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A86 - Fever after ohca – a post hoc analysis of the finnresusci study

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Introduction:

Fever may occur after out-of-hospital cardiac arrest (OHCA) and some previous data suggests it is associated with outcome. Recent studies show that targeted temperature management (TTM) targeting 33°C as a mean to avoid fever does not improve functional outcome (FO) [1] We aimed to assess the prevalence of fever among those not treated with TTM and study associations between fever and FO.

Methods:

A post hoc analysis of patients who were included in the FINNRESUSCI study but not treated with TTM. [2] The FINNRESUSCI study was an observational cohort study including all patients treated in Finnish intensive care units (ICU) following OHCA in 2010-2011. We defined fever as at least one temperature measurement of $\geq 37.8^{\circ}\text{C}$ within 72 h of ICU admission. [3] The primary outcome was favourable FO at 12 months defined as cerebral performance category (CPC) of 1 or 2.

Results:

This study included 67,428 temperature measurements from 192 patients of whom 87 (45%) experienced fever. Twelve-month CPC was missing in seven patients and 51(28%) patients had favourable FO at 12 months. Neither time in minutes nor area (minutes times degree over threshold) over 37°C , 37.5°C , 38°C , 38.5°C , 39°C , 39.5°C or 40°C were significantly different in those with favourable FO compared to those with unfavourable FO within the first 24, 48 or 72 hours from ICU admission. Fever was not associated with favourable FO at 12 months in a binary logistic regression model (odds ratio (OR) 0.65, 95% confidence intervals (CI) 0.34-1.24, $p=0.19$) or in a multivariable binary regression model including initial rhythm, witnessed arrest, bystander CPR and delay to return of spontaneous circulation (OR 0.90, 95% CI 0.44-1.84, $p=0.77$).

Conclusion:

Half of the patients not treated with TTM develop fever. We found no association between fever and outcome.

References:

1. J. Dankiewicz et. al. N Engl J Med 2021; 385:1341-1342
2. Vaahersalo J. et. al. Intensive Care Med. 2013 May;39(5):826-37.
3. Obermeyer Z et. al. S. BMJ. 2017, Dec 13;359:j5468.