The authors reported no conflicts of interest.

The Journal policy requires editors and reviewers to disclose conflicts of interest and to decline handling or reviewing manuscripts for which they may have a conflict of interest. The editors and reviewers of this article have no conflicts of interest.

To the Editor:

We thank Entwistle and colleagues for a balanced and thoughtful review of the ethics of normothermic regional perfusion (NRP). As an author of the cited section on the unifying concept of death, we here state our position that thoracoabdominal (TA) NRP is unethical. The unifying concept of death of the donation after circulatory determination of death (DCD) donor requires the permanent cessation of brain circulation and function. In the absence of collateral blood flow to the brainstem, TA-NRP would be consistent with our unifying concept of death. However, we find TA-NRP to be unethical because of the intentional ligation of the arch vessels (ILAV). Animal data show that even after 8 minutes of asystole, NRP can restore clinical function of the brainstem and electroencephalographic activity in the absence of ILAV. The standard death declaration after 5 minutes of asystole in the DCD requires that the cessation of brain circulation is permanent. In the absence of the intervention of ILAV by the transplant surgeon, restoration of systemic circulation restores brain function. But with ILAV, brain blood flow does not resume solely because of the action taken to ensure that brain resuscitation will not succeed. ILAV can be plausibly viewed as causing death by preventing brain blood flow during resuscitation. This biological fact is not mitigated by donor desires or utilitarian benefits. A dichotomy between flow to the heart and brain was not anticipated in the original framing of DCD. We do support DCD, including direct procurement of hearts.

We conclude that ILAV is an unethical addition to DCD because it contrives to prevent brain resuscitation during circulatory restoration. This was one of several reasons that a Canadian consensus conference did not support NRP-TA.

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References

https://doi.org/10.1016/j.jtcvs.2022.04.029

REPLY FROM AUTHORS:
TYING OFF BRAIN VESSELS: CAN THAT BE OK?

Reply to the Editor:

We appreciate the comments and analysis of Peled and Bernat, whose contributions to the ethics of organ donation we recognize and value. Our paper was a consensus document from the Cardiothoracic Ethics Forum and represents the majority view of the Forum participants. Some participants agreed with Peled and Bernat’s position, so we raised and discussed similar concerns in our paper, including the view that additional study is needed for deeper scientific understanding of brain function in thoracoabdominal normothermic regional perfusion (TA-NRP).

As a group, however, we disagree with the assertion that TA-NRP is definitively unethical. The permissibility of organ donation after circulatory-determined death is based on permanent cessation of circulation to the brain, which inevitably will be totally destroyed. In donation after circulatory-determined death, circulatory cessation is permanent rather than temporary.