First Do No Harm in End-of-Life Care: A Comment on the 2015 American Heart Association Guidelines for Post-Resuscitation Care of Cardiopulmonary Arrest

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Dear Editor:

The American Heart Association published guidelines on neuro-prognostication strategies and treatment withdrawal after successful cardiopulmonary resuscitation.¹ Instead of providing guidance on optimizing the quality of end-of-life care, the authors concluded with a Class I (strong) recommendation that “all patients who are resuscitated from cardiac arrest but who subsequently progress to death or brain death be evaluated for organ donation.”¹ The guidelines summarized data on the favorable outcome in organ recipients, but were silent about the consequences on end-of-life care in potential donors. Indeed, the guidelines acknowledged unresolved ethical problems in organ donation surrounding death determination, consenting process, health care professionals conflict of interests, and perimortem procedures for organ perseveration.¹

The guidelines recommend three organ donation pathways: heart-beating, controlled non-heart-beating, and uncontrolled non-heart-beating. The neurologic standard of absent responsiveness, brain stem reflexes, and spontaneous respiration determines death in heart-beating donation.² A 5-minute absent arterial pulse is the circulatory standard of death determination in controlled and uncontrolled non-heart-beating donation.² The withdrawal of life-support treatment is planned and coordinated with surgical procurement in controlled non-heart-beating donation. In uncontrolled non-heart-beating donation, circulation is artificially supported by extracorporeal cardiopulmonary bypass until surgical procurement is feasible. We raise safety (do no harm) issues with this recommendation.

First, the neurologic standard does not fulfil the legal or medical standard of “irreversible cessation of all functions of the entire brain.”³ The circulatory standard of death does not confirm the “irreversible cessation of circulatory and respiratory functions” because the respiratory function of the brain stem can be recoverable. Extracorporeal circulatory support for organ preservation also reperfuses the brain and can reanimate

donors in uncontrolled non-heart-beating donation. Therefore, performing surgical procedures and procurement without general anesthesia can harm donors with residual viability of the central nervous system. The recent cases of Jahi McMath (*Winkfield v. Childrens Hospital Oakland et al. United States District Court Northern District of California Oakland Division, Case No. C13-5993*) and Aden Hailu (*Hailu v Prime Healthcare, The Supreme Court of the State of Nevada Case No. 68531*) have illustrated the growing legal discontent with current practice standards in death determination.

Second, an “authorization” instead of “informed consent” is now obtained for organ donation.⁴ Authorization does not legally require complete disclosures of all information as mandated for informed consent. Controversies about death determination and adverse consequences of perimortem procedures are not disclosed in the process of obtaining authorization for donation.⁴

Third, the editors of *The Lancet*⁵ have emphasized that the moral permissibility of organ donation in different cultures and religious affiliations is dependent on the authenticity of biologic death determination. Worldwide religions prohibit organ procurement if the act of procuring can be the proximate causation of death. Organ donation would then violate religious values of some patients and families at the end of life in multicultural societies.

We consider that the emphasis on organ donation instead of best practices in end-of-life care and palliation in patients who are deemed terminal after cardiopulmonary resuscitation is a missed opportunity to ensure that the practice guidelines are patient-centered. The new recommendation for organ donation pathways in post-resuscitation care can have unintended harmful consequences on patients and families because of uncertainty in neuro-prognostication, absence of scientific validation in death determination, revision of consenting process, and conflict with religious and cultural values. There is also no supportive data about the effect of organ

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donation pathways on the quality of end-of-life care in donors to qualify Class I recommendation. Instead, the American Heart Association's recommendation should be assigned a "Class III" (possible harm). High-quality scientific evidence, absence of harm, and respect of patients' values and preferences are hallmarks of trustworthy recommendations.

References

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