Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 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
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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
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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
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1

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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
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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