

Clinical Trial Protocol

Iranian Registry of Clinical Trials

02 Jun 2026

Comparison of the Effectiveness of Central versus Peripheral Administration of Epinephrine in Success of Return of Spontaneous Circulation in Cardiopulmonary Arrest Patients

Protocol summary

Study aim

The aim of this study is to compare central versus peripheral administration of Epinephrine during cardiopulmonary resuscitation

Design

This study is a two arm parallel groups clinical trial with double blinding. sample size is estimated based on the census subjects in each group.

Settings and conduct

This study setting is at Namazi Hospital, Shiraz. Trained PGY-2 and PGY-3 emergency medicine residents will be the leader of CPR. Outcome assessors are blinded to treatment allocation. The one who record the data is blinded to the type of interventions and the investigators doing the analysis are not the same as those administering drug and performing the procedures.

Participants/Inclusion and exclusion criteria

Inclusion criteria include adult patients with cardiopulmonary arrest admitted to the emergency department of Namazi hospital. Exclusion criteria include patients with age less than 18 years old, all patients with GCS = 3 before CPR, and all patients expired before CPR.

Intervention groups

The patients will be allocated into two study groups. Patients in the group one will be administered 1 mg Epinephrine every 3-5 minutes through peripheral venous during CPR, while the patients in the group two will be received 1 mg Epinephrine every 3-5 minutes administering through central venous. All the patients will have central or peripheral line before resuscitation

Main outcome variables

The primary outcomes are the systolic and diastolic blood pressure and heart rate after return of spontaneous circulation, and elapsed time to return of spontaneous circulation. In addition, we will be considered success rate and mortality rate as secondary outcomes.

General information

Reason for update

Acronym

CPR (cardiopulmonary resuscitation)

IRCT registration information

IRCT registration number: **IRCT20180613040087N2**

Registration date: **2020-02-22, 1398/12/03**

Registration timing: **retrospective**

Last update: **2020-02-22, 1398/12/03**

Update count: **0**

Registration date

2020-02-22, 1398/12/03

Registrant information

Name

Azadeh Tafakori

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 71 3822 9856

Email address

tafakori@sums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-02-20, 1397/12/01

Expected recruitment end date

2020-02-20, 1398/12/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of the Effectiveness of Central versus Peripheral Administration of Epinephrine in Success of Return of Spontaneous Circulation in Cardiopulmonary Arrest Patients

Public title

Epinephrine administration during cardiopulmonary resuscitation

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Adult patients with cardiopulmonary arrest admitted to the emergency department of Namazi hospital

Exclusion criteria:

Patients with age less than 18 years old All patients with GCS = 3 before CPR All patients expired before CPR

Age

From **18 years** old

Gender

Both

Phase

3

Groups that have been masked

- Outcome assessor
- Data analyser

Sample size

Target sample size: **8**

Randomization (investigator's opinion)

Not randomized

Randomization description

Blinding (investigator's opinion)

Single blinded

Blinding description

Outcome assessors are blinded to treatment allocation. The one who record the data is blinded to the type of interventions and the investigators doing the analysis are not the same as those administering drug and performing the procedures.

Placebo

Not used

Assignment

Parallel

Other design features

All patients will be immediately resuscitated based on AHA guidelines. All patients will have central or peripheral line before resuscitation. Trained PGY-2 and PGY-3 emergency medicine residents will be the leader of CPR. Sample size is estimated based on the census subjects in each group

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Shiraz University of Medical Sciences

Street address

Headquarters of Shiraz University of Medical Sciences, Zand St, Shiraz

City

Shiraz

Province

Fars

Postal code

1456946111

Approval date

2019-02-19, 1397/11/30

Ethics committee reference number

IR.SUMS.MED.REC.1397.537

Health conditions studied

1

Description of health condition studied

Cardiopulmonary Arrest

ICD-10 code

I46

ICD-10 code description

Cardiac arrest

Primary outcomes

1

Description

Systolic and diastolic blood pressure

Timepoint

After return of spontaneous circulation

Method of measurement

Sphygmomanometer

2

Description

Heart rate

Timepoint

After return of spontaneous circulation

Method of measurement

Chronometer

3

Description

Elapsed time to return of spontaneous circulation

Timepoint

After return of spontaneous circulation

Method of measurement

Chronometer

Secondary outcomes

nemazee_inf@sums.ac.ir

1

Description

Success rate of return of spontaneous circulation

Timepoint

After return of spontaneous circulation

Method of measurement

Monitor and pulse checking

2

Description

Mortality rate

Timepoint

After return of spontaneous circulation

Method of measurement

Monitor and pulse checking

Intervention groups

1

Description

Control group: Patients in the group one will be administered 1 mg Epinephrine every 3-5 minutes through peripheral venous during CPR. All the patients will have peripheral line before resuscitation.

Category

Treatment - Drugs

2

Description

Intervention group: The patients in the group two will be received 1 mg Epinephrine every 3-5 minutes administering through central venous. All the patients will have central line before resuscitation.

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Namazi hospital

Full name of responsible person

Azadeh Tafakori

Street address

Namazi square, Shiraz

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Fars

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7193613311

Phone

+98 71 6474 3322

Email

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Shiraz University of Medical Sciences

Full name of responsible person

Merzad Lotfi

Street address

Building of Shiraz University of Medical Sciences,
Zand Ave

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7134814336

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Email

info@sums.ac.ir

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Shiraz University of Medical Sciences

Proportion provided by this source

100

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Shiraz University of Medical Sciences

Full name of responsible person

Babak Bagheri

Position

resident

Latest degree

Medical doctor

Other areas of specialty/work

Emergency Medicine

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Person responsible for scientific inquiries

Contact

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Position
assistant professor
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Person responsible for updating data

Contact

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

All data related to the patients will be shared after identifying the patients

When the data will become available and for how long

Starting 1 month after publication

To whom data/document is available

This only available for people working in academic institutions

Under which criteria data/document could be used

All statistical analysis are allowed in line with the objectives of the study. Application terms for access to data including: People working in academic institutions who have registered a protocol liked our study. People are committed to data protection

From where data/document is obtainable

Azadeh Tafakori, Shiraz Nemazee Hospital, Email:
dr.azadeh.tafakori@gmail.com

What processes are involved for a request to access data/document

Through automation correspondence or email

Comments