

The Effect of Displacement Time on the Quality of Chest Compressions by the Professional and Non-professional Rescuers

Abstract

Introduction: *Early fatigue in cardio pulmonary resuscitation by continuous compression of the chest is one of the main challenges in cardiopulmonary resuscitation. The aim of this study was to determine the effect of shift time on the quality of compression of the chest by professional and non-professional rescuers.*

Methods: *This is a cross-over experimental study, which compares the chest compression quality in two groups of professional and non-professional individuals in 70 teams of two people using two displacement methods in 1 minute and 2 minutes. In this study, three criteria were "chest compression in one minute" and "chest compression with sufficient depth (at least 5 centimeters) per minute" and "total chest compression with sufficient depth at the end of 16 minutes" on the manikin resuscitation was used.*

Results: *At the end of 8 cycles of 2 minutes in the professional group, the chest compression was sufficiently deep in the 1-minute scenario to 1964 and in the 2-minute scenario 1790. In unprofessional group, chest compression was sufficiently deep in the 1-minute scenario 1891 and 1614 in the 2-minute scenario.*

Conclusion: *Despite the descending amount of chest compression in sufficient depth, resuscitation can maintain at least 100-120 the chest compression per minute in 16 minutes. This suggests that displacement of resuscitators after 1 minute can increase chest compression with sufficient depth, and is approved in both professional and non-occupational groups and is more important in the non-professional group.*

Keywords: *Cardio pulmonary resuscitation, quality of the chest compression, Professional and Non-professional Rescuers, displacement time by Rescuers.*