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Islamic Perspective on Organ Donation and Brain Death

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Abstract

Worldwide and in the countries, Islamic scholars do not have a consensus on the criteria and definition of brain death. This lack of consensus on the definition of brain death and its legal status has resulted in delays in withdrawal of care and futile care to the brain-dead patient population that negatively strains the limited resources for human organs in the Islamic community. Also, Islamic countries with organ transplantation resources lack legislation on endorsing brain death and its legal status as death which creates delays in harvesting viable organs from eligible donors. These delays can negatively impact the life quality of patients with end-organ failure waiting for an organ and make organs non-viable for transplantation, adding to the already existing shortages in Islamic countries. This brief review aims to clarify some of the barriers in the determination of brain death and organ donation in Islamic countries and address religious and ethical issues that exist that affect issues of access.

Keywords: Brain Death, Islamic Countries, Organ Donation

1. Organ Transplantation and Brain Death: Islamic Perspective

Organ transplantation is not a new term in medicine. The practice of donating organs has been noted in various ancient Greek, Rome, Chinese, and Indian mythology (Bergan, 1997). Advancements in surgical procedures and immunosuppressive drugs have improved the outcome of organ transplant procedures in the last two decades (Grinyo, 2013). In modern medicine, organ transplant has revolutionized the care for the patient populations with end-organ failure. Organ transplantation is a valuable procedure that promotes quality of life and decreases the patient's financial burden caused by the management of end-organ failure. For example, studies indicate that kidney transplantation outperforms dialysis for patients with chronic kidney disease, regarding improved quality of life, and increased survival rates (Tonelli et al., 2011).

Some of the social life implications of organ donation include improving the life quality of the patient population with end-organ failure, and enhancing not only the life quality of the recipient, but also families, friends, spouses, colleagues, and others in the community. Multiple stories are available concerning lives that were changed by organ donation.

Even though organ transplantation has improved the survival rate and quality of life of the patients with end-organ failure, the shortage of organs available for donation remains a significant problem in many countries. In many

countries, supply and demand are not balanced. Many patient populations are waiting for donated organs. According to Global Observatory on Donation and Transplantation (2020), nearly 129,681 organs were transplanted in 2020 worldwide. It is estimated that the reported number of organ transplants represents less than 10% of the need worldwide (World Health Organization, 2022). Hesitancy toward organ donation stems from social, cultural, educational, and religious factors (Da Silva & Frontera, 2015).

2. Organ Donation and Islamic Doctrine

Islamic scholars have highlighted that Islamic scriptures Holy Book of Quran, and Hadith do not have specific verses and Hadith related to organ donation and transplantation (Ali, 2019). However, the Holy Book of the Quran has verses on the importance of saving a life “Whosoever saves the life of one person it would be as if he saved the life of all mankind” (Ali, 1975, p. 70), and the act of charity (Fiqh Council of North America, 2021). Therefore, fatwa (Islamic ethical-legal verdict) abounds that support organ donation and transplantation in light of the importance of life-saving for the good deed. The Fiqh Council supports many fatwa councils that allow organ donation and transplantation in Islam and consider it charity. However, the fatwa councils prohibit selling organs, when it harms and risk the health of the donor and prohibit donating reproductive organs. (Fiqh Council of North America, 2021).

Some Islamic scholars are advocating for cadaver organ donation and using verses of Islamic doctrine that value prolonging human life and helping others. The lack of cadaver organ donation has created opportunities for live donors, such as kidney donors. However, this process of live donation is poorly regulated in many countries, and many organizations have a hand in brokering the donations which creates ethical issues. Some of these ethical issues a lack of appropriate compensation for the donor, the recipient being misled or not given information about the donor's health status, and the organizations involved not using medically appropriate criteria for donor selection (Broumand & Saidi, 2017). These issues can interfere with organ availability and increase the burden of the management of chronic diseases in the community. Research in underserved countries where the population is primarily Muslim is needed to increase people's awareness of the advantages of donating organs to people who need them, and enable Islamic scholars to come to a consensus on allowing cadaver or living donors organs.

