Correspondence

Mild hypothermia therapy after cardiopulmonary resuscitation may improve cerebral resuscitation

Mild hypothermia has attracted considerable attention to assist cerebral resuscitation after cardiopulmonary arrest.¹ However, the definitive procedure has not been established. Our method involves cooling to a tympanic temperature of 33–34°C using systemic alcohol spray and blanket for several hours, and maintaining that temperature for five days, followed by spontaneous rewarming. Furthermore, 0.5 mg·kg⁻¹·hr⁻¹ midazolam continuously and mannitol 1 g·kg⁻¹ iv rapidly every six hours are administered during this period. Using these procedures, we experienced four cases completely recovered from cardiopulmonary arrest.

Summary data of these patients are presented in the Table below. The Emergency Medical Team transported the patients to our emergency room, while performing ventilation by mask using oxygen and external cardiac massage. By advanced life support, case #1 was immediately recovered heart beat, but case #3 needed a further 30 min before heart beat was restored. In case #2, temporary cardiac pacing restored blood pressure two hours after arrival. All cases, subsequently, received mild hypothermia therapy. Consciousness returned eight days later in case #1, 9 days later in case #2, 8 days later in case #3 and 9 days later in case #4.

From the present cases, it is difficult to evaluate the effectiveness of mild hypothermia on cerebral resuscitation. However, it has been suggested that mild hypothermia should be used more for brain protection during neurosurgical anesthesia.² Although the mechanism has

not been elucidated, we consider that mild hypothermia therapy may improve cerebral resuscitation.

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Aging and cardiovascular autonomic regulation

In a recent issue of the Journal, Nakayama *et al.*¹ reported an asystolic cardiac arrest occurring during removal of a pulmonary balloon catheter. Immediately after the PA catheter was removed hypotension, bradycardia and asystole developed. The authors attributed this unexpected cardiac event to increased parasympathetic activity. They also remarked that this increased response would be expected with aging. It is a daily occurrence for clinicians to observe that, in

TABLE Summary of the patients

No.	Age/Sex	Cause	Estimated time Until CPR	Bystander CPR	Estimated time for arriving at ER	EKG on arrival	Other findings on arrival
Case 1	1 yr/male	Drowning in bath	About 10 min	–	About 40 min	Standstill	Axillary temperature 37.6°C
Case 2	75 yr/male	Complete atrio-ventricular block	Immediate	+	22 min	Standstill	
Case 3	75 yr/male	Fall into the sea with the car	15 min	–	30 min	Standstill	Rectal temperature 33°C
Case 4	6 yr/male	Drowning in the warm pool	About 10 min	–	About 50 min	Sinus rhythm	Gasping Decerebration

CPR = Cardiopulmonary resuscitation. ER = Emergency room.