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The final battle. What more can we do to be victorious with cardiac arrest? Preliminary data

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Abstract

Background. Efficient cooperation of the resuscitation team increases the chances of a survival. It has been shown that interruption of chest compressions during resuscitation significantly reduced the coronary perfusion pressure and at the same time the likelihood of return of spontaneous circulation (ROSC), a successful defibrillation outcome, which decreases chance of survival to discharge from the hospital. It is recommended interruption in chest compressions should be limited to the minimum. Chest compressions should be provided for at least 60% of resuscitation, although higher the percent, better the outcome. **Material and methods.** The study was designed as a randomized, cross-over simulation study. The research involved 60 individuals, formed in 20 three-person teams. The task was to conduct a 10-minute cardiopulmonary resuscitation during simulated sudden cardiac arrest (SCA) in ventricular fibrillation (VF). Each team performed the scenario four times using different defibrillation techniques and airway management. The total chest compression time was calculated and the percentage of compression in total resuscitation was calculated. **Results.** Shortest chest compressions time were obtained during CPR with bag-valve-mask and with AED (mean 6 min 11 s - 61.8%). The longest time (9 min 13 s - 92.2%) was obtained when self-adhesive electrodes were used during the manual defibrillation, asynchronous ventilation after laryngeal mask placement and charging the defibrillator 10-second before heart rhythm analysis. **Conclusions.** The strategy of treatment that we proposed increased chest compression fraction increased 30.4%. *Anestezjologia i Ratownictwo 2018; 12: 111-116.*

Keywords: CCF, Chest compression fraction, resuscitation, team dynamics