Alternatively, some Islamic scholars using limited medical evidence in their argument, oppose organ transplantation from brain-dead patient populations. The determination and definitions of brain death can lead to barriers preventing organ donation in some Islamic countries which be explored next in this review.

3. Major Barrier of Organ Donation in Islamic Countries

3.1. Brain Death Definitions

Even though the concept of brain death is accepted in legislation in several countries worldwide (Greer et al., 2020), determining guidelines for the diagnosis of brain death varies from country to country. One of the basic common concepts among guidelines is that brain death is determined clinically (see Table 1). In addition, ancillary tests are used as supportive or mandatory for confirmation of brain death (Lewis et al., 2020).

Table 1: Clinical Examination Determining Brain Death

Test	Regions of the Brain Tested	Brain Death Indicator
Consciousness	Rostral brainstem, thalamus, bilateral cerebral hemispheres	Absence of response to auditory, visual, or tactile stimulus
Papillary reflex	Upper brainstem	Absence of response to bright light

Corneal Reflex	Middle-to-upper brainstem	Absence of eyelid response when pressure is applied at border of iris with a cotton swab on a stick
Oculocephalic reflex	Middle brainstem	Absence of eye movement with head turning
Oculovestibular reflex	Middle brainstem	Absence of eye movement within 60 seconds of instillation of ice water
Gag reflex	Lower brainstem	Absence of gag reflex in response to bilateral stimulation of posterior pharynx
Cough Reflex	Lower brain stem	Absence of cough in response to deep bronchial suctioning
Motor responses	Brainstem, cerebral hemispheres	Absence of cerebrally mediated response to deep nail bed pressure or proximal stimulation of trunk, arms, and legs

Source: Greer, D. M. (2021). Determination of brain death. *New England Journal of Medicine*, 385(27), 2554-2561.

One of the critical challenges for organ donation is the definition of brain death. The American Academy of Neurology (AAN) suggested an algorithmic approach and details for clinical diagnosis of brain death, apnea testing, ancillary testing, and the exclusion of confounding factors (AAN, 1995). The AAN (1995) guidelines suggest two neurological exams to confirm the presence of Brain Death with a separation of 6 hours between exams for adults. No source has reported brain function recovery even after a single brain death examination that adhered to AAN guidelines (Da Silva & Frontera, 2015).

Lustbader et al. (2011) suggest that a second neurological exam can decrease organ donation consent rates and organ viability. Lustbader et al. (2011) found that a second neurological confirmatory exam does not add anything to the sensitivity and specificity of brain death diagnosis (Lustbader et al., 2011). The time between when the patient is diagnosed with brain death and the ultimate retrieval of organs is highly sensitive. The longer the time to retrieve organs after the diagnosis of brain death the chance the graft dysfunction and graft rejection increases (Oto et al., 2008).

One of the significant issues that can delay the viable retrieval of accessible organs is the availability of different guidelines for clinical diagnosis of brain death, and lack of standardization for brain death guidelines. This lack of consistency leads to various delays and issues with both legal and religious interpretations. For example, in a study in Saudi, 35.6% of participants did not know whether brain death was a curable condition, and 34.6% of participants responded that they were not sure if brain death is a reliable diagnosis (Alamri et al., 2019). Alamri et al. (2019) indicated that 21% of participants believed brain death is a curable condition (Alamri et al., 2019). Moreover, Al Bshabshe et al. (2016) performed a survey at King Khalid University, Abha, Saudi Arabia, on college students from the college of medicine, dentistry, pharmacy, and applied medical science, and 22.5% of participants believed that brain death is a curable condition (Al Bshabshe et al., 2016). Also, Al Bshabshe et al. (2016) indicated that 92.4% of participants did not know the Islamic perspective on brain death and were unaware of the existence of a fatwa in Saudi (Al Bshabshe et al., 2016). In Islamic communities, a limited understanding of the notion of brain death has led to a reduced rate of organ donation and increased the use of limited intensive care resources (Al-Hashim & Al-Busaidi, 2015).

