

POSTER PRESENTATION

Open Access

Can unannounced simulated cardiac arrest reduce pauses in chest compressions and time to defibrillation?

Frederik Mondrup^{1*}, Mikkel Brabrand¹, Lars Folkestad¹, Jacob Oxlund², Karsten Rechnagel Wiborg², Torben Knudsen³

From Danish Society for Emergency Medicine: Research Symposium 2010
Roskilde, Denmark. 20-21 May 2010

Background

The quality of resuscitation during cardiac arrest in hospital is often suboptimal and there is need for continuous improvement of education. Standardized simulation-based training is proposed as a mean to ensure a consistent and high level of competence among hospital staff, but it is costly and requires frequent recertification.

Successful resuscitation is dependent on teamwork and it is a challenging task to train cardiac arrest teams (CAT) as a unit because they consists of varying people.

The purpose of this pilot study is to investigate whether unannounced simulated cardiac arrests in hospital departments can reduce pauses in chest compressions and time to defibrillation.

Methods

This is a prospective intervention study with historical controls. Data on cardiac arrest treatment have been collected prospectively from defibrillators before the intervention was started and will be used as controls for comparison with data collected after the intervention. Data collection will stop when the ILCOR 2010 guidelines are published.

Code Stat 8.0 (Medtronic, Physio Control[®]) is used to collect data from LifePak 12/20 defibrillators (Medtronic[®]).

A Resusci Anne Simulator (Laerdal Medical[®]) is used to perform the simulations and to record data concerning chest compression and defibrillation. After preparing the equipment, the ward staff is informed that there is a critical ill patient on the ward and instructed to act as in a real clinical situation.

The scenario develops into cardiac arrest and the unaware CAT is called. When they reach the room the team is instructed to start treatment as usual (ILCOR 2005 guidelines).

After the simulation, a short debriefing of all participants is conducted with focus on pauses in chest compressions and time to defibrillation.

Results

Data from before intervention, during simulations and post simulation will be presented. Data on pauses in chest compressions and time to defibrillation in the pre-analysis and post-analysis group will be compared statistically. Furthermore data from the simulations will be analysed separately.

Conclusion

Data collection has begun. We think that unannounced simulated cardiac arrest can reduce pauses in chest compressions during cardiac massage, and reduce time to defibrillation and thereby improve the quality of resuscitation.

Author details

¹Department of Acute Care Medicine, Sydvestjysk Sygehus Esbjerg, Denmark.

²Department of Anaesthesiology, Sydvestjysk Sygehus Esbjerg, Denmark.

³Department of Regional Health Research Centre, Sydvestjylland, Denmark.

Published: 17 September 2010

doi:10.1186/1757-7241-18-S1-P4

Cite this article as: Mondrup et al.: Can unannounced simulated cardiac arrest reduce pauses in chest compressions and time to defibrillation? *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine* 2010 **18**(Suppl 1):P4.

* Correspondence: frederik.mondrup@gmail.com

¹Department of Acute Care Medicine, Sydvestjysk Sygehus Esbjerg, Denmark
Full list of author information is available at the end of the article