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Compression Only CardioPulmonary Resuscitation in telephone-assisted bystanders (COCPR III)

Submission date
01/05/2014

Recruitment status
No longer recruiting

Registration date
14/05/2014

Overall study status
Completed

Last Edited
14/08/2019

Condition category
Circulatory System

[X] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
High quality chest compressions are vital for survival after a cardiac arrest. Therefore bystanders are encouraged to act decisively in presence of a cardiac arrest victim. Telephone instructions are given by the emergency services responding to emergency calls. Unfortunately the quality of chest compression is usually inefficient because bystanders are often not trained. The aim of this study is to improve the quality of chest compression by comparing different instruction techniques.

Who can participate?
Your participation is voluntary. You need at least 18, give an informed consent and your blood pressure should be less than 150 mm Hg before the study starts.

What does the study involve?
Participants are randomly allocated to one of three groups: standard instructions given by emergency services over the phone, metronome over the phone, voice metronome over the phone.
If you take part two questionnaires are requested. The first one is about demographic data (age, smoking habits etc). The second questionnaire evaluates your physical fitness. Afterwards, you are requested to perform a skill test evaluating fine motor skills (you need to put pegs into holes with your non-dominant hand). Before the study starts your blood pressure and your heart rate are measured.
The main study is a simulated 10-minute cardiopulmonary resuscitation on a manikin (as for a cardiac arrest victim at home). Over the telephone, emergency services will give you instructions on how to resuscitate the victim (chest compression only resuscitation). During the resuscitation we will ask you for your subjective perceived exertion. After you have finished the simulated resuscitation scenario we will measure your heart rate and your blood pressure again. Also, you are requested to repeat the skill test.

What are the possible benefits and risks of participating?
There are no anticipated risks. The benefit will be improved basic life support skills.

Where is this study run from?
This study is organised by the Department of Emergency Medicine of the Medical University of Vienna. The study venue is a large shopping hall. Verbal instructions are given by a member of emergency services located in an emergency dispatch centre.

When is the study starting and how long is it expected to run for?
June 2014. Your participation will take only 15 minutes.

Who is funding the study?
The study is being funded by Laerdal Austria which will provide the Laerdal manikin.

Who is the main contact?
Dr. Raphael van Tulder
raphael.van-tulder@meduniwien.ac.at

Contact information

Type(s)
Scientific

Contact name
Dr Raphael van Tulder

Contact details
Department of Emergency Medicine
Medical University of Vienna
Waehringerguertel 18-20
Vienna
Austria
1090
+43 (0) 1 40400 1964
raphael.van-tulder@meduniwien.ac.at

Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers
V1.0

Study information

Scientific Title
Effect of a (voice) metronome on chest compression depth and compression rate in telephone-assisted cardiopulmonary resuscitation: a randomized three-armed simulation study

Acronym
COCPR III

Study objectives
Compression depth can be improved by a continuously repeated voice metronome sequence: 'deep-deep-deep-deeper'.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Medical University of Vienna Ethics Committee, 21/05/2013, 1318/2013

Study design
Prospective randomized investigator-blinded parallel-group simulation trial

Primary study design
Interventional

Secondary study design
Randomised controlled trial

Study setting(s)
Other

Study type(s)
Other

Participant information sheet
Not available in web format, please use the contact details below to request a patient information sheet

Health condition(s) or problem(s) studied
Cardiopulmonary resuscitation

Interventions
The scenario is planned as an out of hospital, telephone assisted, bystander CPR. Substantial information about circumstances (at home, compression only, telephone assisted bystander CPR) is given prior to participation. Outcome is blinded to the participants. After informed consent, participants are guided to a simulation room where the manikin is prepared. Only minimal study staff will have access to the scenario room to avoid distractions. The study staff's assignment is documentation of parameters and not to be involved in bystander CPR. Participants will be staffed with a telephone to call the Emergency Dispatch Centre (EDC). In the EDC, a professional emergency dispatcher will be providing verbal prompts via telephone to the bystander.

Every participant will perform closed-chest compression for 10 minutes on a slightly modified Resusci Anne® Manikin (Laerdal, Norway) without giving rescue breaths. Participants will be randomized to one of three groups:

1. Standard instructions will be given by the emergency medical dispatcher via telephone following the AMPDS protocol V12.0 provided by the IAED.
2. A metronome with a rate of 110 bpm will be transmitted via telephone.
3. A voice metronome will continuously prompt: 'deep-deep-deep-deeper!' at a rate of 100 beats per minute.

Data will be collected using the Laerdal® PC Skill-Reporting System - a software used with the adult size Laerdal® Resusci® Anne SkillReporterTM manikin to collect the subjects' CPR performance.

Intervention Type
Other

Phase
Not Applicable

Primary outcome measure
Chest compression depth, measured continously via the pc skillmeter software of the Resusci® Anne skillmeter

Secondary outcome measures
1. Quality of ECC defined as number of percent of adequately achieved compression depth, continously assesed via skillmeter pc
2. Time to measurable decay in chest compression depth, continously assesed via skillmeter pc
3. Frequency of chest compression, continously assesed via skillmeter pc
4. Correct recoiling of the manikin's chest, continously assesed via skillmeter pc
5. Heart rate/systolic blood pressure ratio reflecting physical strain, measured before and immediately after chest compression
6. BORG rate of perceived exertion measured at 2nd, 4th, 6th and 10th minute of chest compressions
7. Systolic and diastolic blood pressure, measured before and immediately after chest compression
8. Nine Hole Peg Test, measured before and immediately after chest compression

Overall study start date
10/06/2014

Completion date
10/06/2014

Eligibility

Key inclusion criteria
1. Voluntary participants
2. Informed consent
3. Age over 18 years
4. Blood pressure less than 160 mmHg (systolic) before starting CPR simulation

Participant type(s)
Patient

Age group
Adult

Lower age limit
18 Years

Sex
Both

Target number of participants
24

Total final enrolment
36

Key exclusion criteria
1. Healthcare professionals
2. Basic Life Support course performed within the last 6 months
3. Pregnancy
4. Blood pressure over 150 mm Hg (systolic) before starting CPR simulation

Date of first enrolment
10/06/2014

Date of final enrolment
10/06/2014

Locations

Countries of recruitment
Austria

Study participating centre
Department of Emergency Medicine
Vienna
Austria
1090

Sponsor information

Organisation
Medical University of Vienna (Austria)

Sponsor details

c/o Associate Prof. Dr. Harald Herkner, MSc
Clinical epidemiologist
Department of Emergency Medicine
Waehringerguertel 18-20/6D
Vienna
Austria
1090

Sponsor type
University/education

Website
http://www.meduniwien.ac.at/notfall

ROR
https://ror.org/05n3x4p02

Funder(s)

Funder type
Industry

Funder Name
Laerdal (Austria)

Results and Publications

Publication and dissemination plan
Not provided at time of registration

Intention to publish date

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	01/11/2015	21/01/2019	Yes	No