Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

Comparison the effect of propofol and N-acetylcysteine on CRP and inflammatory markers after coronary bypass surgery

Protocol summary

Summary

The purpose of this study is comparison between antioxidant effects of propofol and N acetylcysteine on CRP and inflammatory markers after coronary artery bypass surgery. This study is designed as a randomized, prospective, interventional and single blind clinical trial .The study population all the patients who are candidate for coronary artery bypass surgery. Inclusion criteria consist of : Elective coronary artery bypass surgery. Exclusion criteria consist of : Off pump coronary artery bypass surgery; Severe left ventricular dysfunction, Emergency coronary artery bypass surgery; Re exploration surgery. In this study, 30 patients are selected and 15 patients in one groups are considered. One group of patients is received propofol by the dose of 100 microgram /kg/minute perioperative with sufentanil , midazolam and cis atracurium. Another group of the patients is received N acetylcysteine by the dose of 600 mg last night of surgery and this group is not received propofol in anesthesia. All patients monitored with arterial line before induction of anesthesia. Blood samples for cytokines will be drawn after induction of anesthesia , 15 minute post bypass, 3 hours post bypass and 24 hours after bypass. All patients monitored with invasive blood pressure monitoring with arterial line, central venous pressure and electrocardiography monitoring.CRP is checked last night of surgery, 4 hours and 24 hours after surgery. Hemodynamic data will be collected included systolic blood pressure, diastolic blood pressure, mean arterial blood pressure and heart rate after induction of anesthesia, 15, 30 minutes post bypass and 1,3 hours post bypass.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201102035751N1**

Registration date: **2012-07-05, 1391/04/15**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2012-07-05, 1391/04/15

Registrant information

Name

Abdolrasoul Anvaripour

Name of organization / entity

Bushehr University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 77 1252 6801

Email address

anvari@bpums.ac.ir

Recruitment status

Recruitment complete

Funding source

Bushehr University of Medical Sciences

Expected recruitment start date

2012-06-09, 1391/03/20

Expected recruitment end date

2012-08-10, 1391/05/20

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison the effect of propofol and N-acetylcysteine on CRP and inflammatory markers after coronary bypass surgery

Public title

Antioxidants used in anesthesia in coronary bypass surgery

Purpose

Supportive

Inclusion/Exclusion criteria

The study population of patients are 45 -75 years old candidates for coronary artery bypass surgery. Exclusion criteria consist of : Emergency coronary bypass surgery; Chronic renal failure; Chronic corticosteroid therapy; Re exploration surgery; Chronic inflammatory disease and autoimmune disease; Severe left ventricular failure(EF less than 35%); Liver disease; Infectious disease after surgery

Age

From **45 years** old to **75 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **30**

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

Bushehr University of Medical Sciences

Street address

Bahmani,pardis site of Bushehr University of Medical Sciences

City

Bushehr

Postal code

Approval date

2012-03-06, 1390/12/16

Ethics committee reference number

32949

Health conditions studied

1

Description of health condition studied

coronay artery disease

ICD-10 code

125.1

ICD-10 code description

Atherosclerotic heart disease

Primary outcomes

1

Description

CRP

Timepoint

Last night before surgery- 4 and 24 hours after surgery

Method of measurement

arterial blood

2

Description

cytokines

Timepoint

after induction- 15 min, 3 and 24 hour after bypass surgery-

Method of measurement

arterial line

Secondary outcomes

1

Description

sysyolic blood pressure

Timepoint

pre induction of anesthesia- 15,30, 60 minute after bypass- in icu admit

Method of measurement

Arterial line

2

Description

diastolic blood pressure

Timepoint

preinduction- 15,30,60 minute post anesthesia- icu admit

Method of measurement

arterial line

3

Description

mean arterial pressure

Timepoint

preinduction- 15,30,60 minutes after bypass-icu admit

Method of measurement

arterial line

4

Description

heart rate

Timepoint

preinduction of anesthesia- 15,30,60 minutes after bypass- icu admit

Method of measurement

arterial line

Intervention groups

1

Description

N acetyl cyctein 600 mg orally last night of operation

Category

Treatment - Drugs

2

Description

propofol infusion during anesthesia and operation(50-100 mic/kg/min)

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Bentolhoda Hospital- Open Heart Operation Room

Full name of responsible person

Abdolrasoul Anvaripour

Street address

City

Bushehr

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Bushehr University of Medical Sciences

Full name of responsible person

Majid Assadi

Street address

Bushehr University of Medical Sciences

City

Bushehr

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Bushehr 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

Bushehr University of Medical Sciences

Full name of responsible person

Abdolrasoul Anvaripour

Position

Assistant Professor of Cardiac Anesthesiology

Other areas of specialty/work

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Position

Assistant Professor of Cardiac Anesthesiology

Other areas of specialty/work

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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