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Letter to the Editor

In mountain and rural areas all CPR providers should perform chest compressions and rescue breaths for patients in cardiac arrest


The 2017 updated ERC Resuscitation guidelines recommend that the adult Basic Life Support (BLS) sequence remains unchanged and continues to endorse the International Liaison Committee on Resuscitation (ILCOR) recommendations that ‘all CPR providers should perform chest compressions for all patients in cardiac arrest. Compression-only CPR is recommended for bystanders who have not been trained in conventional CPR. For those CPR providers who have been trained and are able to perform rescue breaths, ILCOR still advocates the addition of rescue breaths [1,2].’ We agree that in an urban area, where the response time of an emergency medical system (EMS) is commonly < 15 min, this is a reasonable approach.

It is well established that in persons with secondary cardiac arrest from hypoxia rescue breaths are an essential part of CPR to improve outcome [2,3]. For instance, cardiac arrest in avalanche burial is mainly due to asphyxia if the patient is not extricated within the first 35 min. CPR in these patients has to include rescue breaths to overcome hypoxia [4]. The same rule applies to drowning which is also commoner in rural areas.

Furthermore, it is well established that only conventional CPR with rescue breaths may improve outcomes after prolonged cardiac arrests of > 15 min duration [5]. Some of these prolonged cardiac arrests result from a prolonged emergency medical system (EMS) response interval. In mountain and rural areas, EMS response intervals easily exceed 15 min and can be 30–60 min because EMS bases are more spread out and the distances to reach the patient are longer than in urban areas. Thus, in mountain and rural areas outcome from both primary and secondary, e.g. asphyxia-induced, cardiac arrest may be lower due to a prolonged response time of professional rescuers [4]. Having regard to the above factors, compression-only CPR is not usually an option except in the rare primary cardiac arrest occurring < 15 min before the rescue team’s arrival.

The ERC 2015 guidelines for remote and high altitude areas stated, that CPR should not differ from standard CPR [4]. Based on the afore mentioned, we suggest the 2017 ERC guidelines for mountain and rural areas are amended as follows “In mountain and rural areas all CPR providers should be trained and able to perform chest compressions and rescue breaths for all patients in cardiac arrest.”

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