isfahan, Iran
City
Esfahan
Province
Isfehan
Postal code
7718796755
Phone
+98 34 3425 5900
Email
narimani4@gmail.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Rafsanjan University of Medical Sciences
Full name of responsible person
Ali Shamsizadeh
Street address
Central office of Rafsanjan University of Medical Sciences, Imam Ali Blvd, Rafsanjan, Kerman Province, Iran
City
Rafsanjan
Province
Kerman
Postal code
7718796755
Phone
+98 34 3428 0040
Fax
+98 34 3428 0097
Email
vcrt@rums.ac.ir
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Rafsanjan 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
Rafsanjan University of Medical Sciences
Full name of responsible person
Tayebeh Negahban Bonabi
Position
Assistant Professor
Latest degree
Ph.D.
Other areas of specialty/work

Nursing

Street address
Nursing & Midwifery Faculty,Parastar Street, Rafsanjan, Kerman Province, Iran

City
Rafsanjan

Province
Kerman

Postal code
7718796755

Phone
+98 34 3425 5900

Fax
+98 34 3425 8497

Email
negahbant@rums.ac.ir

Web page address

Person responsible for scientific inquiries

Contact

Name of organization / entity
Rafsanjan University of Medical Sciences

Full name of responsible person
Tayebeh Negahban Bonabi

Position
Assistant Professor

Latest degree
Ph.D.

Other areas of specialty/work
Nursing

Street address
Department of Community Health Nursing, Faculty of Nursing and Midwifery, Parastar ST, Rafsanjan, Kerman Province, Iran

City
Rafsanjan

Province
Kerman

Postal code
7718766755

Phone
+98 34 3425 5900

Fax

Email
Negahbant@rums.ac.ir

Web page address

Person responsible for updating data

Contact

Name of organization / entity
Rafsanjan University of Medical Sciences

Full name of responsible person
Maryam Narimani Zaman Abadi

Position
MS.C. student in nursing

Latest degree
Bachelor

Other areas of specialty/work
Nursing

Street address
Post Graduate Office, Faculty of Nursing and Midwifery, Parastar ST , Rafsanjan, Kerman Province, Iran

City
Rafsanjan

Province
Kerman

Postal code
7718796755

Phone
+98 34 3425 5900

Fax

Email
maryam.narimani4@gmail.com

Web page address

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