Clinical Trial Protocol
Iranian Registry of Clinical Trials

02 Jul 2026

The effect of acupressure on intestinal function in patients undergoing coronary artery bypass surgery

Protocol summary

Study aim
Determining the effect of acupressure on intestinal function in patients undergoing coronary artery bypas surgery

Design
The present study is a three-group randomized controlled clinical trial. Eligible patients will be randomly assigned to three groups of 30: acupressure, sham, and control.

Settings and conduct
In the cardiac intensive care unit of Semnan Heart Center, In the intervention group, one minute of thumb pressure will be applied vertically, then 5 seconds of rest and then one minute of rotational movement. Due to the fact that the interventions are performed simultaneously, in total, each time, a maximum of 3 minutes of intervention will be applied to the patient. The intervention will be performed from 48 hours after the operation to 96 hours after the operation.

Participants/Inclusion and exclusion criteria
Inclusion criteria: People undergoing CABG surgery. No chronic constipation according to RomeIV criteria Lack of known neurological and mental illnesses under treatment Absence of wounds, organ defects, allergies, and fractures in the areas of acupressure no gastrointestinal disorders No dependence or addiction to any drugs Lack of pulmonary drainage and discharge more than 200 ml per hour Exclusion criteria: Patients using combination therapies such as acupuncture, herbal remedies, hypnosis, or yoga Patients need laxatives other than magnesium hydroxide from 96 hours after surgery Patients undergoing emergency coronary artery bypass graft surgery.

Intervention groups
Acupressure: This intervention will be performed by a member of the research team under the training of another member of the team with acupuncture. Control group: These patients are given nutritional training and heart disease routines. Sham: Normal nursing nutrition and care is provided and the procedure will be exactly the same as the test group;

Main outcome variables
Intestinal function

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20110906007494N39**
Registration date: **2021-08-01, 1400/05/10**
Registration timing: **prospective**

Last update: **2021-08-01, 1400/05/10**
Update count: **0**

Registration date
2021-08-01, 1400/05/10

Registrant information

Name
Masoumeh Bagheri Nesami

Name of organization / entity
Mazandaran University of Medical Sciences

Country
Iran (Islamic Republic of)

Phone
+98 11 3336 7551

Email address
mbagheri@mazums.ac.ir

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2021-09-22, 1400/06/31

Expected recruitment end date
2022-02-18, 1400/11/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of acupressure on intestinal function in patients undergoing coronary artery bypass surgery

Public title

The effect of acupressure on intestinal function

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Informed consent to participate in research Individuals undergoing CABG No chronic constipation according to RomeIV criteria Ability to communicate verbally Lack of known neurological and mental illnesses under treatment, absence of wounds, disability Sensitivity and fractures in the desired points of acupressure Lack of simultaneous participation in other intervention studies No thyroid disease, incurable, neuromuscular, congenital gastrointestinal abnormalities and kidney failure, no gastrointestinal disorders (gastrointestinal ulcer, history of chronic constipation, Fischer, hemorrhoids, rectal prolapse, intestinal obstruction based on patient history History and physical examination by a physician No dependence or addiction to any drugs Lack of pulmonary drainage and discharge more than 200 ml per hour No need for balloon pump inside the aorta No intubation for more than 24 hours

Exclusion criteria:

Patients using combination therapies such as acupuncture, herbal remedies, hypnosis, or yoga Patients need laxatives other than magnesium hydroxide from 96 hours after surgery Patients undergoing emergency coronary artery bypass graft surgery.

Age

From **18 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **90**

Randomization (investigator's opinion)

Randomized

Randomization description

Eligible patients are randomly assigned to three groups of 30: acupressure, sham, and control using random numbers provided by computer software and Randomization Permuted Block; In other words, 15 blocks of 6 will be considered in such a way that in each block there are two people from each group of pressure, sham, and control. Therefore, 90 envelopes are designed and inside it, based on the information obtained from the computer program, the letters A of the acupressure group, B group of the sham group and C group of the control group are embedded. Based on the patient's admission date, the priority of opening the envelope door is executed in the order of the number on it.

