Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

Comparison of the effects of aromatherapy with essential oils of lavender and valerian on pain and anxiety in patients undergoing coronary artery bypass graft (CABG)

Protocol summary

Summary

This study aims to compare the effect of lavender and valerian essential oil on pain and anxiety after coronary artery Bypass Graft (CABG) surgery. In this study, patients undergoing CABG who admitted to Surgical ICU Department, at Fatemeh Al Zahra Hospital, affiliated by Mazandaran University of Medical Sciences will be studied. Inclusion criteria include being at the age of 35-70 years, complete consciousness, healthy sense of smell, and absence of drug addiction. Selected samples will be assigned into three groups of 28 participants including lavender, valerian, and placebo according to age and sex and through randomized block design. On second day after CABG in the evening shifts and after 3 hours of the last dose of the analgesics injection, pain will be measured using a Visual Analog Scale (VAS) questionnaire and anxiety will be measured using Spielberger state- trait anxiety inventory before intervention and then, intervention will be performed according to the designated group. In lavender and valerian group, three drops of essential oil will be poured on cotton and all of this will be placed in an oxygen mask and oxygen therapy with a mask (5-6 liters per minute) will be performed for 15 minutes. In the placebo group instead of the essential oil, three drops of distilled water will be poured on cotton and will be placed in an oxygen mask and oxygen therapy with a mask (5-6 liters per minute) will be performed for 15 minutes. Then the pain intensity will be measured at 5, 30, and 60 minutes after the intervention. The patients' anxiety will be measured one hour after the intervention with Spielberger's state anxiety inventory.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201708016342N6**
Registration date: **2017-08-31, 1396/06/09**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2017-08-31, 1396/06/09

Registrant information

Name

Ali Asghar Ghods

Name of organization / entity

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Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Semnan University of Medical Sciences

Expected recruitment start date

2017-08-23, 1396/06/01

Expected recruitment end date

2017-12-22, 1396/10/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of the effects of aromatherapy with essential oils of lavender and valerian on pain and anxiety in patients undergoing coronary artery bypass graft (CABG)

Public title
Effects of aromatherapy on pain and anxiety
Purpose
Supportive
Inclusion/Exclusion criteria
Inclusion Criteria: Patient consent to participate in the study; age 35-70 years; having spontaneous breathing; complete consciousness; healthy sense of smell; no history of asthma and allergy to plants; lack of drug addiction; not treated with anti-anxiety and depression drugs; surgery of Coronary artery bypass graft is not an emergency; having no pulmonary and obstructive disease. Exclusion Criteria: Unwillingness to continue to participate in the study; the severe complications of coronary artery bypass graft surgery; the patient's pain before the study is zero
Age
From **35 years** old to **70 years** old
Gender
Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **84**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Double blinded
Blinding description
Placebo
Used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics committee of Semnan University of Medical Sciences
Street address
Semnan University of Medical Sciences, Basij blvd, Semnan
City
Semnan
Postal code
Approval date
2017-07-12, 1396/04/21
Ethics committee reference number
IR.SEMUMS.REC.1396.63

Health conditions studied

1

Description of health condition studied
ischaemic heart disease
ICD-10 code
I25.1
ICD-10 code description
Atherosclerotic heart disease

Primary outcomes

1

Description
Pain
Timepoint
befor intervention; 5, 30 and 60 minute after intervention
Method of measurement
Pain Visual analogue scale

2

Description
Anxiety
Timepoint
Before and after intervention
Method of measurement
Speilberger anxiety questionnaire

Secondary outcomes

empty

Intervention groups

1

Description
three drops of valerian essential oil will be poured on cotton and all of this will be placed in an oxygen mask and oxygen therapy with a mask (5-6 liters per minute)will be performed for 15 minutes
Category
Prevention

2

Description
three drops of lavender essential oil will be poured on cotton and all of this will be placed in an oxygen mask and oxygen therapy with a mask (5-6 liters per minute)will be performed for 15 minutes
Category
Prevention

3

Description
three drops of distilled water will be poured onto cotton and will be placed in an oxygen mask and oxygen therapy with a mask (5-6 liters per minute)will be performed for 15 minutes
Category
Placebo

Recruitment centers

1

Recruitment center
Name of recruitment center
Fateme-Al-Zahra hospital
Full name of responsible person
Abbas Keramati
Street address
Fateme-Al-Zahra hospital, Artesh Boulevard, Sari, Iran
City
Sari

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Vice Chancellor for Research, Semnan University of Medical Sciences
Full name of responsible person
Dr, Ali Rashidi pour
Street address
Semnan University of Medical Sciences,Basij Boulevard, Semnan, Iran
City
Semnan
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, Semnan 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
Semnan University of Medical Sciences
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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