

COMMENTARY

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Response to ‘Chest compressions at altitude are of decreased quality, require more effort and cannot reliably be self-evaluated’

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To the editor,

We thank van Veelen and colleagues for their interest in our article on an ascent to high altitude on physical exhaustion during cardiopulmonary resuscitation (CPR) [1].

We wholeheartedly concur with the assessment that performing CPR under such unique circumstances requires greater effort and impairs providers' ability to adhere to resuscitation guidelines at high altitudes. Whether the ascent was simulated through the use of a hypobaric chamber [2], made by car [3], or through an arduous ascent exceeding 1,200 m as in our case [1], the analysis of vital parameters showed pronounced exhaustion due to the demands of chest compressions at high altitude.

From this perspective, the findings by van Veelen et al. on providers' struggle to reliably self-evaluate the quality of chest compressions at high altitudes is both interesting and significant. This is in line with our previous findings on the discrepancy between subjective exhaustion and actual quality of CPR at high altitude [4]. We could demonstrate that during ventilation phases, heart rate immediately decreases, even after 14 min of CPR, underlining the importance of frequent resting phases.

We also concur with the assessment of a need for widespread adoption of mechanical chest compression devices in alpine settings, as those have been shown to be viable, even in difficult terrain [5].

We fully endorse the call to adjust the guidelines for CPR in the alpine setting in the light of recent findings. There is a critical need to emphasize the widespread use of mechanical chest compression devices. In their absence, a minute-by-minute rotation of chest compressions might be advocated and should be further studied.

Declarations

Competing interests

The authors declare that they have no competing interests.

Received: 20 November 2023 / Accepted: 21 November 2023

Published online: 12 December 2023

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