


MECHANICAL CHEST COMPRESSION DEVICES AS AN OPTION FOR OUT-OF-HOSPITAL CARDIAC ARREST IN COVID-19 PANDEMIC

Mehdi Al-Jeabory¹, Gabriela Oliwia Borkowska², Agata Olecka², Adrian Goss²,
Wojciech Wiczorek¹, Togay Evrin³ 

¹Department of Emergency Medicine, Medical University of Warsaw, Poland

²Faculty of Medicine, Collegium Medicum, Cardinal Stefan Wyszyński University, Warsaw, Poland

³Department of Emergency Medicine, Ufuk University Medical Faculty, Dr Ridvan Ege Education and Research Hospital, Ankara, Turkey

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We read with great interest an article by Malysz et al. [1]. In this manuscript, authors showed that over-the-head position is much more effective than standard position during chest compression. However, performing chest compressions while medical staff wears personal protective equipment (PPE) against aerosol generating procedure (AGP) may reduce the quality of resuscitation efforts. This is because of the heavy burden on medical personnel wearing PPE-AGP [2]. The above thesis is confirmed by many studies [3]. At this point, as indicated by another study by Malysz et al., it is worth considering chest compressions using mechanical chest compression systems [4]. Thanks to the use of this type of devices, we obtain full standardization of chest compressions. With travel teams, when they are limited to 2–3 people, it is even more important, because then the rescuer may focus on performing other medical procedures instead of compressing the chest.

A problematic in the COVID-19 era is a significant reduction in the survival rate of OHCA patients. Ball et al. [5] analyzing the data of the Victorian Ambulance Cardiac Arrest Registry showed that survival to hospital discharge in adult OHCA patients during COVID-19 pandemic period was 6.1%, while in the period before the SHD pandemic it was significantly higher and amounted to 11.7%. This relationship is also confirmed by the studies of Baldi et al., where

SHD was 5.1% vs. 9.5% ($p = 0.06$) [6]. Importantly, in the studies indicated by Baldi et al. the frequency of mechanical CPR use was significantly lower for COVID-19 period compared to pre-COVID-19 period (respectively: 6.5% vs. 16.7%). In the study by Ball et al., however, it remained at a similar level: respectively 14.7% vs. 14.5% ($p = 0.921$).

In summary, it is justified in accordance with the guidelines of the European Resuscitation Council on Advanced Life Support during the COVID-19 pandemic to consider mechanical chest compression to facilitate transfer/treatment [7]. Due to the results obtained by Malysz et al., in favor of the use of mechanical chest compression, consideration should be given to the routine use of this type of device in relation to OHCA patients with suspected COVID-19.

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ADDRESS FOR CORRESPONDENCE:

Wojciech Wiczorek, Department of Emergency Medicine, Medical University of Warsaw, Lindleya 4 str. 02–005 Warsaw, Poland
e-mail: w.wiczorek@easyrescue.pl; phone: 048 692423119

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