

LETTER TO THE EDITOR

Objections to Brain Death Determination: Religion and Neuroscience



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To the Editor

Lewis surveyed rabbis to determine religious attitudes toward death declaration by neurologic criteria or brain death (BD) and subsequent withdrawal/withholding of medical treatment [1]. Although 97% of rabbis were aware that BD is medically and legally equivalent to cardiopulmonary death in the USA, almost 1 in 4 rabbis believed that BD is not equivalent to death, and almost 1 in 5 rabbis agreed with continuation of mechanical ventilation, initiation of hydration, nutrition, additional clinically warranted therapies, or cardiopulmonary resuscitation in BD [1]. Lewis is applauded for conducting this novel and much-needed survey of Jewish faith leaders and would be most informative if faith leaders from other religious affiliations are included in future surveys. Lewis explained that the religious objection to BD stemmed from “varying interpretations of religious texts ± lack of awareness of medical facts about BD...” [1]. Here, it is argued that religious objection to BD is well grounded, informed, and justifiable because: (1) many religions demand unequivocal and infallible biologic criteria for determining the occurrence of death with certainty, and (2) neuroscientific advances over the past decades have refuted BD equivalency with cardiopulmonary death. It is argued that failing to accommodate religious objection to BD can have serious moral and legal consequences.

The three Abrahamic faiths (Judaism, Christianity, and Islam) uphold the inviolability of human life. Unequivocal distinction between the dying and the truly dead is a condition to uphold this moral imperative. Lewis [1] cited two stories from Jewish texts to justify the claim that the defining criteria of death are ambiguous in Abrahamic faiths and perhaps obsolete in modern-day

society. Consequently, advocates of BD have asserted that the medical profession should be the ultimate authority in defining the moment of human death and its criteria regardless of the interpretation of religious texts [2]. They further defended this authority by indicating that religious texts of Abrahamic faiths were revealed centuries before medical advances in organ donation and transplantation [2]. Religious texts in Abrahamic faiths include the Torah, the Bible, and the Quran. However, the medical authoritarian position in defining death can defy the fundamental moral imperative of inviolability of human life if faulty death declaration is followed by procurement of transplantable vital organs [2]. “Thou shalt not kill” is one of the Ten Commandments in the Torah and is also an absolute moral imperative in Christianity and Islam. The phenomena of human life and death have been described and characterized explicitly in the Quranic text [2]. The defining biologic criteria of (cardiopulmonary) death are specific and unequivocal in Abrahamic faiths (Table 1), while on the other hand, the neurologic criteria of death are arbitrary, ambiguous, and fallible in practice [2, 3]. In December 2018, the Fiqh Council of North America revised the Islamic fatwa (legal verdict) regarding death determination by neurologic criteria:

“... [BD] or neurological determination of death is a highly contentious issue among medical scientists and bioethicists, and indeed stirs controversy amongst jurists... Consequently, based on caution (ihtiyat) the Fiqh Council does not include brain death in the definition of death, and thus does not allow for extraction of vital organs (e.g. the heart) for donation purposes in such a state”[emphasis added] [4].

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Religious objection is also corroborated by recent advances in neuroscience that have challenged the

Table 1 Description of the phenomenon of death in religious texts

The characteristics of the phenomenon of death	The criteria in the determination of death
<p>God created the phenomenon of death</p> <p>The phenomenon of death is universal and singular</p> <p>The definition of death is uniform and constant across generations and geography</p> <p>The determination of death requires absolute certainty (<i>yaqin</i>)</p> <p>The process of dying must be distinguished from the state of death</p>	<p>The soul (ruh) has separated irreversibly from the body</p> <p>The ruh is present in the body as long as the brain and the heart retain capacity for recovery of function</p> <p>The ruh has departed when ceased vital functions can no longer be reversed regardless of any external intervention (absolute irreversibility)</p> <p>The biological criterion (disintegration) confirms death</p>

The characteristics and criteria of the phenomenon of death have been described in the Quran (the religious text and the primary source of knowledge in Islam). Table adapted from the source [2] and subject to the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0/>)

equivalency of BD with death [3]. The “medical facts” [1] justifying the equivalency of BD with cardiopulmonary death were presented in the President’s Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research publication “Defining Death: A Report on the Medical, Legal and Ethical Issues in the Determination of Death” in 1981 [5]. This report was central for the enactment of the Uniform Determination of Death Act that included death determination by neurologic criteria as an alternative to cardiopulmonary criteria. Although the medical facts that previously substantiated the conclusions of this report were subsequently disproven, the Uniform Determination of Death Act was not revised or amended accordingly [3]. Additionally, neuroscientific research and discoveries in disorders of consciousness, acute brain resuscitation, and novel neurotherapeutic interventions have changed the landscape of neuroprognosis and treatment of severe brain injuries and have challenged the fundamental assumptions underpinning BD conception as biologic death [3, 6]. It should also be noted that several recommendations in the updated clinical practice guidelines of BD determination have been assigned the weakest level of scientific support or evidence “U = Data inadequate or conflicting; given current knowledge, treatment (test, predictor) is unproven” [7]. Consequently, several publications have criticized the diagnostic accuracy and utility of these clinical practice guidelines in death determination [8, 9].

Lewis indicated that only four states (California, Illinois, New Jersey, and New York) permit religious accommodation to death declaration by neurologic criteria [1]. However, nonconsensual discontinuation of medical treatment after BD is permissible in all states except in New Jersey. The state of Nevada has amended the death statute permitting nonconsensual BD determination and nonconsensual discontinuation of treatment with no religious exemption [10]. Denying religious exemption to BD determination has moral and legal consequences [3]. Faulty death determination violates the moral imperative

of inviolability of human life. The legal consequences are equally paramount because of the denial of personal right of upholding and adhering to religious values and the impedance of free exercise of religion.

In conclusion, religious objection to BD is well grounded in Abrahamic faiths because the defining criteria of (cardiopulmonary) death are unequivocal and neuroscientific advances have challenged the validity and equivalency of BD with death. This should reinforce the call to enact new legislation ratifying religious exemption to death determination by neurologic criteria in all states in the USA.

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