

Practical issues on therapeutic temperature modulation



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Therapeutic hypothermia has been considered as a new treatment modality in patients with severe brain injury since the landmark presentation of successful data after cardiac arrest. Despite with the lack of large randomized clinical trial, hypothermia has been applied in a variety of neurologic diseases including traumatic brain injury, severe meningitis and severe stroke. Moreover, patients with severe brain damage are prone to be febrile, which may be harmful because hypermetabolism is potentially harmful in a condition with limited energy sources. Therefore, maintaining normothermia, in other words, therapeutic normothermia *per se* may be beneficial. Here we will provide a representative term of *Therapeutic temperature modulation (TTM)* which includes hypothermia and normothermia. There are three main phases in TTM, induction, maintenance and rewarming. A variety of physiologic changes occur in three phases and some of them are very unique in specific phases. Here, we will briefly review the changes occurring in specific patient at a specific TTM phase.

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