Letter by Mattingly et al Regarding Article, “Endovascular Hypothermia in Acute Ischemic Stroke: Pilot Study of Selective Intra-Arterial Cold Saline Infusion”

To the Editor:
We read with interest the article by Chen et al and had many questions about the methodology and findings.

This report indicates that a drop in cerebral tissue temperature was observed. However, the Methods section does not describe brain tissue monitoring or external surrogates such as nasopharyngeal temperature. Under the Discussion section, the authors state “we used data from a previous study to estimate the temperature reduction” and, in addition, “…we anticipate that we could have achieved at least a 2°C temperature drop in the ischemic territory.” This contradicts the statement presented in the Abstract and Results sections, which states that “The temperature of ischemic cerebral tissue was decreased by at least 2°C during infusion of the cold solution…”; therefore, we are uncertain whether the authors actually measured a drop in brain tissue temperature.

In addition, the results indicate that rectal temperature was decreased to 0.1°C. We have assumed the authors’ intent is the degree of rectal temperature reduction, not the absolute number; however, this is unclear. We also note that the Abstract states different systemic temperature reduction (maximum 0.3°C) and tables do not show final or postinfusion temperature.

We note that this is a safety trial. No evidence of efficacy is presented. However, the high incidence of vasospasm (15.4%) and pneumonia (38.5%) raise questions as to the safety of this technique, which is the primary end point. A prior trial using ice cold saline in diagnostic angiography did not detect angiographic vasospasm. The ICTuS-L study (Intravascular Cooling in the Treatment of Stroke—Longer window) detected a significant increase in pneumonia in the hypothermia arm. Therefore, we think that both of these measures are relevant to assessing safety and feasibility of endovascular ice cold saline in acute stroke. The lack of a reported baseline nonintervention cohort makes assessment of these critical measures impossible.

Unfortunately, this report raises more questions than it answers about the effect and safety of ice cold saline during endovascular treatment of acute ischemic stroke and utility remains completely unknown.

Disclosures
None.

Thomas K. Mattingly, MD, MSc
Stephen P. Lownie, MD
David M. Pelz, MD
Departments of Clinical Neurological Sciences and Medical Imaging
London Health Sciences Centre
Western University
Ontario, Canada

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