Are Individuals Diagnosed WithBrain Death Really Dead?

by Lauris C. Kaldjian, MD, PhD — Column Editor

It has been nearly 40 years since the term “brain death” was introduced. The principal aim of this concept was to facilitate organ transplantation by providing a justification for the removal of organs from individuals with severe brain injury who were not dead by cardiopulmonary criteria.1 The extent to which organs are now routinely procured from brain-dead individuals shows this aim has been achieved. The diagnosis of brain death follows established procedures and is supported by statutory laws in the United States that follow the 1981 Uniform Determination of Death Act.3 But despite the common practice of removing organs from brain-dead individuals and the apparent medicolegal consensus that supports it, a closer look at the concept of brain death can raise unsettling questions about the way in which brain death is currently used to justify organ retrieval.

However, it must be granted that the diagnosis of death by neurologic criteria continues to receive ardent support from those who do not question the legitimacy of brain death as a biologically valid and ethically compelling concept. Shaner and colleagues, for instance, are convinced that brain death should be equated with death and therefore recommend that physicians tell families of brain-dead individuals that their loved one “has died,” since the term brain death may be misconstrued by families as a type of serious coma that might be reversible. They also suggest that physicians should not refer to the withdrawal of life support or treatment, since medical therapies do not benefit patients who are dead. Shaner et al advise physicians to do the following: (1) declare death publicly once brain death is diagnosed; (2) allow a third party to discuss organ donation with the family; and (3) discontinue life support once brain death is diagnosed, unless organ donation is planned. They support the physician’s discretion to continue life support at the family’s request, but only for “compelling social reasons” and a “reasonably brief” period of time.4

To understand why some physicians are so comfortable equating brain death with death of the entire individual, it is helpful to appreciate 2 highly influential beliefs about brain death. The first belief is that individuals with brain death will die within a matter of days, regardless of whether or not life support is continued. The second, and related, belief is that the brain serves as an irreplaceable center of integration for the entire organism, without which the organism inevitably disintegrates. Both of these beliefs, however, are no longer empirically tenable.

Through a careful review of the literature, Shewmon has documented 56 patients diagnosed with brain death who lived for more than 1 month, 12 of whom lived for more than 6 months, and 1 of whom lived for more than 14 years.5 These data explain his use of the term “chronic brain death” and support his conclusion that patients with brain death can live for prolonged periods if they are given sufficient medical support. Cardiac arrest is not necessarily the inevitable outcome of brain death. Shewmon also points out the self-fulfilling prophecy of imminent death resulting when life support is withdrawn or organs are removed from brain-dead patients. We do not know, he argues, how many such patients would have lived for considerable periods of time had full medical treatment been continued. To illustrate the capacity for survival despite brain death, he refers to the success physicians have in keeping alive brain-dead women who are pregnant until the fetus is mature enough to be delivered. Based on the available empirical evidence, Shewmon persuasively concludes that patients with brain death do not inevitably die within days and that the brain is not the irreplaceable “integrator” of the body it was once thought to be. With the advance of medical technology, intensive medical care now has the ability to replace the homeostatic functions of the brain.

The force of such empirical observations has led some authors to a call for a reassessment of the way brain death is employed to justify organ procurement and for a reconsideration of what is known as the “dead donor rule.” This rule has heretofore expressed the societal consensus that organs should only be procured from individuals who have been declared dead.1,5 Equating brain death with overall death has been an attempt to satisfy the dead donor rule, but this attempt now comes at the cost of biotechnologic plausibility. If one wishes to abide by the dead donor rule, but is

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unwilling to equate brain death with overall death, then one must return to a traditional cardiovascular criterion for death, which would only permit non-beating-heart organ donation.

Alternatively, one may question the validity of the dead donor rule and suggest, as some authors do,\textsuperscript{1,3} that present organ procurement policies are ethically legitimate, but not because the dead donor rule is being followed (it is not). Such authors argue that individuals with severe neurologic damage are appropriate candidates for organ donation, not because they are dead, but because they are permanently unconscious.\textsuperscript{13} Following the analysis of Truog,\textsuperscript{4} Kerridge et al\textsuperscript{1} argue that we should set the dead donor rule aside and focus instead on 3 key questions:

1. When can life support be withdrawn?
2. When can organs be removed?
3. When can a body be cremated or buried?

The authors propose a graded approach to these questions. Regarding the cessation of treatment, they appropriately observe that the question of when it is ethical to withdraw life support from neurologically damaged patients is independent of whether or not such a patient is deemed dead or alive. At the other end of the spectrum, they support the necessity of documenting the absence of circulation in individuals who are to be cremated or buried. When determining if it is acceptable to remove organs from a patient, the authors believe that either a circulatory criterion (non-beating-heart donors) or a brain-dead (beating-heart donors) criterion is appropriate.

Truog and Robinson also argue that we should abandon the dead donor rule. They base their position on 2 ethical principles: nonmaleficence (do no harm) and respect for persons (operationalized through informed consent).\textsuperscript{1} According to Truog and Robinson, individuals who are brain dead are so neurologically compromised that to cause their death by removing their organs does not constitute a significant harm if they have expressed a wish to donate their organs. The claim of nonmaleficence is largely based on the absence of documented instances of recovery of any degree of consciousness in patients who meet the criteria for brain death. They contend that brain-dead patients should be allowed—through advance directives and surrogate decision makers—to voluntarily accept the harm incurred by organ donation. These guidelines would be more straightforward, focusing on questions of harm and consent rather than on the question of whether or not a patient is dead. The implications of this approach are stark, and Truog and Robinson realize as much. They recognize that transplantation clinicians and the public are likely to object to their proposal, because it would require a willingness to admit that patients whose organs are removed for transplantation are being killed by their physicians. This, they conclude, is the logical consequence of abandoning the dead donor rule.

The idea of killing some severely brain-damaged, unconscious individuals so that others might live may have genuine utilitarian appeal for some. For others, the thought of sacrificing living individuals—however neurologically devastated—runs against beliefs about the inviolable value of every human life and prohibitions against killing. Although society honors the right of individuals to make decisions that are likely to result in death (ie, the withdrawal of life support), society has not granted individuals the right to be killed by having their organs removed. The distinction between a disease that kills after life support is withdrawn and a procedure that kills by removing vital organs is a difference in causality that is generally seen as morally significant. Seriousness about this moral difference is what underlies the dead donor rule: we want to be able to say that a disease or accident has killed the patient before the surgeon starts removing organs.

If one accepts that brain-dead individuals are not dead, then current organ procurement practices have already abandoned the dead donor rule. Accordingly, calls to set aside the dead donor rule have the virtue of candor by acknowledging what is already happening. The practice of transplantation would do well to either return to a circulatory definition of death or adopt a candid posture toward current practice that acknowledges that human bodies (if not beings or persons) are being killed in the process of organ procurement. If society chooses the latter of these 2 options in the future, such a change will suggest that the capacity for consciousness, rather than for life, will have become the operative criterion for the removal of organs from brain-dead patients.

References


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