

When Has Death Occurred and When May Organs Be Procured?: The Next Major Bioethics Controversy

This summer marked the 40th anniversary of the Harvard Medical School's report that recommended "brain death"—the irreversible cessation of all brain function—as the definition of death. This definition of death and the accompanying criteria have been broadly accepted around the world.

The church itself has accepted the concept of brain death. In an Aug. 29, 2000 address to the 18th International Congress of the Transplantation Society, for example, Pope John Paul II stated that "the criterion adopted in more recent times for ascertaining the fact of death, namely the *complete* and *irreversible* cessation of all brain activity, if rigorously applied, does not seem to conflict with the essential elements of a sound anthropology" (par.5). The pope went on to say: "[A] health-worker professionally responsible for ascertaining death can use these criteria in each individual case as the basis for arriving at that degree of assurance in ethical judgment which moral teaching describes as 'moral certainty.' This moral certainty is considered the necessary and sufficient basis for an ethically correct course of action. Only where such certainty exists, and where informed consent has already been given by the donor or the donor's legitimate representatives, is it morally right to initiate the technical procedures required for the removal of organs for

transplant" (par.5, see www.vatican.va/holy_father/john_paul_ii/speeches/2000/jul-sep/documents/hf_jp-ii_spe_20000829_transplants_en.html).

The validity and status of brain death criteria, however, are being challenged and it could well be that determining when death has occurred and when organs may be procured will be the next major debate in health care ethics.

In a Sept. 2, 2008 article ("The Signs of Death") in *L'Osservatore Romano*, the official Vatican newspaper, Lucetta Scaraffia, a history professor at a Roman university and a member of Italy's National Bioethics Committee, challenged the concept of brain death. She wrote: "The 40th anniversary of the new definition of brain death seems to be the occasion to reopen the discussion both at the scientific level as well as in the heart of the Catholic Church."

What has prompted this debate, noted Scaraffia, are a few cases where pregnant women who had been declared brain dead had their vital functions mechanically maintained until their babies could be delivered. It makes no sense, she believes, to call someone dead who can deliver a child—that a living child can be delivered from a cadaver. Furthermore, she argues, "the idea that the human person ceases to exist when the brain no longer functions, while the

body, thanks to artificial respiration, is kept alive, implies an identification of the person with brain activity alone. This is in contradiction with the concept of the person according to Catholic doctrine, and therefore, with the directives of the church in the case of patients in a persistent coma." Scaraffia is also concerned that as the demand for organs increases, doctors are pressured to shift the line that divides life from death, so that they can obtain organs for transplant as soon as possible so that they will be in optimal condition.

Several days later, the director of the Vatican press office issued a statement indicating that there had been no change in church teaching regarding the concept of brain death as a legitimate definition of death. However, it should be remembered that this is not the first time this issue has surfaced at the Vatican. The issue of brain death was taken up in 2005 and 2006 by the Pontifical Academy of Sciences which had twice previously, in 1985 and 1989, affirmed the concept of brain death. Opponents of brain death made their voices heard at the 2005 conference. The academy, however, re-affirmed its position in 2006 in a nine-page statement entitled, "Why the Concept of Brain Death Is Valid As a Definition of Death." Opponents of the concept published a book shortly after entitled, *Finis Vitae—Is Brain Death Still Life?* Critics of brain death believe that it

redefines living human beings as dead in order to obtain organs. Consequently, it devalues the lives of the terminally ill, reducing them to little more than sources of tissue and organs.

Meanwhile, in the United States, several articles appeared in the Aug. 14, 2008 issue of the *New England Journal of Medicine* (vol. 359, no. 7) having to do with organ donation after cardiac death. In one (“Pediatric Heart Transplantation after Declaration of Cardiocirculatory Death,” pp. 709-14), the researchers note that they removed hearts from two infants 75 seconds after the cessation of cardiocirculatory function. The justification given was that no heart is known to have self-started in a child or adult after 60 seconds and time is of the essence in order to ensure that the organs remain in the best possible condition.

In the same issue, two bioethicists, Drs. Robert Truog of Harvard Medical School and Franklin Miller of the National Institutes of Health, call into question the adequacy of the concept of

brain death as well as cardiovascular death (followed by the retrieval of organs). Regarding the first, they say: “The uncomfortable conclusion to be drawn from this literature is that although it may be perfectly ethical to remove vital organs for transplantation from patients who satisfy the diagnostic criteria of brain death, the reason it is ethical cannot be that we are convinced that they are really dead” (p. 674). Regarding donation after cardiac death, the authors write: “Although everyone agrees that many patients could be resuscitated after an interval of two to five minutes, advocates of this approach to donation say that these patients can be regarded as dead because a decision has been made not to attempt resuscitation. ... Again, although it may be ethical to remove vital organs from these patients, we believe that the reason it is ethical cannot convincingly be that the donors are dead” (p. 674).

In the estimation of these two authors, the dead donor rule has at best “provided misleading ethical cover that cannot

withstand careful scrutiny” and, at worst, “suggests that the medical profession has been gerrymandering the definition of death to carefully conform with conditions that are most favorable for transplantation” (p. 675). Their proposal is that the dead donor rule be abandoned and that organs can be retrieved from patients who have given informed consent in advance and have “devastating, irreversible neurologic injuries that do not meet the technical requirements of brain death” (p. 675). They believe that there is no harm in retrieving organs before death so long as anesthesia is administered.

It seems unlikely that discomfort about current approaches to determining death and the implications of this for organ retrieval will go away. This may well be the next big issue for health care ethics.

—R.H.

(Please see the Resource section for a listing of all the articles in the Aug. 13, 2008 issue of the NEJM on organ donation.)