

Clinical Trial Protocol

Iranian Registry of Clinical Trials

07 Jun 2026

Comparison of the analgesic effect of Ibuprofen, morphine, and ketorolac in patients with renal colic

Protocol summary

Study aim

The aim of this study is to investigate the comparison of Ibuprofen, Ketorolac, and Morphine on acute renal colic pain relief.

Design

A clinical trial with a control group, with parallel and randomized groups.

Settings and conduct

In this randomized clinical trial, patients suspicious of renal colic referred to the emergency department of Ahvaz were evaluated. Diagnosis of the disease is based on the pain of the flank, history of the disease and the presence of blood in the urine that confirmed by ultrasound or spiral abdominal CT. Patients were selected from the emergency department of Imam Khomeini and Golestan hospitals in Ahwaz, Iran. Patients' pain was measured by Visual analogue scale (VAS) and patients with a pain score of more than 3 were evaluated based on this system. The patients were randomly divided into 3 groups receiving morphine, ketorolac and ibuprofen. The pain was recorded at different time points

Participants/Inclusion and exclusion criteria

Inclusion criteria: Confirmed acute renal colic by computed tomography scan or urinary tract ultrasound.
Exclusion criteria: History of the heart, renal or hepatic disease and fever

Intervention groups

Group A received 800 mg I.V Ibuprofen during 5 minutes
Group B received 30 mg I.V Ketorolac Group C treated by 5 mg I.V Morphine sulfate

Main outcome variables

Pain

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20170423033599N2**

Registration date: **2018-10-22, 1397/07/30**

Registration timing: **registered_while_recruiting**

Last update: **2018-10-22, 1397/07/30**

Update count: **0**

Registration date

2018-10-22, 1397/07/30

Registrant information

Name

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 61 3161

Email address

yazdani.p@ajums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2017-03-21, 1396/01/01

Expected recruitment end date

2018-11-22, 1397/09/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of the analgesic effect of Ibuprofen, morphine, and ketorolac in patients with renal colic

Public title

Comparison of ibuprofen, morphine, and ketorolac in the treatment of kidney pain

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Confirmed acute renal colic by computed tomography scan or urinary tract ultrasound

Exclusion criteria:
Pregnancy Patients with history of Heart, renal or hepatic disease Fever

Age
No age limit

Gender
Both

Phase
3

Groups that have been masked
No information

Sample size
Target sample size: **183**
Actual sample size reached: **183**

Randomization (investigator's opinion)
N/A

Randomization description

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Other

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Jundishapour University of Medical Sciences Ethical Committee

Street address

Golestan

City

Ahvaz

Province

Khuzestan

Postal code

6455134358

Approval date

2016-04-09, 1395/01/21

Ethics committee reference number

IR.AJUMS.REC.1395.554

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

Timepoint

Baseline, 15, 30, 60 and 120 minutes after intervention

Method of measurement

Visual analogue scale

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group1: An intravenous single dose of 800 mg will be injected within 5 minutes

Category

Treatment - Drugs

2

Description

Intervention group2 : A single dose of 30 mg intravenous Ketorolac will be injected

Category

Treatment - Drugs

3

Description

Intervention group3: A single dose of 5 mg intravenous morphine will be injected

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Golestan Hospital

Full name of responsible person

Parivash Yazdani

Street address

Golestan

City

Ahvaz

Province

Khuzestan

Postal code
6455136472
Phone
+98 21 8670 5503
Email
Ali.khosravi70@yahoo.com

2

Recruitment center

Name of recruitment center
Imam Khomeini Hospital
Full name of responsible person
Parivash Yazdani
Street address
Golestan
City
Ahvaz
Province
Khuzestan
Postal code
6455136472
Phone
+98 21 8670 5503
Email
Ali.khosravi70@yahoo.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Vice chancellor for research, Ahvaz University of
Medical Sciences
Full name of responsible person
Parivash Yazdani
Street address
Golestan
City
Ahvaz
Province
Khuzestan
Postal code
6455128422
Phone
+98 61 3374 3079
Email
Ali.khosravi70@yahoo.com

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Vice chancellor for research, Ahvaz University of Medical
Sciences

Proportion provided by this source

100

Public or private sector

Public

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
Ahvaz University of Medical Sciences
Full name of responsible person
Parivash Yazdani
Position
Resident
Latest degree
Medical doctor
Other areas of specialty/work
Emergency Medicine
Street address
Golestan
City
Ahvaz
Province
Khuzestan
Postal code
64661823172
Phone
+98 61 3374 3079
Email
ali.khosravi70@yahoo.com

Person responsible for scientific inquiries

Contact

Name of organization / entity
Ahvaz University of Medical Sciences
Full name of responsible person
Parivash Yazdani
Position
Resident
Latest degree
Medical doctor
Other areas of specialty/work
Emergency Medicine
Street address
Golestan
City
Ahvaz
Province
Khuzestan
Postal code
64661823172
Phone
+98 61 3374 3079
Email
ali.khosravi70@yahoo.com

Person responsible for updating data

Contact

Name of organization / entity

Ahvaz University of Medical Sciences

Full name of responsible person

Parivash Yazdani

Position

Resident

Latest degree

Medical doctor

Other areas of specialty/work

Emergency Medicine

Street address

Golestan

City

Ahvaz

Province

Khouzestan

Postal code

64661823172

Phone

+98 61 3374 3079

Email

ali.khosravi70@yahoo.com

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

Not applicable

Informed Consent Form

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

Clinical Study Report

Not applicable

Analytic Code

Not applicable

Data Dictionary

Not applicable