Is therapeutic hypothermia beneficial in all patients following cardiac arrest?

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Whole body cooling in comatose patients who have suffered a heart attack can limit the damage to brain tissue caused by the restoration of blood flow and oxygen. But new data indicate that in certain patients therapeutic hypothermia is less effective and may even worsen neurological outcomes, as described in an article in *Therapeutic Hypothermia and Temperature Management*.

Timothy Mader and coauthors representing the CARES Surveillance Group (Baystate Medical Center, Tufts University School of Medicine, Springfield, MA; OptiStatim, LLC, Longmeadow, MA; Emory University School of Medicine, Atlanta, GA) conclude that while therapeutic hypothermia may be effective for certain patient subsets, “more uniform and rigid guidelines for application are needed to assure more appropriate application.”

The authors measured neurological outcomes at hospital discharge among a large group of adults who suffered heart attacks out of the hospital. They compared the results among patients whose hearts resumed beating with or without the need to be shocked and report their findings in the article “Comparative Effectiveness of Therapeutic Hypothermia After Out-of-Hospital Cardiac Arrest: Insight from a Large Data Registry.”

“This manuscript is important to the field of therapeutic hypothermia in that it points to a need for additional research to be conducted and guidelines developed to clarify specific patient populations that will most benefit from cooling strategies,” says W. Dalton Dietrich, III, PhD, Editor-in-Chief of the Journal and Kinetic Concepts Distinguished Chair in Neurosurgery, Professor of Neurological Surgery, Neurology and Cell Biology, University of Miami Leonard M. Miller School of Medicine.

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