EUROPEAN RESUSCITATION COUNCIL

Letter to the Editor

Reply to: Comment on 'Comparison of presumed cardiac and respiratory causes of out-of-hospital cardiac arrest'

Sir,

We would like to thank Dr Ma Qingbian et al. for their interest in the article "Comparison of presumed cardiac and respiratory causes of out-of-hospital cardiac arrest". We would like to answer some of their comments.

As reported in our study, a respiratory origin of cardiac arrest is associated with a worse outcome in our population represented by patients admitted to ICU.[1] Obviously, we cannot extend our results to the entire population of out-of-hospital cardiac arrest patients. First, because only a few patients are admitted to ICU after an out-of-hospital cardiac arrest (around 17% in a previous study).[2] Second, the determination of the origin of cardiac arrest is very difficult in the pre-hospital setting without biochemical and imaging parameters. Indeed, the accurate estimation of the cardiac and respiratory proportions is impossible.

The proportion of cardiac origin is different in our study compared to previous reports. This can be easily explained by the different settings, for example pre-hospital evaluation of the origin of cardiac arrest in the article by Engdahl et al.[3] Concerning the absence of matching, the aim of our study was to compare 2 populations dichotomized by the origin of cardiac arrest. The statistical analysis highlighted many differences between these populations. However, we reported only baseline characteristics. We did not intend to evaluate the efficacy of 2 interventions in these populations. That is why we make the choice to not match patient by using a methodological technique as propensity score, in order to preserve patient characteristics and to publish "real life" data. Concerning epinephrine, we realized that we forgot to report this important parameter in the multiple logistic regression model. Actually, it is associated with an unfavorable outcome with an odds-ratio of 4.53 (2.43–8.45); $p < 0.001$.

We agree that according to our results, the origin of cardiac arrest cannot be considered a prognostic factor in the entire cardiac arrest population. Obviously, larger studies are needed to evaluate this parameter.

Conflict of interest statement

None to declare.

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