Clinical Trial Protocol
Iranian Registry of Clinical Trials

09 Nov 2026

Effect of essential oil of Lavender inhalation on open-heart surgery pain

Protocol summary

Summary

The goal of this study is evaluating the effects of inhalation of Lavender essential oil on the pain of open-heart surgery. The main complaint of patients after open-heart surgery is chest pain. Due to the side effects of opioids, it is important to use a non-invasive way to effectively relieve pain including aromatherapy with analgesics. This study is a clinical single-blind trial. The study was conducted on 40 patients who had open-heart surgery in the Cardiac ICU of two Hospitals of Tehran University of Medical Sciences, 2012. The level of patient's pain before and after aromatherapy were analyzed by paired t-tests and chi-square and Fishers' exact is used to investigate the relationship between demographic characteristics and pain. Statistical significance was accepted for $P < 0.05$. Criteria included: full Consciousness, spontaneous breathing ability and not using synthetic opioids within 2 hours before extubation. Also, some exclusion criteria were set in this research. The patients that needed medical intervention during the inhalation, or in case of allergies, respiratory problems and emergencies, were excluded from this research. After extubation, the patients were asked to mark the intensity of their pain using the visual analogue scale. Then, a cotton swab which was impregnated with 2 drops of Lavender essential oil 2% was placed in their oxygen mask, and they got breath for 10 minutes. Thirty minutes after aromatherapy, they were asked to re-mark their pain intensity. The level of patient's pain before and after aromatherapy were compared.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2013061813711N1**
Registration date: **2013-07-16, 1392/04/25**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2013-07-16, 1392/04/25

Registrant information

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Recruitment status

Recruitment complete

Funding source
Islamic Azad University Tehran Medical Branch

Expected recruitment start date

2012-11-21, 1391/09/01

Expected recruitment end date

2012-12-21, 1391/10/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of essential oil of Lavender inhalation on open-heart surgery pain

Public title

Effect of essential oil of Lavender inhalation on open-heart surgery pain

Purpose

Supportive

Inclusion/Exclusion criteria

Criteria included: between 18 and 65 full Consciousness,

spontaneous breathing ability and not using synthetic opioids within 2 hours before extubation. Exclusion criteria: needed medical intervention during the inhalation in case of allergies, respiratory problems and emergencies

Age
From **18 years** old to **65 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **40**

Randomization (investigator's opinion)
N/A

Randomization description

Blinding (investigator's opinion)
Single blinded

Blinding description

Placebo
Not used

Assignment
Single

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Islamic Azad University Tehran Medical Branch

Street address
Tehran

City
Tehran

Postal code

Approval date
2012-05-18, 1391/02/29

Ethics committee reference number
13610403902018

Health conditions studied

1

Description of health condition studied
open-heart surgery

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description
Pain

Timepoint
one hour after Lavender inhalation

Method of measurement
Pain measurement

Secondary outcomes

empty

Intervention groups

1

Description
A cotton swab which was impregnated with 2 drops of Lavender essential oil 2% was placed in their oxygen mask, and they got breath for 10 minutes

Category
Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center
Tehran Heart center

Full name of responsible person

Street address

City
Tehran

2

Recruitment center

Name of recruitment center
Moheb Hospital

Full name of responsible person

Street address

City
Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Research Departent of Islamic Azad University Tehran Medical Branch

Full name of responsible person
Naghipour (Research Dep of Azad University)

Street address
Tehran

City
Tehran

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Research Departent of Islamic Azad University Tehran Medical Branch
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
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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