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Letter to the Editor

Reply to letter: Adaptation to the 2017 ICAR MEDCOM Avalanche Victim Resuscitation Checklist



Sir,

The authors would like to thank D. Gray for his valuable inputs aiming to improve the 2017 Avalanche Victim Resuscitation Checklist (AVRC), recommended by the International Commission for Mountain Emergency Medicine ICAR MedCom, and want to address here a few aspects of his proposal.^{1,2}

The AVRC was initially designed for organised mountain rescue services that include BLS (mountain rescuers, ski patrollers, avalanche dog handlers) and ALS health care providers. BLS providers are meant to have been trained how to use the AVRC with the teaching presentation available on the ICAR website.³ The box “obvious lethal trauma or body totally frozen” is intentionally set in the ALS section, because the decision to terminate resuscitation is usually restricted to experienced providers according to national law. Stiff extremities should not be confused with “body totally frozen” and “lethal injury” should not be confused with “obvious lethal trauma”, which is defined on the back side of the 2017 AVRC. In the latter case, common sense should keep the rescuer from any resuscitation attempt, whilst for declaring a victim dead due to “lethal injury”, a complete medical assessment/treatment according to traumatic cardiac arrest guidelines is required.⁴

We also question the use of burial duration for victims with core temperature $<30^{\circ}\text{C}$, as proposed by Gray. If a core temperature of $<30^{\circ}\text{C}$ is measured on extrication using an esophageal probe, burial duration is no longer decisive. We disagree that victims in cardiac arrest with a core temperature $<30^{\circ}\text{C}$ should be treated with standard ALS. These patients should be treated according to the right arm of the AVRC and extracorporeal life-support be considered regardless of burial duration.

The sequence of ECG and airway patency in the AVRC allows the ALS provider to stop resuscitation in a patient with >60 min burial, asystole and obstructed airway, because esophageal temperature measurement will be futile and impossible if the airway is obstructed. Moreover, detection of any cardiac electrical activity in the early phase of rescue will prevent from missing a rescue collapse.

The AVRC is based on observational studies and has been proposed as a quality improvement intervention to enhance the low adherence to international guidelines reported in literature.⁵ Only a few mountain rescuers can rely on their personal experience as avalanche accidents are rare.⁶ The checklist has been designed for on-site decision making and to improve the transfer of medical information to hospital, especially in multi-victim accidents when

patients are treated by several rescuers at different places over time.

The AVRC is as limited as the current avalanche treatment guidelines, which are based on a low level of evidence. The ICAR MedCom intends to update the checklist according to the ERC guidelines expected to be published in 2021 and to include the experience acquired by mountain rescue services over the last 5 years.

Conflict of interest

I hereby confirm that any of the authors do not have any conflict of interest with regard to the content.

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