Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

Effect of IV dextrose 5% on incidence of postoperative nausea and vomiting after laparoscopic cholecystectomy

Protocol summary

Summary

The aim of this randomized, double-blind clinical trial is to evaluate the effect of dextrose on nausea and vomiting after laparoscopic cholecystectomy surgery in the operating room of Imam Khomeini hospital of Sari. A total 132 patients with inclusion criteria are randomized into two 66 equal groups. After establishment of monitoring of the operating room, all patients will be placed under general anesthesia with the same anesthetic technique, including midazolam 0.01 mg / kg, fentanyl 2µg / kg for Pre-medication, Propofol 2-2.5 mg / kg, cisatracurium 0.15 mg / kg for induction of anesthesia and isoflurane 1-1.5 MAC, morphine 0.1 mg / kg and 0.0 2 mg / kg cisatracurium during maintenance of anesthesia. Intravenous fluid will be standardized 3cc / kg / hr for all patients during surgery. Level of blood glucose will be measured before the start of the infusion of study solution, half an hour after the start of operation and at the beginning of the recovery with glucometer . Patients in the intervention group will receive half a liter of solution containing 5% dextrose in Ringer Lactate (Add 25 ml 50% dextrose in half a liter of Ringer lactate) and the control group will receive a half liters of ringer lactate solution. Nausea and vomiting will be asked and recorded according to the VRS, immediately and then at 30, 60, 90, 120 after recovery and then at 6, 12, 24 hours after being discharged from the recovery.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201504086803N9**
Registration date: **2015-05-27, 1394/03/06**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2015-05-27, 1394/03/06

Registrant information

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Name of organization / entity
Mazandaran University of Medical Sciences
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Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Mazandaran University of Medical Sciences

Expected recruitment start date

2014-05-31, 1393/03/10

Expected recruitment end date

2015-05-31, 1394/03/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of IV dextrose 5% on incidence of postoperative nausea and vomiting after laparoscopic cholecystectomy

Public title

Effect of IV Dextrose on postoperative nausea and vomiting after laparoscopic cholecystectomy

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria included: (1) the desire to participate in the study, and informed consent(2) planned laparoscopic cholecystectomy surgery (3) age between 18-65 years. Exclusion criteria included: (1) At any time based on the patient's unwillingness to continue participating in study (2) Systemic hypertension (blood pressure above the 140/90 mm-Hg in two or more measurements(3) renal failure(4) coagulopathy (5)chronic heart failure, (6)liver failure(7) Diabetes mellitus (fasting morning glucose levels over 100 mg / dl)(8) previous history of severe nausea and vomiting after surgery (9)pregnancy(10) surgery prolonged more than 2 hours.

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

Gender
Female

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **132**

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 Mazandaran University of Medical Sciences

Street address
Mazandaran University of Medical Sciences, Moallem Square

City
sari

Postal code
4817844718

Approval date
2014-11-25, 1393/09/04

Ethics committee reference number
28/8/1393

Health conditions studied

1

Description of health condition studied
postoperative nausea and vomiting after laparoscopic cholecystectomy

ICD-10 code
k91.0

ICD-10 code description
Vomiting following gastrointestinal surgery

Primary outcomes

1

Description
incidence of nausea and vomiting

Timepoint
immediately and at 30, 60, 90, 120 after recovery and at 6, 12, 24 hours after being discharged from the recovery

Method of measurement
yes/no and Record in Questionnaire

Secondary outcomes

1

Description
intensity of nausea and vomiting

Timepoint
immediately and at 30, 60, 90, 120 after recovery and at 6, 12, 24 hours after being discharged from the recovery

Method of measurement
VRS(visual rating scale) and Record in Questionnaire

2

Description
use of antiemetics

Timepoint
during 24 hours after surgery

Method of measurement
mg(miligram) and record in questionnaire

Intervention groups

1

Description
infusion of 500cc solution containing 5% dextrose in Ringer Lactate whithin 30 minutes before induction of anesthesia

Category
Treatment - Drugs

2

Description
infusion of 500cc solution containing Ringer Lactate whithin 30 minutes and before induction of anesthesia

Category
Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center
Emam Khomeini Hospita

Full name of responsible person
Abolfazl Firouzian MD, Assistant Professor

Street address
Emam Khomeini Hospital, Amir mazandarani Ave.

City
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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Vice chancellor for research, Mazandaran University of Medical Sciences

Full name of responsible person
Ahmad Ali Enayati MD

Street address
Mazandaran University of Medical Sciences, Moallem Square.

City
SARI

Grant name
10506

Grant code / Reference number
28/8/1393

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

Title of funding source
Vice chancellor for research, Mazandaran 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
Mazandaran University of Medical Sciences

Full name of responsible person
Abolfazl Firouzian MD

Position
Anesthesiologist, Assistant Professor

Other areas of specialty/work

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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