

Clinical Trial Protocol

Iranian Registry of Clinical Trials

09 Jun 2026

Effect of dopamine on renal function in diabetic patients undergoing coronary artery bypass surgery by extracorporeal circulation

Protocol summary

Summary

Objectives: The aim of this study was to evaluate the effect of renal dose dopamine on renal function in diabetic patients undergoing coronary artery bypass surgery. Research Design: Conduction of a randomized, double-blind, clinical trial. Inclusion criteria: CABG surgery patients with heart bypass, diabetic patients, and patients with EF more than 30%. Patients with BUN lower than 30 mg / dl, Patients with serum creatinine less than 5 mg / dl. Exclusion criteria: Age over 70 years, The combined surgical procedure, reoperation, The use of balloon pump, hyper-thyroidism, patients with contraindications for use dopamine such as pheochromocytoma, dialysis for history of Renal Failure, patients with serum creatinine equal to or more than 1.5 dl / mg, patients with EF equal and less than 30%, patients with BUN more than 30 dl / mg, patients with kidney and liver problems, patients who we had to use a higher dose of 0.05 isotropic in the operating room and ICU, The left ventricular dysfunction. To determine the effect of renal dose dopamine in diabetic patients undergoing coronary artery bypass surgery at 7am in the first, second and third days after surgery and 1 hours after surgery CR, BUN, K, Cr CLEARANCE will be measured. Interventions: In this randomized study, 86 patients with normal renal function will randomly assign into two groups. Group dopamine receives infusion of 3 µg / kg / min dopamine to 24 hours after the induction of the anesthesia but the control group does not receive medical treatment.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015110823716N1**

Registration date: **2015-12-29, 1394/10/08**

Registration timing: **prospective**

Last update:

Update count: **0**

Registration date

2015-12-29, 1394/10/08

Registrant information

Name

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Name of organization / entity

Shiraz University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Shiraz University of Medical Science

Expected recruitment start date

2016-02-01, 1394/11/12

Expected recruitment end date

2016-06-30, 1395/04/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of dopamine on renal function in diabetic patients undergoing coronary artery bypass surgery by extracorporeal circulation

Public title

Effect of dopamine on renal function in diabetic patients undergoing cardiac surgery

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: CABG surgery patients with heart bypass; diabetic patients; patients with EF more than 30% Patients with BUN lower than 30 mg / dl; Patients with serum creatinine less than 5 mg / dl1.5 Exclusion criteria: Age over 70 years; The combined surgical procedure; reoperation; The use of balloon pump; hyperthyroidism; patients with contraindications for use dopamine such as pheochromocytoma; dialysis for history of Renal Failure; patients with serum creatinine equal to or more than 1.5 dl / mg; patients with EF equal and less than 30%, patients with BUN more than 30 dl / mg; patients with kidney and liver problems; patients who we had to use a higher dose of 0.05 isotropic in the operating room and ICU; The left ventricular dysfunction

Age

To **70 years** old

Gender

Both

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: **86**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Single blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethic Committee of Shiraz University Of Medical Sciences

Street address

Central Building of Shiraz University of Medical Sciences, Zand Street

City

Shiraz

Postal code

Approval date

2010-09-23, 1389/07/01

Ethics committee reference number

IR.SUMS.REC.1394.59

Health conditions studied

1

Description of health condition studied

Diabetes type I,II

ICD-10 code

(E10-E14)

ICD-10 code description

Diabetes mellitus

Primary outcomes

1

Description

renal function

Timepoint

At 7am in the first ,second and third days after surgery and 1 hours after surgery

Method of measurement

CR,BUN,K ,Cr CLEARANCE

2

Description

clearance Cr

Timepoint

At 7am in the first ,second and third days after surgery and 1 hours after surgery

Method of measurement

: $(140 - \text{age}) \times \text{wt} / 72 \times \text{Pcr}$ (in female $\times 0.85$) = Cockcroft

Secondary outcomes

1

Description

Check intake and output

Timepoint

during 8 pm to 8 am after operation and 24 hrs after 8 am

Method of measurement

by ICU sheet

Intervention groups

1

Description

Group intervention received infusion of 3 $\mu\text{g} / \text{kg} / \text{min}$ dopamine to 24 hours after the induction of the anesthesia

Category

Treatment - Drugs

2

Description

The control group did not receive medical treatment.

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center
MRI and Ordibehesht Hospital
Full name of responsible person
Homeira Moradi
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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Vice Chancellor for Research, Shiraz University of Medical Sc
Full name of responsible person
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Shiraz
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, Shiraz University of Medical Sc
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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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