

Clinical Trial Protocol

Iranian Registry of Clinical Trials

28 Jun 2026

Investigating the effect of abdominal compression on consequences of cardiopulmonary resuscitation in hospitalized patients

Protocol summary

Study aim

Determining the effect of abdominal compression on the consequences of cardiopulmonary resuscitation in hospitalized patients

Design

The present study is an interventional study, parallel design, with a sample size of 90 people. Block randomization based on block permutation is used for randomization. To conceal the allocation, block sizes are also randomly selected (4, 6).

Settings and conduct

The study sample is selected by random sampling method from patients with cardiopulmonary arrest admitted to Razi hospital. Study subjects are blind to the intervention due to lack of knowledge about the type of cardiopulmonary resuscitation (due to loss of consciousness).

Participants/Inclusion and exclusion criteria

Inclusion criteria: Written informed consent from the client's family or guardian, age of 18 to 85 years, hospitalized patients with cardiopulmonary arrest.

Exclusion criteria: patients with liver cirrhosis, history of abdominal surgery in the last two weeks, active gastrointestinal bleeding, abdominal ascites.

Intervention groups

In the intervention group, chest compression will be performed 100 times in a minute at a depth of 5 cm and ventilation will be performed using an Ambobag. Also in this group, abdominal compression is performed simultaneously with chest compression with the hands open and integrated and it is applied in the center of the abdomen between the xiphoid process and the umbilicus during the resting phase of the chest compression. In the control group, chest compression will be performed as in the intervention group, but no abdominal compression will be applied.

Main outcome variables

Spontaneous return of blood flow

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20080901001174N14**

Registration date: **2021-05-28, 1400/03/07**

Registration timing: **prospective**

Last update: **2021-05-28, 1400/03/07**

Update count: **0**

Registration date

2021-05-28, 1400/03/07

Registrant information

Name

Atefeh Ghanbari

Name of organization / entity

Guilan University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 13780509

Email address

at_ghanbari@gums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-07-06, 1400/04/15

Expected recruitment end date

2021-12-06, 1400/09/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Investigating the effect of abdominal compression on consequences of cardiopulmonary resuscitation in hospitalized patients

Public title

The effect of abdominal compression on consequences of cardiopulmonary resuscitation

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Written informed consent from the client's family or guardian Age of 18 to 85 years Hospitalized patients with cardiopulmonary arrest

Exclusion criteria:

Patients with liver cirrhosis History of abdominal surgery in the last two weeks Active gastrointestinal bleeding Patients with abdominal ascites

Age

From **18 years** old to **85 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **90**

Randomization (investigator's opinion)

Randomized

Randomization description

In this research, block randomization based on block permutation will be used. Initially, based on the specified sample size, the samples will be placed inside the blocks and in each block there will be an equal number of control and intervention groups. The site <https://www.sealedenvelope.com/>, which was set up to randomize clinical trials, will be used to generate a random allocation sequence in each block. To hide the allocation, the block size will be selected randomly (4, 6). In this case, for the present study, which have two groups, blocks with a size of 4 will include 2 participants from the control group and 2 participants from the intervention group. Also, blocks with a size of 6 will include 3 participants from the control group and 3 participants from the intervention group. Sampling will continue based on the assigned sequences in each block to complete the specified sample size. If the patient leaves the study, the relevant code will be assigned to the next sample.

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

Ethics Committee of Guilan University of Medical Sciences

Street address

Deputy of Research and Technology of Guilan University of Medical Sciences., In front of 17Sharivar Hospital., Shahid Siadati St., Namjoo Blvd.

City

Rasht

Province

Guilan

Postal code

4146939114

Approval date

2021-03-10, 1399/12/20

Ethics committee reference number

IR.GUMS.REC.1399.665

Health conditions studied

1

Description of health condition studied

Cardiac arrest

ICD-10 code

I46

ICD-10 code description

Cardiac arrest

Primary outcomes

1

Description

Spontaneous return of blood flow

Timepoint

After intervention (immediately after onset and half an hour after cardiopulmonary resuscitation).

Method of measurement

Cardiopulmonary monitor

Secondary outcomes

1

Description

Mean arterial pressure

Timepoint

After intervention (immediately after onset and half an hour after cardiopulmonary resuscitation).

Method of measurement

Cardiopulmonary monitor

2

Description

Arterial blood oxygen saturation

Timepoint

After intervention (immediately after onset and half an hour after cardiopulmonary resuscitation).

