Futility in Cardiopulmonary Resuscitation of Pre-Hospital Emergency

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Out-of-hospital cardiac arrest (OHCA) is cardiac arrest that occurs outside of a hospital setting [1]. Cardiopulmonary resuscitation (CPR) is the foundation of treatment for this major global health problem with high mortality, that improving patient’s chances of survival [2,3]. The results of a meta-analysis study on OHCA showed that the rate of survival to hospital admission, the rate of survival to hospital discharge, the pooled 1-month survival rate and the 1-year survival rate are 22.0%, 8.8%, 10.7% and was 7.7%, respectively [4]. Improving the quality and effectiveness of care for these patients is one of the tasks of pre-hospital emergency [2].

Pre-hospital emergency as a health management system is one of the most important pillars of providing medical services around the world [5], which is responsible for responding to emergency phone requests, sending to the place, providing care by trained staff at the scene of the accident, providing care in the vehicle and transporting the person to the selected medical center [6]. Although facilities, equipment and age of the patient are effective factors in successful resuscitation [7]. It should be noted that successful resuscitation depends on a strong chain of survival with the cooperation of the community, hospital, dispatch center, and ambulance [8]. The goal of emergency medical service (EMS) is to improve response time, respond to dispatch calls as often as possible, and ensure quality CPR [8]. In this system, personnel often provide advanced life support to patients with OHCA [8]. But staff in pre-hospital emergency teams is limited [9]. Therefore, it should be said that one of the barriers to CPR in the EMS is the lack of human resources [2].

In Iran’s EMS, people call 115 and provide the reason for the call and a history of the patient’s problems to the dispatch unit [10]. After identify the emergency situation of the patient, the dispatch personnel send the information and the main problem of the patient to the nearest emergency center [10]. The current policy is that for all CPR missions, only two personnel are organized, and these two must perform all CPR maneuvers and actions [2]. Apart from this, if the patient is transferred to the hospital, one of the two personnel must drive the ambulance. One or two person CPR for patients who are far from the hospital. It can cause many costs for the patient and the family. Separately, in the absence of an automatic massage machine, performing CPR by one person in the back of the ambulance brings difficulties. It seems that CPR in EMS is faced with a concept called futility.

Futility is a contentious term that has eluded clear definition [11]. With the proposed descriptions either too rigid or too vague to cover many aspects of medical care [11]. Futility is generally difficult to define, especially when dealing with CPR and other life-sustaining measures [11], so there are several definitions of futility in CPR [12]. But is the futility or assumption of the futility of CPR a cause not to perform this maneuver or not? How ethics are adhered to if a CPR is fulfilled, and
if CPR is not carried out, what ethical principles have not been observed. A question whose answer can reveal cases of cultural conflicts, the diversity of facilities and equipment’s among different societies and lead to the creation of general and specified opinions and reactions at the level of society and policy makers. On the one hand, ethical principles state that participation in procedures without the possibility of reasonable profit is prohibited [13]. There is no right to harm the patient and all patients have the right to be treated fairly and equally by others [14], and on the other hand, in clinical practice, there are no well-established criteria or guidelines to determine futility [12].

According to the above, it can be said that EMS personnel face many challenges, limitations and problems in CPR [15]. Clinical guidelines based on medical factors help make decision-making in pre-hospital resuscitation in some countries, while others countries rely on individual judgment [16]. The decision-making process in the pre-hospital emergency context is complicated [16]. Therefore, on the one hand, there is a need to provide a clear definition of the futility of CPR in the pre-hospital emergency context, which takes into account the lack of human resources and equipment. And on the other hand it seems that managers and policy makers should take steps to solve the lack of human resources and equipment.

References