

Clinical Trial Protocol

Iranian Registry of Clinical Trials

09 Jun 2026

Comparison of analgesia between ketamine infusion and morphine infusion as postoperative pain pump

Protocol summary

Study aim

Comparison of analgesia after injection of ketamine and morphine by pain pump

Design

A clinical trial with parallel double-blind groups was performed on 50 patients after surgery

Settings and conduct

Patients are transferred to recovery under general anesthesia after surgery and are monitored by the pain service. In this case, a 100 ml venous pain control pump is connected to the patient by continuous injection of 5 ml per hour. Patients will be randomly divided into two groups of morphine and ketamine injections after obtaining informed consent. One group of patients will receive low-dose morphine 1 mg / hr and the other group will receive low-dose 3 µg of ketamine. Then at 1, 6, 12 and 24 hours after surgery, patients will be examined for pain scores. If there is a pain score above 3, 10% of the pump is injected intravenously and slowly for 10 minutes and then the patient is monitored for half an hour. Pain intensity is recorded using the VAS scale with a score of 0 to 10 and also qualitatively (low-moderate-severe) before and after drug injection. 24 hours after the operation, the device will be disconnected and the amount of housing used will be recorded. Inclusion criteria include patients who undergo surgery in Khatam Shahroud teaching and medical hospital in 1400. Ages 20 to 60, ASA class two and three.

Participants/Inclusion and exclusion criteria

Existence of significant and uncontrolled underlying disease (hypertension, diabetes, severe renal, hepatic, coagulation disorders, etc.), obesity (weight over 115 kg)
History of drug or alcohol addiction

Intervention groups

Ketamine 3Mg/kg/min Morphine 1mg/h

Main outcome variables

pain score

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20210509051234N1**

Registration date: **2021-05-15, 1400/02/25**

Registration timing: **prospective**

Last update: **2021-05-15, 1400/02/25**

Update count: **0**

Registration date

2021-05-15, 1400/02/25

Registrant information

Name

Sahar Jamshidi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 13 3350 1617

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minoo.ebrahimzadeh1@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-05-22, 1400/03/01

Expected recruitment end date

2021-07-23, 1400/05/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of analgesia between ketamine infusion and morphine infusion as postoperative pain pump

Public title

Comparison of ketamine and morphine

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

No underlying disease no history of drug and alcohol addiction

Exclusion criteria:

hypertension diabetes severe renal disorder obesity

Age

From **20 years** old to **60 years** old

Gender

Both

Phase

1-2

Groups that have been masked

- Participant
- Investigator
- Outcome assessor

Sample size

Target sample size: **50**

Randomization (investigator's opinion)

N/A

Randomization description**Blinding (investigator's opinion)**

Double blinded

Blinding description

The patient receives the medication. The pain score is given by the assessor and the doctor, assessor and patient are blind

Placebo

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics Committee of Islamic Azad University of Shahroud

Street address

next to the gas station, Islamic Azad University, Shahroud, Semnan

City

shahrood

Province

Semnan

Postal code

4318936199

Approval date

2020-09-30, 1399/07/09

Ethics committee reference number

IR.IAU.SHAHROOD.REC.1399.036

Health conditions studied**1****Description of health condition studied****ICD-10 code****ICD-10 code description****Primary outcomes****1****Description**

Pain score

Timepoint

1-6-12-24

Method of measurement

Asking the patient

Secondary outcomes

empty

Intervention groups**1****Description**

Intervention group: ketamine 3 microgram/kg/min

Category

Treatment - Drugs

2**Description**

Intervention group: morphine 1mg/h

Category

Treatment - Drugs

Recruitment centers**1****Recruitment center****Name of recruitment center**

Khatam o lanbia Hospital

Full name of responsible person

Yahyayi Behrouz

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Sponsors / Funding sources

1

Sponsor

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Grant name
Grant code / Reference number
**Is the source of funding the same sponsor
organization/entity?**
No
Title of funding source
Researcher
Proportion provided by this source
100
Public or private sector
Private
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
Islamic Azad University
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Sharing plan

Deidentified Individual Participant Data Set (IPD)

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

Study Protocol

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

Statistical Analysis Plan

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

Informed Consent Form

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

Clinical Study Report

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

Analytic Code

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

Data Dictionary

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