Authors have nothing to disclose with regard to commercial support.

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GROUP HOMOGENEITY IS PARAMOUNT IN RANDOMIZED TRIALS

Reply to the Editor:

We appreciate the insightful comments made by Lou and colleagues¹ regarding our recent article.² The multifactorial origin of neuronal injury accompanying cardiac surgery has been shown by Hogue and colleagues.³ To measure the independent impact of remote ischemic preconditioning on the outcomes of our trial, we accounted for all known potential confounders by following strict and uniform intraoperative and perioperative protocols.⁴ A goal-oriented strategy was used for all measurable parameters.

The periprocedural data we gathered were not limited to arterial oxygenation and systemic blood pressure control mentioned by Lou and colleagues,¹ but also included cardiac output, pulmonary artery pressure, and mixed venous oxygen saturation measurements. Systemic biomarkers of tissue perfusion complemented the monitoring strategy. Interventions designed to optimize these parameters were outlined in the previously published study protocol.⁴

We studied a low-risk patient population, which enabled us to use conservative transfusion triggers.⁵ Studying a homogenous population ensured the appropriateness of using

unvarying criteria for blood transfusions in both patient groups.

Variables monitored in our trial, however, went beyond the limited number of potential confounders mentioned by Lou and colleagues.¹ The parameters mentioned in their commentary would fall short of our monitoring standard.¹ Hyperglycemia, for instance, contributes significantly to neurologic dysfunction via cellular acidosis, brain edema, and oxidative stress.³ Therefore, tight glucose control was also included in our perioperative management strategy. In addition, stringent temperature control during cardiopulmonary bypass was implemented as cerebral hyperthermia, which has been shown to be associated with worse neurologic outcomes.⁵

A predefined and identical set of interventions was used in both groups to correct for hemodynamic and laboratory parameters diverging from targeted values. Neither the aforementioned variables nor the previously reported patient characteristics showed any statistically significant intergroup differences. Strict patient selection criteria coupled with adherence to uniform intervention protocols allowed for robust between-group comparisons that brought the independent impact of remote ischemic preconditioning into focus.

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