Method of measurement

Arterial blood gas test

3

Description

Heart rate

Timepoint

After intervention (immediately after onset and half an hour after cardiopulmonary resuscitation).

Method of measurement

Cardiopulmonary monitor

Intervention groups

1

Description

Intervention group: In the intervention group, chest compression will be performed 100 times in a minute at a depth of 5 cm and ventilation will be performed as soon as possible after intubation. Ventilation will be performed using an Ambobag and intravenous epinephrine and other drugs will be injected intravenously if necessary during resuscitation. Cardiopulmonary resuscitation will continue until the spontaneous return of blood flow and its termination will be one of the indications for termination of cardiopulmonary resuscitation. In this study, abdominal compression is performed simultaneously with chest compression with the hands open and integrated and it is applied in the center of the abdomen between the xiphoid process and the umbilicus during the resting phase of the chest compression. According to similar articles, the depth, rhythm and number of abdominal compression are similar to those of a chest compression, and the pressure on the abdomen continues until the next chest compression begins.

Category

Treatment - Other

2

Description

Control group: In this group, chest compression will be performed and ventilation will be performed as soon as possible after intubation. Ventilation will be performed using an Ambobag and intravenous epinephrine and other drugs will be injected intravenously if necessary during resuscitation. Cardiopulmonary resuscitation will continue until blood flow returns spontaneously and its termination will be one of the indications for termination of cardiopulmonary resuscitation.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Razi Educational & Remedial Center, Rasht

Full name of responsible person

Atefeh Ghanbari

Street address

Razi Educational & Remedial Center, Entezam St., Rasht

City

Rasht

Province

Guilan

Postal code

1311141937

Phone

+98 13 3332 6065

Email

bazrasi@gums.ac.ir

Web page address

<https://www.gums.ac.ir/razi>

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Deputy of Research and Technology of Guilan University of Medical Sciences

Full name of responsible person

Mohammad Reza Naghipour

Street address

Deputy of Research and Technology of Guilan University of Medical Sciences., In front of 17Sharivar Hospital., Shahid Siadati St., Namjoo Blvd.

City

Rasht

Province

Guilan

Postal code

4146939114

Phone

+98 13 3333 5821

Email

research@gums.ac.ir

Web page address

<https://www.gums.ac.ir/research/default.aspx?tabid=303>

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Deputy of Research and Technology of Guilan 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

Postal code

4146939841

Phone

+98 13 3355 5056

Email

at_ghanbari@gums.ac.ir

Web page address

https://isid.research.ac.ir/Atefeh_Ghanbari

Person responsible for general inquiries**Contact****Name of organization / entity**

Guilan University of Medical Sciences

Full name of responsible person

Atefeh Ghanbari

Position

Professor

Latest degree

Ph.D.

Other areas of specialty/work

Nursery

Street address

Faculty of Nursing and Midwifery., Daneshjo St., shahid Beheshti highway.

City

Rasht

Province

Guilan

Postal code

4146939841

Phone

+98 13 3355 5056

Fax

+98 13 3355 0098

Email

at_ghanbari@gums.ac.ir

Web page address

https://isid.research.ac.ir/Atefeh_Ghanbari

Person responsible for updating data**Contact****Name of organization / entity**

Guilan University of Medical Sciences

Full name of responsible person

Atefeh Ghanbari

Position

Professor

Latest degree

Ph.D.

Other areas of specialty/work

Nursery

Street address

Faculty of Nursing and Midwifery., Daneshjo St., shahid Beheshti highway.

City

Rasht

Province

Guilan

Postal code

4146939841

Phone

+98 13 3355 5056

Fax**Email**

at_ghanbari@gums.ac.ir

Web page address

https://isid.research.ac.ir/Atefeh_Ghanbari

Person responsible for scientific inquiries**Contact****Name of organization / entity**

Guilan University of Medical Sciences

Full name of responsible person

Atefeh Ghanbari

Position

Professor

Latest degree

Ph.D.

Other areas of specialty/work

Nursery

Street address

Faculty of Nursing and Midwifery., Daneshjo St., shahid Beheshti highway.

City

Rasht

Province

Guilan

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

Main and total data

When the data will become available and for how long

After publication of the results, the access period begins

To whom data/document is available

Universities and scientific institutions

Under which criteria data/document could be used

In case of citing the article and observing the principles of intellectual property

From where data/document is obtainable

Executor of proposal

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

Contact with proposal executor and making ethical agreement

Comments