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Letter to the Editor

Comment on ‘Comparison of presumed cardiac and respiratory causes of out-of-hospital cardiac arrest’

Dear Editor,

We read with great interest the study by Orbanin et al.¹ in a recent issue of *Resuscitation*. The authors confirmed findings from previous studies^{2,3} that patients with cardiac arrests of respiratory origin have worse outcomes compared to patients with arrests of cardiac origin, which might be explained by respiratory patients' greater insult preceding cardiac arrest.

However, we have a few questions and suggestions for the authors. First, the study included out-of-hospital cardiac arrest patients admitted to participating ICUs and treated with therapeutic hypothermia. Since the study excluded cardiac arrest patients who died before hospital admission or did not receive therapeutic hypothermia treatment, would it not be the case that, rather than for all cardiac arrest patients, respiratory origin indicates a worse outcome for patients after the return of spontaneous circulation? The number of cardiac origin deaths before transfer to hospital is unknown, which could lead to great bias if we extend the conclusion to all cardiac arrest patients.

Second, the proportion of cardiac origin is lower compared to some previous studies^{2,3}, and these patients are significantly younger compared to the respiratory origin patients in the study. We would suggest analyzing the data after pairing because there are many independent factors that may affect the outcome disproportionately. Third, adrenaline use does not appear in the multiple logistic regression model. Is this because the factor did not affect the results? If so, how is that demonstrated?

Despite the implications of this and previous studies comparing cardiac origin, we think it is still too early to specify causes of cardiac arrest as definite prognostic factors for the entire cardiac arrest population. Results from well-designed larger studies are awaited.

Conflict of interest statement

None to declare.

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