

Study reveals no benefit to costly and risky brain cooling after brain injury

October 24 2018



Credit: CC0 Public Domain

The study, published today, in the *Journal of the American Medical Association* and presented at the same time at the Congress of European Society of Intensive Care Medicine in Paris by lead authors, Professors

Jamie Cooper and Alistair Nichol, looked at the outcomes for 511 patients across six countries who had traumatic brain injury (TBI).

An estimated 50-60 million people, worldwide, will suffer a TBI this year and more than half of the world's population will suffer at least one TBI during their lifetime. There has long been controversy around the benefits of brain cooling in the Intensive Care Unit following a TBI, in the belief the cooling or [hypothermia](#) reduces brain inflammation and consequent brain damage.

Professors Cooper, and Nichol, together with Lisa Higgins, and Tony Trapani, Dr. Dashiell Gantner, Profs Michael Bailey, Stephen Bernard, Peter Cameron Jeffrey Rosenfeld and Andrew Forbes all from Monash, together with colleagues in Queensland, Western Australia, New Zealand, France, Qatar, and Saudi Arabia, divided the TBI patients into two groups: those that received [hypothermia treatment](#) as soon as possible post-injury, often in the ambulance on the way to an emergency department, and half who did not receive the therapy. The study, called POLAR (Prophylactic hypothermia to lessen [traumatic brain injury](#)) ran from seven years from 2010.

Patients in the hypothermia arm of the trial had their body temperatures reduced (firstly with cold saline provided intravenously in the ambulance and then with cold body wraps in emergency departments and ICUs for between 3 and 7 days post-injury).

According to Professor Cooper, who will present the results in Paris, the study definitively found there was no benefit to patients receiving hypothermia, as measured by their capacity to live independently following recovery from the TBI with 49% able to do so in both groups. "This study is the final word on whether hypothermia as a treatment for TBI works," Professor Cooper, who is also Director of the Australian and New Zealand Intensive Care (ANZIC) Research Centre, said.

Using hypothermia in the ICU not only requires valuable staff time but runs the risk of increased bleeding, increased risk of infection, and decreased heart rate and blood pressure, all of which have to be managed in a vulnerable patient. "From now on, patients should not have to endure the risks of hypothermia because we now know there are no benefits," Professor Cooper said.

Provided by Monash University

Citation: Study reveals no benefit to costly and risky brain cooling after brain injury (2018, October 24) retrieved 5 July 2024 from <https://medicalxpress.com/news/2018-10-reveals-benefit-costly-risky-brain.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.