Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 2026

Comparing the effect of acupressure and reflexology on sleep condition in the patient after coronary artery bypass graft surgery

Protocol summary

Study aim
Comparison of the effect of foot reflexology massage with acupressure on patients' sleep after coronary artery bypass graft

Design
Patients are divided into 3 groups of 20 Acupressure and Reflexology and Control Using random numbers provided with computer software and Permuted Block Randomization By the Statistics Advisor, they will be randomly assigned. 10 blocks that has 6 member. In each block, there are 2 people from each group.

Settings and conduct
The intervention begins on the third night after the operation and 4 consecutive nights around 19-21 o'clock 2 to 3 hours before bedtime for the intervention group do Foot massage and acupressure. On the third to seventh day after the operation, the sleep quality questionnaire is completed again. The location of the study is Imam Reza Hospital in Mashhad.

Participants/Inclusion and exclusion criteria
Inclusion criteria: The age of adults over 18 years of age, those undergoing coronary artery bypass grafting, their vital signs are stabilized (blood pressure, temperature, pulse, respiration), lack of communication problems Hearing impairment, vision or speech, not using anti-depressant drugs and antihistamines, Exclusion criteria: infection or ulcer in the palms of the feet, hands and forehead, amputation of the extremities, replacement or repair of the valve.

Intervention groups
The intervention begins on the third night after the operation and 4 consecutive nights 2 to 3 hours before bedtime.In reflexology group 5 minutes general massage and 10 minutes of specialized massage is done for each foot. in acupressure 7 points are stimulated that for every point 5 seconds pressure and 1 second rest until It reaches 3 minutes. The whole intervention takes 21 minutes. In control group, only applying ointment to feet is done.

Main outcome variables
sleep condition

General information

Reason for update
Acronym
IRCT registration information
IRCT registration number: **IRCT20110906007494N29**
Registration date: **2019-06-06, 1398/03/16**
Registration timing: **registered_while_recruiting**

Last update: **2019-06-06, 1398/03/16**
Update count: **0**

Registration date
2019-06-06, 1398/03/16

Registrant information

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2018-12-22, 1397/10/01

Expected recruitment end date
2019-12-22, 1398/10/01

Actual recruitment start date
empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparing the effect of acupressure and reflexology on sleep condition in the patient after coronary artery bypass graft surgery

Public title

the effect of acupressure and reflexology on sleep condition in the patient has heart surgery

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

The age of adults over 18 years of age Do coronary artery bypass graft surgery

Exclusion criteria:

Drug use Having communication problems (hearing impairment, vision or speech) Having severe neuropathy in the patient Having valve replacement or repair Having infection or ulcer on the soles of the feet, hands and forehead Having history of acute arthritis or rheumatoid arthritis End extremities amputation Using antidepressants and antihistamines Their vital signs have not been stabilized (blood pressure, temperature, pulse, respiration)

Age

From **18 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **60**

Randomization (investigator's opinion)

Randomized

Randomization description

Patients eligible for 3 groups of 20 people of acupressure and reflexology and control Using random numbers provided with computer software and Permuted Block Randomization By the Statistics Advisor, they will be randomly assigned.10 blocks that has 6 member. In each block, there are 2 people from each group.

Blinding (investigator's opinion)

Not 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 Mazandaran University of Medical Sciences

Street address

Mazandaran University of Medical Sciences, Vice chancellor for research, Moalem street, Moalem square, Sari, Mazandaran, Iran.

City

Sari

Province

Mazandaran

Postal code

4816715793

Approval date

2019-05-11, 1398/02/21

Ethics committee reference number

IR.MAZUMS.REC.1398.050

Health conditions studied

1

Description of health condition studied

sleep condition

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

sleep condition

Timepoint

determination sleep condition at third day after surgery and at fourth until seventh day after surgery in control and massage group

Method of measurement

SMHSQ questionnaire (St. Marys Hospital Sleep Questionnaire)

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Foot reflexology massage will be done for 30 minutes (15 minutes each foot)5 minutes general massage and 10 minutes special massage. for every person from third day after surgery started and continued for 4 nights.

Category

Lifestyle

2

Description
Intervention group: acupressure performed on 7 point of body like forehead, radial, ulnar, solar plexus with 3 to 5 kg pressure for 5 seconds pressure and 1 seconds relax until it reaches 3 minutes. it takes 21 minutes for 4 Consecutive nights.
Category
Lifestyle

3

Description
Control group: Not done any massage or acupressure
Category
Lifestyle

Recruitment centers

1

Recruitment center
Name of recruitment center
Emam Reza hospital of Holy Mashhad
Full name of responsible person
Seyed Milad Hoseini Matankolaee
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
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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
Sari 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
Other

Person responsible for general inquiries

Contact
Name of organization / entity
Mazandaran University of Medical Sciences
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Sharing plan

Deidentified Individual Participant Data Set (IPD)
No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD
There is no further information

Study Protocol
No - There is not a plan to make this available

Statistical Analysis Plan
No - There is not a plan to make this available

Informed Consent Form
No - There is not a plan to make this available

Clinical Study Report
No - There is not a plan to make this available

Analytic Code
No - There is not a plan to make this available

Data Dictionary
No - There is not a plan to make this available