Wood et al. (2004) suggest that the progression of brain death to somatic death can lead to 10% to 20% loss of viable donors' tissue (Wood et al., 2004). Therefore, preventing delays and improving the timely treatment of donors is critical for organ viability and the long-term outcome of transplanted organs (Anwar & Lee, 2019; Stallone et al., 2020).

In Islamic countries, families are unwilling to discuss or withdraw care from terminally ill patients.. Families will often be unwilling to accept a fatal diagnosis and request aggressive treatment which can then cause challenges for hospitals with limited resources (Pasha & Albar, 2017). These delays can then decrease the viable organ donation rate for people with terminal diseases waiting for organs. In Islamic countries, some religious scholars raise the question about the definition of brain death and clarification as to if brain death is the as cardiopulmonary death and clarification of the state between death and life (Padela et al., 2013).

Even though Islamic scholars have different interpretations of brain death, many Islamic scholars interpret brain death as cardiopulmonary arrest death and consider it death according to Islamic laws (Padela et al., 2013). Also, multiple Muslim organizations acknowledge the clinical diagnosis of brain death as a type of actual death such as the Islamic Fiqh Academies (IFAs) of the Organization of the Islamic Countries (IOCs), the Islamic Medical Association of North America (Miller et al., 2014).

At the Third International Conference of Islamic Jurist in Amman, Jordan, in 1986, the IFA of the OICs homogenized the concept of brain death into the legal definition of death. According to Albar (1996) and Padela et al. (2011), the legal definition in the Third International Conference of Islamic Jurist found that a person is legally pronounced dead when a doctor declares that total cardiac and pulmonary functions arrest is not reversible or a competent, specialized, and experienced doctor declare total brain functions are not reversible (Pasha & Albar, 2017). Under these conditions, the legal definition reveals that physicians are permitted to discontinue life-supporting measures according to Islamic law (Albar, 1996; Padela et al., 2011).

Moreover, according to Grundman (2005), the Islamic Fiqh Majma of the Muslim World League in the Kingdom of Saudi Arabia in 1987 issued the criteria for the definition of brain death similar to IFA of the OICs but required confirmation of the requirement by three specialized and competent physicians instead of one specialized and competent physician. According to Jan et al. (2001) Specialized and Competent terminology is defined as physicians who have skills in neurological examination (Jan, 2001). The three physicians can then agree to withdraw life-support despite the presence of respiration and cardiac function under life-support (Pasha & Albar, 2017). Brain Death confirmation tests vary from country to country. In some countries, for example, Saudi Arabia, additional tests are required to confirm the diagnosis of brain death. Further tests include a 30-minute electroencephalography evaluation showing the absence of neural activity and blood flow to the brain by doppler or other diagnostic imaging (Pasha & Albar, 2017).

3.2. Brain Death, Organ Donation and Religious Controversies

Thirteen Islamic countries in South Asia and the Near and Middle East were surveyed, and 12 countries had laws endorsing brain death as legal death, see **Table 2** (Miller, 2016). On the other hand, some Islamic scholars have shown opposition to the conception that brain death is equivalent to complete death (Bedir & Aksoy, 2011). These scholars oppose the American Academy Neurology 2010 updated guidelines. They argue that the guideline does not entail the onset of brain disintegration and irreversible cessation of total brain functions (Rady et al., 2011).

