Clinical Trial Protocol
Iranian Registry of Clinical Trials

18 Jul 2026

Effect of allopurinol in preventing contrast induced nephropathy among patients undergoing elective PCI

Protocol summary

Summary

The aim of this study is to evaluate the efficacy of allopurinol in preventing contrast induced nephropathy. Inclusion criteria is admission for elective PCI and exclusion criteria is serum creatinin>3mg/dL or eGFR<60ml/min; sever hepatic failure; concomitant use of 6mercaptopurin or azathioprine or warfarin. The study population is all patients admitted for elective PCI in Tehran Heart Center and the sample size is 200. 24 hours before PCI, blood samples are drawn to measure serum creatinin, uric acid, and serum cystatin C. After that patients are grouped in two groups-placebo and intervention. Patients in the intervention group receive two doses of 600mg allopurinol, one 24 hours and one immediately before the procedure. The control group will receive the placebo at these times. 24 hours after the procedure, another blood sample will be drawn to measure serum creatinin, uric acid, and serum cystatin C. The rate of contrast induced nephropathy will be compared between the two groups using aforementioned biomarkers. Also, adverse drug reactions will be recorded.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015120525372N1**
Registration date: **2017-06-06, 1396/03/16**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2017-06-06, 1396/03/16

Registrant information

Name

Zahra Alimohammad Ghelichkhan

Name of organization / entity

Urmia University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

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Recruitment status

Recruitment complete

Funding source

Tehran University of Medical Sciences

Expected recruitment start date

2012-10-13, 1391/07/22

Expected recruitment end date

2014-09-01, 1393/06/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of allopurinol in preventing contrast induced nephropathy among patients undergoing elective PCI

Public title

Effect of allopurinol in preventing kidney damage due to coronary angiography

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: All patients undergoing elective PCI
Exclusion criteria: Patients who are candidates for CABG or primary PCI; Patients with gout or prior use of allopurinol; Serum creatinin >3mg/dL or eGFR<60ml/min; Advanced hepatic failure; Patients who are using azathioprine, 6MP, or warfarin; Patients who

have not filled/signed consent form, or the ones who had shown adverse reaction to the drug in prior use

Age
From **18 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **200**

Randomization (investigator's opinion)
Randomized

Randomization description

Blinding (investigator's opinion)
Double blinded

Blinding description

Placebo
Used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics commitee of Tehran University of Medical Sciences

Street address
Tehran University of Medical Sciences

City
Tehran

Postal code

Approval date
2015-05-23, 1394/03/02

Ethics committee reference number
149384-28024-159-01-94

Health conditions studied

1

Description of health condition studied
contrast induced nephropathy

ICD-10 code
Y57.5

ICD-10 code description
X-ray contrast media

Primary outcomes

1

Description
serum cystatin C

Timepoint
24 hours after PCI

Method of measurement
blood sample

2

Description
serum creatinin

Timepoint
24 hours after PCI

Method of measurement
blood sample

Secondary outcomes

1

Description
serum uric acid

Timepoint
24 hours before and after PCI

Method of measurement
blood sample

Intervention groups

1

Description
allopurinol, 600 mg PO, 24 hours before PCI

Category
Treatment - Drugs

2

Description
placebo, 24 hours before PCI

Category
Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center
Tehran Heart Center

Full name of responsible person
Zahra Alimohammad Ghelich Khan

Street address
Clinical Pharmacy Dept., School of Phramacy, Tehran University of Medical Sciences

City
Tehran

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Tehran University of Medical Sciences
Full name of responsible person
Dr. Masoud Yunesian
Street address
North Kargar-Ave
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
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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