



Letter to the Editor

Not all shockable initial rhythms have the similar clinical outcome in cardiac arrest victims

Dear Editor,

We read the article titled “In-hospital cardiac arrest in middle-income settings: A comprehensive analysis of clinical profiles and outcomes of both adults and pediatrics” by Khan MF *et al.* with great interest.¹ In this publication, the authors investigated the clinical characteristics and outcomes of cardiac arrest victims who had their index event during in-hospital admission. They reported that in the adult subgroup of study population, initial rhythm was non-shockable (93.4 %) and arrest was related to cardiac causes (68.4 %) mostly. Return of spontaneous circulation (ROSC) was achieved in 52.6 % of victims. Besides this, only 28.3 % of the adult subgroup of study population was discharged from hospital successfully. The study highlights the effect of comorbidities, initial heart rhythms and the duration of resuscitation on survival rates of cardiac arrest victims. Initial shockable rhythm existence has been well defined as a positive predictor for the future neurological recovery and hospital discharge. On the other hand, not all shockable initial rhythms especially different wave patterns of ventricular fibrillation (VF) possess the similar neurological outcome in clinical practice.

The time until defibrillation is the most important prognostic factor determining the survival and neurological outcome of patients with an initial rhythm of VF.² Waveforms of VF such as coarse or fine can give information about the time of circulatory collapse. Coarse VF means that majority of waveforms measure 3 mm or greater. Fine VF means that the majority of waveforms measure smaller than 3 mm. Coarse VF is related to an earlier phase of the circulatory collapse. The success of defibrillation therapy depends on how early it is administered after VF develops.³ Previous studies reported that proper defibrillation rates are higher in pulseless VT and coarse VF patients but fine VF patients can be overlooked sometimes.^{4,5} There are studies to improve softwares of automated external defibrillators for diagnosis of shockable initial rhythms to increase proper defibrillation rates.^{6,7} We wonder that if Khan MF *et al.* have any data about the waveforms of patients with an initial rhythm of VF. They reported that 10 patients in the adult subgroup of study population had a shockable initial rhythm (only 6.6 % of the total patients). Are there any statistical data for the percentage of coarse and fine VF for initial rhythms?

In conclusion, difference in waveforms of VF predict the good neurological recovery and discharge from the hospital in cardiac arrest victims. Coarse VF has a better clinical outcome and survival rate than fine VF.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Ali Çoner, Can Ramazan Öncel, Cemal Köseoğlu*
Alanya Alaaddin Keykubat University, Faculty of Medicine, Department of
Cardiology, Antalya, Turkey

* Corresponding author.

E-mail address: drcemalkoseoglu@hotmail.com (C. Köseoğlu).

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