Therapeutic Hypothermia in the Postresuscitation Patient: The Development and Implementation of an Evidence-Based Protocol in the Emergency Department
Zeb E. Koran, RN, APN, DNP, CEN, CCRN
Northwest Community Hospital

Problem
Cardiopulmonary resuscitation (CPR) may or may not save a life. If a person survives the primary cause of arrest, the outcomes may still be less than desired. Efforts at using hypothermia to improve outcomes from arrest and severe disease processes have been explored since the 1800’s. If postresuscitation hypothermia can improve outcomes, it should become our practice. To do this, a literature review needed to occur and if enough evidence, a protocol needed to be developed. Because the emergency department is extremely busy, the protocol had to be practical and reasonable to increase the chances of it being implemented and successful.

Evidence
A systematic literature review was initially conducted regarding the topic of postresuscitation hypothermia. Because the literature was very supportive of this procedure and progressive changes could be seen, a decision was made to use only the last two years of research findings to develop the protocol details.

Strategy
A protocol was developed, with the intensive care medical director’s approval, which provided evidence based criteria for patient inclusion and exclusion, a method of initiating hypothermia, and medications to use. A process was also developed to educate the staff.

Practice
Postresuscitation hypothermia was to be initiated on patients that met the criteria. Practice changes also included the usage of urinary catheters with a thermistor and a process to maintain saline at 4° Celsius.

Evaluation, Results, and Lessons Learned
A monitoring process was originally established to determine if the protocol was initiated on appropriate patients and if it was carried out correctly. Within the first few weeks, a gap was noted in the process of maintaining cold saline. There was also a gap in the process of a patient, with hypothermia initiated, going to the cardiac catheterization lab. These issues were addressed. At present, the process continues to be monitored along with monitoring the outcomes of these patients.

Recommendation
All hospitals should consider implementing a postresuscitation hypothermia protocol. Literature should also be reviewed on a continuum as hypothermia in the postresuscitation patient is constantly changing in the window to start and the criteria to initiate the process. Traumatic brain injury, traumatic cardiac arrest, and stroke are currently being investigated to determine if hypothermia improves outcomes.

*This was originally published, with the same title, in (2008) Advanced Emergency Nursing Journal, 30(4), 319-333. It was published with permission in (2009, January-March) Journal of Trauma Nursing, 16(1), 48-57.
References


