

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

Country

Iran (Islamic Republic of)

Phone

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Email address

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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/>

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

City

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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 Sciences, 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**

Tehran University of Medical Science, School of Medicine

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Position

MD, Emergency Medicine Specialist

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Web page address**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*