Ilmar Efendijev
Rahul Raj
Matti Reinikainen
Sanna Hoppu
Markus Benedikt Skrifvars

The incidence and outcome of in-ICU cardiac arrest

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Dear Editor,
We would like to thank Eastwood and Bellomo [1] for their interest in our paper on intensive care unit cardiac arrest (ICU-CA) in Finland between 2003 and 2013 [2]. We agree that ICU-CA incidence varies greatly. In a recent systematic review we found incidence rates to vary between 6 and 78/1,000 ICU admissions [3]. We think that the most important reason for this, apart from obvious differences in end-of-life care and allocation of ICU beds, is indeed the definition for cardiac arrest used in the different studies. In our study we defined cardiac arrest cases on the basis of the TISS item “*cardiac arrest and/or countershock within past 48 h*”, according to which even brief arrests that required only

defibrillation would result in a positive TISS item. A more commonly used definition “the need for chest compressions” might exclude brief episodes of ventricular fibrillation or pulseless ventricular tachycardia treated with defibrillation only. Additionally cardiac arrest occurring in the areas where all expertise and resources needed for cardiac arrest management are readily available would not necessarily lead to rapid response team activation.

The noted decrease in ICU-CA incidence and ICU-CA survival is in line with studies showing a decrease in in-hospital cardiac arrest incidence and improved survival overall [4]. We agree that these changes are multifactorial. Our findings should, as we have stated in our paper, be tested in other health care settings. Finally we think that adult ICU-CA has been somewhat neglected by the scientific community and there is a clear need for prospective studies looking at the etiology, management and outcome of ICU-CA.

Conflicts of interest None.

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I. Efendijev (✉) · M. B. Skrifvars
Intensive Care Medicine, Department of Anaesthesia and Intensive Care Medicine, Helsinki University Central Hospital, Helsinki, Finland
e-mail: ilmar.efendijev@helsinki.fi

R. Raj
Department of Neurosurgery, Helsinki University Central Hospital, Helsinki, Finland

M. Reinikainen
Department of Intensive Care, North Karelia Central Hospital, Joensuu, Finland

S. Hoppu
Department of Intensive Care, Tampere University Hospital, Tampere, Finland