

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

05 Jul 2026

### Comparison of the efficacy of the administration of ephedrine and phenylephrine on cerebral oxygenation in patients with off-pump coronary artery bypass graft surgery candidates

#### Protocol summary

##### Summary

This study aimed to compare the efficacy of administration of ephedrine and phenylephrine on cerebral oxygenation in patients undergoing off-pump coronary artery bypass graft surgery. This study is a clinical trial that was performed on 79 patients' candidate for Off-pump coronary artery bypass graft surgery. In the first group, to maintain normal blood pressure, bolus dose of 0.1 mg per kg body weight was administrated and second group, 2 micrograms per kilogram of body weight was administered phenylephrine. Invo indices of left and right and also O2Sat and MAP and HR were recorded at specified intervals.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT201204154583N5**  
Registration date: **2014-05-04, 1393/02/14**  
Registration timing: **retrospective**

Last update:

Update count: **0**

##### Registration date

2014-05-04, 1393/02/14

##### Registrant information

##### Name

Hossein Moshtaghion

##### Name of organization / entity

Yazd University of Medical Sciences

##### Country

Iran (Islamic Republic of)

##### Phone

+98 35 1525 0207

##### Email address

moshtaghion@ssu.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

Vice-chancellor for research -Shahid Sadoughi University of Medical Science

##### Expected recruitment start date

2012-03-01, 1390/12/11

##### Expected recruitment end date

2013-12-22, 1392/10/01

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Comparison of the efficacy of the administration of ephedrine and phenylephrine on cerebral oxygenation in patients with off-pump coronary artery bypass graft surgery candidates

##### Public title

Comparison of the efficacy of the administration of ephedrine and phenylephrine on cerebral oxygenation in patients with off-pump coronary artery bypass graft surgery candidates

##### Purpose

Treatment

##### Inclusion/Exclusion criteria

Inclusion criteria: all patients undergoing for Off-pump coronary artery bypass graft surgery. exclusion criteria: history of liver and renal diseases: history of previous neurologic disease and CVA: EF<40%

##### Age

No age limit

**Gender**

Both

**Phase**

3

**Groups that have been masked**

No information

**Sample size**

Target sample size: 79

**Randomization (investigator's opinion)**

Randomized

**Randomization description****Blinding (investigator's opinion)**

Double blinded

**Blinding description****Placebo**

Not used

**Assignment**

Parallel

**Other design features****Secondary Ids**

empty

**Ethics committees****1****Ethics committee****Name of ethics committee**

shahid sadoughi university of medical sciences

**Street address**

yazd\_ bahonar SQ

**City**

YAZD

**Postal code**

89177

**Approval date**

2013-03-06, 1391/12/16

**Ethics committee reference number**

p/17/1/180770

**Health conditions studied****1****Description of health condition studied**

ischemic heart disease

**ICD-10 code**

I23.8

**ICD-10 code description**

Other current complications following acute myocardial infarction

**Primary outcomes****1****Description**

cerebral oxygenation

**Timepoint**

before and after receiving vasoconstrictor

**Method of measurement**

INVOS (Invos 5100 somanetic Corp, Tory, MI, usa )

**2****Description**

cerebral oxygenation

**Timepoint**

before, during and after CX graft

**Method of measurement**

INVOS (Invos 5100 somanetic Corp, Tory, MI, usa )

**Secondary outcomes****1****Description**

mean heart rate

**Timepoint**

before induction, before and after receiving first constrictor, before and after receiving second constrictor

**Method of measurement**

ECG

**2****Description**

mean arterial blood pressure

**Timepoint**

before induction, before and after receiving first constrictor, before and after receiving second constrictor

**Method of measurement**

sphygmometer

**3****Description**

mean O2 SATURATION

**Timepoint**

before induction, before and after receiving first constrictor, before and after receiving second constrictor

**Method of measurement**

pulse oximetry

**Intervention groups****1****Description**

Intervention group 1: 0.1mg/kg Ephedrine bulus dose

**Category**

Treatment - Drugs

**2****Description**

Intervention group 2: 2 µ/kg Ephedrine

**Category**

Treatment - Drugs

## Recruitment centers

1

### Recruitment center

**Name of recruitment center**

Afshar hospital

**Full name of responsible person**

dr moshtaghion

**Street address**

yazd, Afshar hospital

**City**

yazd

## Sponsors / Funding sources

1

### Sponsor

**Name of organization / entity**

Vice-chancellor for research -Shaid Sadoughi  
University of Medical Science

**Full name of responsible person**

dr hassan mozaafari

**Street address**

yazd\_ bahonar SQ\_Shaid Sadoughi University of  
Medical Science

**City**

yazd

**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 -Shaid Sadoughi University  
of Medical Science

**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**

Shaid Sadoughi University of Medical Science

**Full name of responsible person**

Mohammad Hassan Abdollahi

**Position**

associate professor

**Other areas of specialty/work**

**Street address**

Afshar Hospital

**City**

yazd

**Postal code**

89177

**Phone**

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mhabdollahi@ssu.ac.ir

**Web page address**

## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**

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**Full name of responsible person**

Mohammad Hassan Abdollahi

**Position**

associate professor

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## Person responsible for updating data

### Contact

**Name of organization / entity**

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**Full name of responsible person**

Mohammad Hassan Abdollahi

**Position**

associate professor

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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*