

Clinical Trial Protocol

Iranian Registry of Clinical Trials

24 Jul 2026

Preconditioning effect of Remifentanil on myocardium in patients undergoing on-pump coronary artery bypass graft surgery

Protocol summary

Summary

The purpose of this study was to evaluate the effect of remifentanil preconditioning on heart during on-pump coronary artery bypass grafting (CABG). This study is a prospective randomized clinical trial on 54 patients scheduled for elective on pump CABG surgery. The patients were randomized to receive Remifentanil or normal saline. Serial samples for measurement of cardiac troponin I (cTnI) were taken at the baseline and 2, 6, 12, and 24 hours after cross-clamp release. After operation the inotrop use in ICU, lengths of ICU and hospital stay were recorded.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT138904124297N1**

Registration date: **2010-08-23, 1389/06/01**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2010-08-23, 1389/06/01

Registrant information

Name

Mohammad Javad Esmaili

Name of organization / entity

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Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Shiraz University of Medical Sciences

Expected recruitment start date

2010-08-23, 1389/06/01

Expected recruitment end date

2010-10-22, 1389/07/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Preconditioning effect of Remifentanil on myocardium in patients undergoing on-pump coronary artery bypass graft surgery

Public title

Remifentanil preconditioning in patient undergoing CABG surgery

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: patients undergoing CABG, age <75 years, ejection criteria >30% Exclusion criteria: Any other surgeries (valve replacement), off pump patients, - MI at 2 wks prior to the study, cardiogenic shock, cardiac arrest, intra aortic balloon pump, ejection fraction <30%, TU score<9, CHF, LBBB, AV block, uncontrolled HTN

Age

To **75 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 54

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Single blinded

Blinding description

Placebo

Used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Shiraz University of Medical Sciences

Street address

Zand street, shiraz

City

Shiraz

Postal code

71345-1978

Approval date

2010-06-27, 1389/04/06

Ethics committee reference number

irct-89-5110

Health conditions studied

1

Description of health condition studied

Other functional disturbances following cardiac surgery

ICD-10 code

I97.1

ICD-10 code description

Other functional disturbances following cardiac surgery

Primary outcomes

1

Description

Troponin I

Timepoint

0, 2, 6, 12, 24 hours after induction

Method of measurement

laboratory

Secondary outcomes

1

Description

Hospital stay

Timepoint

During admission

Method of measurement

in days

2

Description

Inotrop use after operation

Timepoint

At admission time in ICU and hospital

Method of measurement

Inotrop use

3

Description

ICU stay

Timepoint

Duration admission

Method of measurement

in days

Intervention groups

1

Description

Intervention group: after monitoring with 5 lids ECG and pulse oximetry and noninvasive blood persior iv line was inserted, then after infusion of midazolam .02mg/kg and lidocain .5% subcutaneous arterial line was inserted with 20 gauge catheter then anesthesia induced by: midazolam , .05-.15mg/kg; fentanil, 5-10 mic/kg; propofol, .5-1.5mg/kg; pavlon.08-.15mg/kg; morphin .1-.5mg/kg. Then anesthesia was maintained with propofol, 50-150mg/kg. First, 1mcg/kg remifentanil was administered then .5 mcg/kg/min was infused for 30 minutes after induction and before sternotomy.

Category

Treatment - Drugs

2

Description

Control group: after monitoring with 5 lids ECG and pulse oximetry and noninvasive blood persior iv line was inserted, then after infusion of midazolam .02mg/kg and lidocain .5% subcutaneous arterial line was inserted with 20 gauge catheter then anesthesia induced by: midazolam , .05-.15mg/kg; fentanil, 5-10 mic/kg; propofol, .5-1.5mg/kg; pavlon.08-.15mg/kg; morphin .1-.5mg/kg. Then anesthesia was maintained with propofol, 50-150mg/kg. Normal saline was administered instead of remifentanil.

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Faghihi Hospital

Full name of responsible person

Dr Mohamad Javad Esmaili fellowship of cardiac anesthesia

Street address

Anesthesia ward, Faghihi Hospital

City

Shiraz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

University Of Medical sciences

Full name of responsible person

Dr Mohamad Hosain Dabagh Manesh

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ZAND street-SHIRAZ

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SHIRAZE

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

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

Shiraz University Of Medical Sciences

Full name of responsible person

Dr Mohamad Javad Esmaili

Position

Resident Fluship Of Cardiac Anesthesia

Other areas of specialty/work**Street address**

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Full name of responsible person

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Position

Profosor associated

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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