

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

05 Jul 2026

### Comparison of sonographic right internal jugular vein catheterization with short axis method in natural head position and medial- oblique method in 45 degree head position in open heart surgery

#### Protocol summary

##### Summary

**Objectives:** The aim of this study is to compare sonographic right internal jugular vein catheterization with short axis method in natural head position via medial-oblique technique in 45 degree head position in open heart surgery. **Research Design:** Conduction of a randomized, double-blind, clinical trial. **Inclusion criteria** of the study were as follows: Open-heart surgery patients, age above 18 years, Patients' consent to participate. **Exclusion criteria** of the study were: cannulation site infection/wound/hematoma/emphysema and surgery, intensive coagulopathy, IJV cannulation during the past 72 hours, recent cervical trauma with movement limitations, anatomical changes in the cervical vessels, IJV thrombosis with the short axis technique in open-heart surgery patients. **Intervention:** After induction of anesthesia 80 patients were divided into two groups of 40, Short Axis Group and Medial-Oblique Group. For short-axis technique, the patient's head was positioned at 0-degree angulation with his trunk. For medial-oblique technique, the patient's head was tilted to left to 45 degrees between the head and trunk. **Venous access time, guide wire time, cannulation time, total attempts for catheterization, total successful first attempts, number of arterial puncture, bleeding and hematoma at the puncture site and proper catheter placement were recorded and success rate of each technique, duration of different catheterization steps, primary mechanical complications for comparison of these techniques were determined in the operating room and also 7 hours after CABG in the ICU by chest X-ray .**

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT2015020819470N15**

Registration date: **2015-03-14, 1393/12/23**

Registration timing: **retrospective**

Last update:

Update count: **0**

##### Registration date

2015-03-14, 1393/12/23

##### Registrant information

###### Name

Farzaneh Masihi

###### Name of organization / entity

###### Country

Iran (Islamic Republic of)

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##### Recruitment status

**Recruitment complete**

##### Funding source

Vice Chancellor for Research, Shiraz University of Medical Science

##### Expected recruitment start date

2014-03-21, 1393/01/01

##### Expected recruitment end date

2014-09-23, 1393/07/01

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Comparison of sonographic right internal jugular vein catheterization with short axis method in natural head

position and medial- oblique method in 45 degree head position in open heart surgery

### Public title

Comparison of sonographic right internal jugular vein catheterization with short axis method in natural head position and medial- oblique method in 45 degree head position in open heart surgery

### Purpose

Supportive

### Inclusion/Exclusion criteria

inclusion criteria :age above 18 years, Open-heart surgery patients. Exclusion criteria : cannulation site infection/wound/hematoma/emphysema and surgery, intensive coagulopathy, IJV cannulation during the past 72 hours, recent cervical trauma with movement limitations, anatomical changes in the cervical vessels, IJV thrombosis with the short axis technique.

### Age

From **18 years** old

### Gender

Both

### Phase

2-3

### Groups that have been masked

*No information*

### Sample size

Target sample size: **80**

### Randomization (investigator's opinion)

Randomized

### Randomization description

### Blinding (investigator's opinion)

Not 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

2014-05-30, 1393/03/09

#### Ethics committee reference number

cp-p-9371-7071

## Health conditions studied

### 1

#### Description of health condition studied

Open Heart Surgery

#### ICD-10 code

197.1

#### ICD-10 code description

Other functional disturbances following cardiac surgery

## Primary outcomes

### 1

#### Description

To Determine the success rate of sonographic right internal jugular vein catheterization with short axis method with 0-degree angulation with his trunk

#### Timepoint

at the time of catheter insertion, in the operating room, 7 hours after catheter insertion in the ICU

#### Method of measurement

Observation

## Secondary outcomes

### 1

#### Description

To Determine the success rate of sonographic right internal jugular vein catheterization with medial-oblique method with 45-degree angulation with his trunk

#### Timepoint

at the time of catheter insertion, in the operating room, 7 hours after catheter insertion in the ICU

#### Method of measurement

Observation

## Intervention groups

### 1

#### Description

Intervention group 1: for internal jugular vein catheterization with short-axis technique, the patient's head was positioned at 0-degree angulation with his trunk

#### Category

Treatment - Surgery

### 2

#### Description

Intervention group 2: for internal jugular vein catheterization with medial-oblique technique, the patient's head was tilted to left to 45 degrees between the head and trunk.

#### Category

Treatment - Surgery

## Recruitment centers

1

### Recruitment center

**Name of recruitment center**

Namazi Hospital

**Full name of responsible person**

Mohammad Mehdi Derakhshan

**Street address**

Zand Street, Namazee Hospital

**City**

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Anesthesiologist, Cardioanesthetic fellowship

**Other areas of specialty/work**

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## Sponsors / Funding sources

1

### Sponsor

**Name of organization / entity**

Vice Chancellor for Research, Shiraz University of  
Medical Sciences

**Full name of responsible person**

Dr Seed Basir Hashemi

**Street address**

Vice Chancellor for Research, Shiraz University of  
Medical Sciences, 7th floor, Central Building of Shiraz  
University of Medical Sciences, Zand Street

**City**

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  
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**

Mohammad Mehdi Derakhshan

**Position**

## Person responsible for scientific inquiries

### Contact

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**Full name of responsible person**

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Cardioanesthesiologist

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## Person responsible for updating data

### Contact

## 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*