Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

The effect of three counting chest compression methods on quality of CPR and rescuer fatigue

Protocol summary

Summary

This study a clinical trial aimed to make comparison of the effectiveness of Three methods of counting chest compressions the quality of cardiopulmonary resuscitation and the rescuers fatigue at Mashhad Ghaem Hospital by the CPR team was performed on patients with .cardiopulmonary arrest Inclusion and exclusion criteria include: the rescuers is to possess at least 6 months membership in CPR team; Patient must have advanced aerial pathways such as trachea duct; hesitation of continuing the CPR program and failing to perform the correct 2minutes CPR cycles. The volume of 90 Patients specimens has been calculated. With enouncing the code 99 associated with the patient arrest, the CPR process get commenced . Looking for intubating the patient, Capnography sensor is connected to the endotracheal tube. At the end every 2 minutes, the ETCo2 value is read by the researcher via monitor and registered in the patient CPR assessment checklist. Generally, every rescuer in every CPR performs 4 min chest compression For two cycles of 2 minutes with wash out 2minute. The number of massages which is calculated by cronometer is registered in patient CPR checklist. The rescuer fatigue before starting the CPR is measured upon the self -reported form (evaluation instrument 0-10) and get registered on the basis of observational criterion of severity of fatigue. The specimens will be done in 2 months and the CPR quality, numbers of massage per minute and the rescuers fatigue are investigate

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016092129908N1**
Registration date: **2016-11-27, 1395/09/07**
Registration timing: **registered_while_recruiting**
Last update:
Update count: **0**

Registration date

2016-11-27, 1395/09/07

Registrant information

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Recruitment status

Recruitment complete

Funding source

Mashhad University of Medical Sciences - School of Nursing and Midwifery

Expected recruitment start date

2016-10-22, 1395/08/01

Expected recruitment end date

2016-12-20, 1395/09/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of three counting chest compression methods on quality of CPR and rescuer fatigue

Public title

The effect of the number of massage in cardiopulmonary resuscitation

Purpose

Diagnostic

Inclusion/Exclusion criteria

Inclusion criteria ; Revivers should be intended to participate in the study ; Must hold a Bachelor certificate or higher education(nursery or anesthesia) ; Minimum of 6 month work experience in reviving team is obligate ; participating in explanatory program before commencing the program interfering ; The patient must have advanced Aerial pathways such as Trachea duct. Exclusion criteria ; Hesitation of continuing the program ; Failing in perfect performing of 2 minutes CPR (cardio massage and Giving artificial breath) ; Refusing to participate in at least one of the methods ; Failing to perform the reviving process according to AHA protocol.

Age

From **18 years** old to **75 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **90**

Randomization (investigator's opinion)

N/A

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Crossover

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Mashhad University of Medical Sciences

Street address

Research and Technology Mashhad University of Medical Sciences, next to the Cinema Hovazeh, University Street , Mashhad

City

MASHHAD

Postal code

Approval date

2015-12-21, 1394/09/30

Ethics committee reference number

IR.MUMS.REC.1394.567

Health conditions studied

1

Description of health condition studied

Cardiopulmonary resuscitation

ICD-10 code

E26، E28

ICD-10 code description

Pulmonary heart disease and diseases of pulmonary circulation

Primary outcomes

1

Description

The number of massage

Timepoint

Immediately after two minutes of cardiac massage

Method of measurement

Stopwatch، Observation

2

Description

rescuer fatique

Timepoint

Before and after two minutes of cardiac massage

Method of measurement

Visual Analog Scale.

3

Description

end-tidal CO2

Timepoint

Immediately after two minutes of cardiac massage

Method of measurement

Capnography device

Secondary outcomes

1

Description

number ventilation

Timepoint

after two minutes of cardiac massage

Method of measurement

Observation

Intervention groups

1

Description

Alternate Method (1-10): Counting massage by Rescuer From 1 to 10 done. again Massage counting starts from one. Total Count 2 minute massage is done by researcher. Generally, every rescuer in every CPR performs 4 min chest compression For two cycles of 2 minutes with wash out 2minute. quality of CPR and rescuer fatique will be evaluated.

Category
Other

2

Description
common method (Without counting): rescuer Performed of Chest compressions without counting for 2 minutes and total Count 2 minute massage is done by researcher. . Generally, every rescuer in every CPR performs 4 min chest compression For two cycles of 2 minutes with wash out 2minute. quality of CPR and rescuer fatique will be evaluated.
Category
Other

3

Description
Continuous method (1-100): Rescuer Counts cardiac massage form one to hundred and counting again Repeats form one to hundred. Total Count 2 minute massage is done by researcher. Generally, every rescuer in every CPR performs 4 min chest compression For two cycles of 2 minutes with wash out 2minute. quality of CPR and rescuer fatique will be evaluated.
Category
Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Quaem Haspital
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Mashhad University of Medical Sciences
Full name of responsible person
Zahra Sadat Manzary
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Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Mashhad 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

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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