Clinical Trial Protocol
Iranian Registry of Clinical Trials

18 Sep 2026

The effect of aromatherapy with lemon essential oils on nausea, vomiting and anxiety in patients undergoing chemotherapy

Protocol summary

Study aim
Determining the effect of sour lemon scent on vomiting nausea and anxiety of patients undergoing chemotherapy

Design
In this randomized clinical trial, patients will be randomly assigned to two groups of 25 people.

Settings and conduct
Aromatherapy during chemotherapy will be performed for 4 weeks in the chemotherapy department of Shahid Beheshti Hospital in Kashan.

Participants/Inclusion and exclusion criteria
Inclusion criteria:Age over 18 years؛Patients with breast and esophageal, gastric and intestinal cancers؛Healthy sense of smell؛No history of asthma or chronic obstructive pulmonary disease؛ Lack of sensitivity to plant essential oils؛Have a nausea score of at least 2؛Do not take sedatives or other medications to reduce anxiety for six weeks before the procedure؛Not addicted to drugs؛Chemotherapy once a week؛Patients with stage I, II cancer؛The goal of chemotherapy is therapy؛Exclusion criteria:Vomiting due to other diseases diagnosed by an oncologist؛The patient's inability to determine the severity of nausea despite the instructions؛Use complementary medicine methods to relieve anxiety or nausea and vomiting

Intervention groups
In the intervention group, its lemon scent will be used for 4 weeks during chemotherapy. In the control group, placebo will be used for 4 weeks.

Main outcome variables
Nausea and vomiting and anxiety

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20111210008348N45**
Registration date: **2020-07-06, 1399/04/16**
Registration timing: **registered_while_recruiting**

Last update: **2020-07-06, 1399/04/16**
Update count: **0**

Registration date
2020-07-06, 1399/04/16

Registrant information

Name
Neda Mirbagher

Name of organization / entity
Kashan University of Medical Science

Country
Iran (Islamic Republic of)

Phone
+98 36 1555 0021

Email address
mirbagher_n@kaums.ac.ir

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2020-06-06, 1399/03/17

Expected recruitment end date
2020-09-20, 1399/06/30

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
The effect of aromatherapy with lemon essential oils on nausea, vomiting and anxiety in patients undergoing chemotherapy

Public title

The effect of aromatherapy with lemon essential oils on nausea, vomiting and anxiety in patients undergoing chemotherapy

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Patients over 18 years Patients with breast and esophageal, gastric and intestinal cancers (due to the same drugs used) Healthy sense of smell: Measurement by smelling alcohol No history of asthma or chronic obstructive pulmonary disease Lack of sensitivity to plant essential oils Having a minimum nausea score of 2 based on vas criteria on the first day of study No more anxiety score of 63 Do not take sedatives or other medications (such as using herbal essential oils, regular exercise) to reduce anxiety for six weeks before the intervention Not addicted to drugs Perform chemotherapy once a week Patients with stage I, II cancer The goal of chemotherapy is therapy

Exclusion criteria:

Use of other Complementary therapies

Age

From **18 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **50**

Randomization (investigator's opinion)

Randomized

Randomization description

Random allocation in two groups of intervention and control will be simple randomization. Randomization is carried out by creating a random sequence of numbers using on an line randomizer tool (https://www.randomizer.org).

Blinding (investigator's opinion)

Not 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 Kashan University of Medical Sciences

Street address

Ravand Street, Kashan University of Medical Sciences.

City

Kashan

Province

Isfehan

Postal code

8715981151

Approval date

2020-06-06, 1399/03/17

Ethics committee reference number

IR.KAUMS.NUHEPM.REC.1399.019

Health conditions studied

1

Description of health condition studied

Nausea and vomiting

ICD-10 code

R11

ICD-10 code description

Nausea and vomiting

2

Description of health condition studied

Anxiety

ICD-10 code

F06.4

ICD-10 code description

Anxiety disorder due to known physiological condition

Primary outcomes

1

Description

Nausea, vomiting

Timepoint

Before and during the intervention

Method of measurement

Visual criteria for nausea and vomiting

Secondary outcomes

1

Description

Aňxiety

Timepoint

Before and during the study

Method of measurement

Spielberger's Anxiety Questionnaire

Intervention groups

1

Description

In addition to the usual care of the ward (Geranisetron and Dexamethasone), the researchist pours a drop of

sour lemon essential oil onto a paper towel with a drip during chemotherapy and attaches it to the collar of the research unit with a pin, then asks him to breathe normally. This method will be used once a week (during chemotherapy) for 4 weeks. The intervention of 5 minutes before the start of chemotherapy until receiving chemotherapy treatment for patients will be done. Aromatherapy with lemon essential oil is performed when the patient is lying on the bed and the paravan is lying around his bed.

Category

Treatment - Other

2

Description

Control group: In addition to the usual care of the ward (Geranisetron and Dexamethasone), the researchist pours 3 ml of water (placebo) poured on the paper and the collar is connected sick during chemotherapy.This method will be used once a week (during chemotherapy) for 4 weeks. The intervention of 5 minutes before the start of chemotherapy until receiving chemotherapy treatment for patients will be done. Aromatherapy with lemon essential oil is performed when the patient is lying on the bed and the paravan is lying around his bed.

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Department of Chemotherapy, Shahid Beheshti Hospital, Kashan

Full name of responsible person

Morteza Moghari

Street address

Ravand street,Shahid Beheshti Hospital

City

Kashan

Province

Isfehan

Postal code

8715981151

Phone

+98 31 5554 0021

Fax

+98 31 5554 6633

Email

mortezamoghari@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Kashan University of Medical Sciences

Full name of responsible person

Hamid Reza Banafsheh

Street address

Ravand Street, Kashan University Medical Sciences

City

Kashan

Province

Isfehan

Postal code

8715981151

Phone

+98 31 5554 0021

Fax

+98 31 5554 6633

Email

mortezamoghari@gmail.com

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Kashan 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

Kashan University of Medical Sciences

Full name of responsible person

Morteza Moghari

Position

Student

Latest degree

Bachelor

Other areas of specialty/work

Nursery

Street address

15 Khordad Blvd., Alley 54, Alley 12, No. 8

City

Qom

Province

Ghoum

Postal code

3714834141

Phone

+98 25 3722 3661

Email

mortezamoghari@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity
Kashan University of Medical Sciences

Full name of responsible person
Morteza Moghari

Position
Student

Latest degree
Bachelor

Other areas of specialty/work
Nursery

Street address
15 Khordad Blvd., Alley 54, Alley 12, No. 8

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Qom

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Ghoum

Postal code
3714834141

Phone
+98 25 3722 3661

Email
mortezamoghari@gmail.com

Person responsible for updating data

Contact

Name of organization / entity
Kashan University of Medical Sciences

Full name of responsible person
Morteza Moghari

Position
Student

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mortezamoghari@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
Data of participants are confidential

Study Protocol
Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan
Not applicable

Informed Consent Form
Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report
Not applicable

Analytic Code
Not applicable

Data Dictionary
Not applicable