Table 2: Islamic Countries and Organization Endorsed Brain Death

Year	Legal/Judicial Body	Endorsed Brain Death	Classification	Purpose	Criteria Used
1964	Iran: Ayatollah Khomeini	Yes	Legal Death	Organ Donation	Not specified
1982	Saudi Arabia: Senior Religious Scholars Commission	Yes	Legal Death	Organ Donation	Not specified
1982	Libya: Law No. 4/1982	Yes	Legal Death	Organ Donation	Not specified
1983	Lebanon: Decree Law No. 109	yes	Legal Death	Organ Donation	Not specified
1985	IFA-OIC	Yes	Legal Death	Not Specified	Not specified

1994	Oman: Ministerial Decision No. 8	Yes	Legal Death	Organ Donation	Brain Stem
1995	United Kingdom: Muslim Law Council	Yes	Legal Death	Organ Donation	Brain Stem
1996	Indonesia: Council of Ulama	Yes	Not Specified	Not Specified	Brain Stem
1998	Morocco: Law No. 16-98	Yes	Legal Death	Organ Donation	Not specified
1999/2000	Iran: Act H/24804-T/9929	Yes	Legal Death	Organ Donation	Brain Stem
2000	Turkey: Act No. 21674	Yes	Legal Death	Organ Donation	Brain Stem
2003	Islamic Medical Association of North America	Yes	Legal Death	Not Specified	Not specified
2003	Syria: Law No. 30/2003	Yes	Legal Death	Organ Donation	Not specified
2010	Qatar: Doha Donation Accord and Law No. 21	Yes	Legal Death	Organ Donation	Brain Stem

Source: Miller, A. C., Ziad-Miller, A., & Elamin, E. M. (2014). Brain death and Islam: the interface of religion, culture, history, law, and modern medicine. *Chest*, 146(4), 1092-1101.AA

Moreover, some scholars have opposed the concept of brain death as it can be abused for organ donation (Al Sayyari, 2008). For example, according to Al Sayyari (2008), Egyptians raised ethical concerns over the procurement of organs from executed prisoners, and these ethical concerns and objections have further boosted the debate by the allegation of the removal of organs from the Muslim political Chinese government oppositions (Gutman, 2012).

4. Summary

In summary, guidelines are available on the criteria of brain death in many countries that lack consistency, and universally to put an end to the inconsistency and controversies among scholars and the lay population, it is critical to develop an international consensus on the criteria for brain death and enhance the culture of organ donation thus saving thousands of lives that are waiting for an organ. Also, an international consensus on brain death will pave the way for the growth of organ transplantation worldwide and assist in increasing people's confidence that, according to religious doctrine and ethical values, it is acceptable to withdraw care from patients with brain death and donate their organs. Furthermore, at a regional level, it is essential to improve organizational and political environments to create national strategies and infrastructures for transplantation. The lack of comprehensive strategies and policies can create illegal and unethical practices as a major barrier to meeting the needs of the patient population with end organ failure. These barriers include, but are not limited to, organ trafficking and commercialization of donated organs. Specific international policies must be put in place to address the issue of illegal trafficking of donated organs to improve the quality of access to these needed resources.

5. Conclusion

Islamic institutions need to consider the current medical evidence in the literature and develop a universal consensus and fatwa on the criteria of the brain death that is medically supported to open the doors of organ donation for Muslim patient populations with end-organ failure. These guidelines that consider religious beliefs can clarify the issues of organ donation for those that live with poor quality of life in the community and spend most of their financial resources on their treatment. Islamic scholars' consensus and fatwa can boost the lay people's awareness of available programs and increase the incidence of consent to organ donation. Furthermore, withdrawal of care and initiation of organ donation will be enhanced by appropriate education of healthcare providers to address lay people's religious concerns. The lack of consensus and unclear definitions of brain death will leave Muslim laypeople and clinicians with uncertainty, and decisions on care withdrawal and organ donation unanswered. Clarification is needed to present guidelines for medical providers to the assure their Muslim patients

and families about the benefits of organ donation and allay fears of conflict of conscience and faith to make informed decisions for themselves and their loved ones.

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