

Relevance of reversible causes during out-of-hospital cardiac arrest (REBECCA)

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Objectives

Early identification of reversible factors in out-of-hospital cardiac arrest (OHCA) is essential for effective treatment [1]. Portable diagnostic tools such as prehospital ultrasound, toxicology screening, and blood gas analysis aid in this critical process [2,3]. This study aims to assess the prevalence of reversible causes of OHCA.

Methods

The present preliminary data were collected as part of a study that was approved by the Ethics Committee of the Medical University of Vienna (EK 1608/2022) and was performed in accordance with the Declaration of Helsinki. This prospective single-center study is conducted in the Vienna metropolitan area. We included patients who had an OHCA in Vienna and it was possible to integrate prehospital ultrasound, blood gas analysis and intoxication screening in the advanced-life-support algorithm. Exclusion criteria were age <18, suspected pregnancy and delayed treatment or transport, due to enrolment.

Results

From April 2023 to March 2024, 56 patients with complete diagnostic data were recruited. In 21 (37,5%) cases, the resuscitation was stopped prehospital and in 35 (62,5%) cases the patient was transported to the hospital (sustained prehospital ROSC n=28 (50)).

Declaration of competing interest

The authors declare that they have no conflict of interest.

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In 32 (57,1%) cases it was possible to detect a reversible cause of cardiac arrest (Fig. 1), even though in 10 (31,2%) of these cases resuscitation was terminated pre-hospital. In 9 (28,1%) of these cases, the findings led to a change in therapy (n=6 (18,8%)) and destination hospital (n=3 (9,4%)).

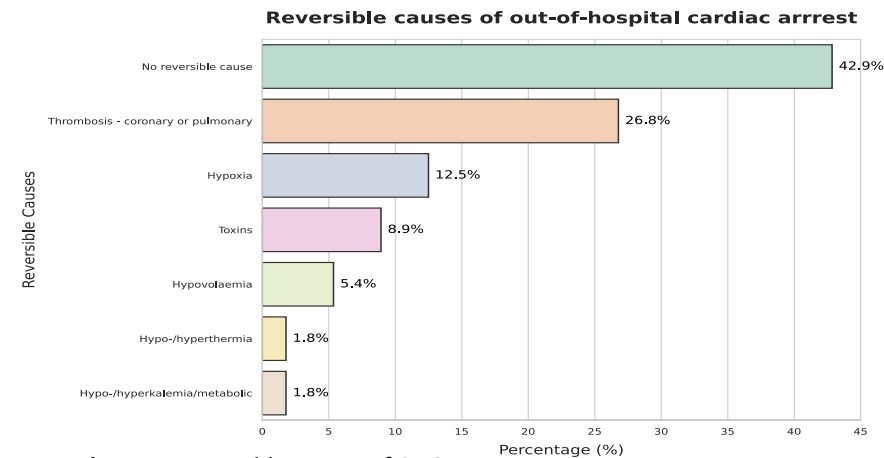


Figure 1: Reversible causes of OHCA

Discussion

Based on these preliminary data, a potentially reversible cause of OHCA could be identified in more than half of the cases. However, completing a full diagnostic work-up to determine the cause of OHCA remains a challenge.

References

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