Clinical Trial Protocol
Iranian Registry of Clinical Trials

10 Jun 2026

Comparison between intranasal Desmopressin and intravenous Acetaminophen in renal colic pain management

Protocol summary

Summary

Renal colic is one the main painful situations which brings the patients to emergency department and proper management of renal colic pain is an important task for every emergency medicine physician. There are some evidence that shows intranasal desmopressin may be efficient for renal colic pain management, however the studies which had been done so far has limitations, among them one of the most important limitation is small sample size. In the present study we are going to compare efficacy of intranasal desmopressin with intravenous acetaminophen in renal colic pain relief. 300 patients with primary diagnosis of renal colic who would be admitted to Rasoul Akram and Sina hospital will be randomly divided into two groups of 150 patients. One group will receive 40 micro gr of intranasal desmopressin and the other will receive 15 mg/kg of intravenous Acetaminophen with maximum dose of 1000 mg. Patients' pain score will be assessed at minutes 0, 15, 30, and 60 by means of a visual analog scale which is a 10 cm scale in which 0 means no pain and 10 means maximum level of pain. If the patient's pain is not controlled after 30 minutes he will receive intravenous Morphine until the pain would be relieved. The mean of pain severity score at minutes 0, 15, 30, 60 and dosage of morphine used in each group will be compared. After 24 hours and then 1 week later we assess patients for any possible morbidity and stone passage. These outcomes will be also compared.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2012101510017N4**
Registration date: **2013-04-29, 1392/02/09**
Registration timing: **registered_while_recruiting**
Last update:
Update count: **0**

Registration date

2013-04-29, 1392/02/09

Registrant information

Name
Hamed Basir Ghafouri
Name of organization / entity
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Iran (Islamic Republic of)
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h-basirghafouri@tums.ac.ir

Recruitment status

Recruitment complete

Funding source

Tehran University of Medical Sciences

Expected recruitment start date

2012-03-19, 1390/12/29

Expected recruitment end date

2013-05-22, 1392/03/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison between intranasal Desmopressin and intravenous Acetaminophen in renal colic pain management

Public title

Effect of intranasal Desmopressin in renal colic pain management

Purpose

Treatment

Inclusion/Exclusion criteria
Inclusion criterion: patients with renal colic impression on diagnosis. Exclusion criteria: patients for whom another diagnosis would be established rather than renal colic; analgesic use 4 hours before admission; opium addiction; any kind of renal, hepatic or infectious disease; pregnancy.
Age
From **15 years** old to **60 years** old
Gender
Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **300**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Not blinded
Blinding description
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Research ethics committee of Tehran University of medical sciences
Street address
Headquarter for Tehran University of Medical Sciences, Qods St., Keshavarz Blvd.
City
Tehran
Postal code
Approval date
2012-06-05, 1391/03/16
Ethics committee reference number
271/ 130/91/د

Health conditions studied

1

Description of health condition studied
Renal colic
ICD-10 code
N23
ICD-10 code description
Unspecified renal colic

Primary outcomes

1

Description
Pain severity
Timepoint
Before intervention and 15, 30, 60 min after intervention
Method of measurement
Visual analog pain scale

Secondary outcomes

1

Description
Final mortality and morbidity
Timepoint
24 hours and one week after intervention
Method of measurement
Asking by phone

Intervention groups

1

Description
Control group: 15 mg/kg of intravenous Acetaminophen with maximum dose of 1000 mg as a single dose.
Category
Treatment - Drugs

2

Description
Intervention group: 40 micro gr of intranasal desmopressin as a single dose.
Category
Treatment - Drugs

Recruitment centers

1

Recruitment center
Name of recruitment center
Sina hospital
Full name of responsible person
Hamed Basir Ghafouri
Street address
Hasan Abad sq
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Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Tehran University of Medical Sciences
Full name of responsible person
Dr Shahin Akhundzadeh
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Keshavarz Blvd. Pour Sna street.Tehran University of Medical Siences, School of Medicine .first floor .No303
City
Tehran

Grant name

Grant code / Reference number

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

Title of funding source
Tehran 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
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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