Clinical Trial Protocol
Iranian Registry of Clinical Trials

10 Jun 2026

Effect of treatment of hyperuricemia on lowering blood pressure in hemodialysis patients: single-blind, two-period randomized cross-over study

Protocol summary

Summary

We conducted a single-blind, two-period randomized cross-over clinical trial study to investigate the benefits of allopurinol treatment in hyperuricemic patients for reduction of high blood pressure (BP) in HD patients. A total of 53 patients enrolled in this study. Patients were randomly assigned into allopurinol (n:28) or control (n:27) groups. Patients in allopurinol group received 100 mg/day allopurinol for three months at the first phase of study. After that, patients passed two months washing period. Then, allopurinol was administrated for another three-month period followed by cross-over in second phase. The systolic and diastolic blood pressures were measured before and after dialysis at the first dialysis session of each week. Uric acid was also measured every month.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT138902043325N2**
Registration date: **2010-04-24, 1389/02/04**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2010-04-24, 1389/02/04

Registrant information

Name

Majgan Jalalzadeh

Name of organization / entity

Zanjan University Of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 24 1426 6934

Email address

jmojgan@zums.ac.ir

Recruitment status

Recruitment complete

Funding source

Zanjan University of Medical Sciences

Expected recruitment start date

2009-04-24, 1388/02/04

Expected recruitment end date

2009-06-26, 1388/04/05

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of treatment of hyperuricemia on lowering blood pressure in hemodialysis patients: single-blind, two-period randomized cross-over study

Public title

Effect of Allopurinol in lowering blood pressure in hemodialysis patients

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: having high level of serum uric acid (serum uric acid level greater than 6.5 mg/dl (men) or greater than 5.5 mg/dl (women). This definition was based on analyses from the Atherosclerosis Risk in Communities (ARIC) Study; Exclusion criteria: uric acid level of serum less than 6.5 for men and less than 5.5 for women, known history of allopurinol hypersensitivity or those who already were on allopurinol

Age
No age limit
Gender
Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **55**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Single blinded
Blinding description
Placebo
Not used
Assignment
Crossover
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Zanjan University of Medical Sciences
Street address
faculty of medicine, Zanjan University of Medical Sciences, shahrake karmandan, zanjan, iran
City
Zanjan
Postal code
Approval date
2010-05-30, 1389/03/09
Ethics committee reference number
19/3-3/976

Health conditions studied

1

Description of health condition studied
Hypertension
ICD-10 code
I12, I13,
ICD-10 code description
Hypertensive renal disease, Hypertensive heart and renal disease , Secondary hypertension

2

Description of health condition studied
Hyperuricemia
ICD-10 code
E79.0
ICD-10 code description
Hyperuricaemia without signs of inflammatory arthritis and tophaceous disease Asymptomatic hyperuricaemia

Primary outcomes

1

Description
blood pressure
Timepoint
Baseline, at the beginning of each phase, each week for 3 month during each phase
Method of measurement
sphygmomanometer

Secondary outcomes

1

Description
blood level of uric acid
Timepoint
at the begining of study and after 3 months
Method of measurement
laboratory techniques

Intervention groups

1

Description
No intervention
Category
N/A

2

Description
Allopurinol a tablet (100 mg)/day,for 3 months
Category
Treatment - Drugs

Recruitment centers

1

Recruitment center
Name of recruitment center
Valieasr hemodialysis center
Full name of responsible person
Zeinolabedin Nourcheshmeh
Street address
City
Zanjan

2

Recruitment center
Name of recruitment center
Beheshti hemodialysis center

Full name of responsible person
Zeinolabedin Nourcheshmeh
Street address
City
Zanjan

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Zanjan University of Medical Sciences
Full name of responsible person
samsami
Street address
Zanjan University of Medical Sciences, Azadi boulevard, Zanjan, Iran
City
Zanjan
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Zanjan 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
Zanjan University of Medical Sciences
Full name of responsible person
Fatemeh Mirzamohammadi
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Person responsible for updating data

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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