Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 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 Univesity of Medical Sciences

Street address
Headquarters of Shiraz Univesity 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
Sphygmomonometer

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

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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Shiraz
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7193613311
Phone
+98 71 6474 3322
Email
nemazee_inf@sums.ac.ir

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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Shiraz
Province
Fars
Postal code
7134814336
Phone
+98 71 3230 5410
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

Name of organization / entity
Shiraz University of Medical Sciences

Full name of responsible person
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Position
assistant professor

Latest degree
Specialist

Other areas of specialty/work
Emergency Medicine

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Person responsible for updating data

Contact

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assistant professor

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Specialist

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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