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

City

Sari

Province

Mazandaran

Postal code

4816715793

Approval date

2021-06-29, 1400/04/08

Ethics committee reference number

IR.MAZUMS.REC.1400.301

Health conditions studied

1

Description of health condition studied

Intestinal function

ICD-10 code

K59

ICD-10 code description

Other functional intestinal disorders

Primary outcomes

1

Description

Digestive disorders

Timepoint

Before the intervention and after the intervention

Method of measurement

RomeIV

2

Description
Intestinal function
Timepoint
Before the intervention and after the intervention
Method of measurement
Bristol Scale, Intestinal function checklist

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: Intervention group: Acupressure will be performed twice a day (10 am and 6 pm) for three days from 48 hours after surgery for three days. The ST25 point is two fingers away from the navel. The LI4 point is located deep in the muscle bulge, resulting from the close alignment of the thumb and forefinger. Acupressure is applied symmetrically to each point for two minutes. One minute as a push with the thumb vertically, then, 5 seconds of rest and then, one minute of circular motion; Due to the fact that the interventions are performed simultaneously with the two-handed technique, in total, a maximum of 3 minutes of intervention will be applied to the patient each time; Nutrition training and routine nursing care are also provided. It should be noted that the interventions will be performed within 48 hours after surgery.
Category
Treatment - Other

2

Description
Intervention group: In the sham group, nutrition education and routine nursing care are provided and the procedure will be exactly the same as the experimental group; With the difference that the pressure is applied in the points close to the points of acupressure according to the experts of acupuncture and acupressure of the authoritative books of this field, that this point is not located on a specific meridian. The order of pressure, the type of pressure, the patient's position, the time and the amount of pressure in the test and sham groups will be the same. The location of the pressure points is the same as the intervention group; With the difference that it is located at a distance of 1.5 cm from them. It should be noted that in both groups, the pressure procedure will be taught by one person (researcher). Intestinal function and checklists will be completed 24 hours after surgery (before intervention), 48, 72, 96 and 120 hours after surgery.
Category
Treatment - Other

3

Description
Only nutrition education and heart disease routines are given.
Category
N/A

Recruitment centers

1

Recruitment center
Name of recruitment center
Cardiac Intensive Care Unit of Semnan Heart Center
Full name of responsible person
Fatemeh Khan Mohammadi
Street address
Juibar three ways, Mazandaran University of Medical Sciences
City
Sari
Province
Mazandaran
Postal code
4815733971
Phone
+98 11 3336 1985
Email
fatima.khanmohamadi5@gmail.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Mazandaran University of Medical Sciences
Full name of responsible person
Dr Majid Saeedi
Street address
Mazandaran University of Medical Sciences ,Valiye asr highway, Joybar 3way ,Imam Sq
City
Sari
Province
Mazandaran
Postal code
48157-33971
Phone
+98 11 3397 8055
Email
mansoorehezaty1994@gmail.com
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Mazandaran 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
Mazandaran University of Medical Sciences
Full name of responsible person
Masoumeh Bagheri Nesami
Position
PhD in Nursing Education
Latest degree
Ph.D.
Other areas of specialty/work
Nursery
Street address
Reseach Assistant of Mazandaran University of Medical sciences
City
Sari
Province
Mazandaran
Postal code
4815733971
Phone
+98 11 3379 5508
Email
mansoorehezaty1994@gmail.com

Person responsible for scientific inquiries

Contact
Name of organization / entity
Mazandaran University of Medical Sciences
Full name of responsible person
Masoumeh Bagheri Nesami
Position
PhD in Nursing Education
Latest degree
Ph.D.
Other areas of specialty/work
Nursery
Street address
Sari, Joybar three ways, Mazandaran University of Medical Sciences
City
Sari
Province
Mazandaran
Postal code
4816715793
Phone
+98 11 3379 5508
Email
Anna3043@gmail.com

Person responsible for updating data

Contact
Name of organization / entity
Mazandaran University of Medical Sciences
Full name of responsible person
Masoumeh Bagheri Nesami
Position
PhD in Nursing Education
Latest degree
Ph.D.
Other areas of specialty/work
Nursery
Street address
Sari, Joybar three ways, Mazandaran University of Medical Sciences
City
Sari
Province
Mazandaran
Postal code
4816715793
Phone
+98 11 3379 5508
Email
Anna3043@gmail.com

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 more 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