

## “Is Brain Death Actual Death?” “Absolutely not !”

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### Abstract

Despite the concept of brain death being around for over five decades and the various attempts to define death by different disciplines, the question, “Is brain death actual death?” continues to be a source of controversy and debate. Unfortunately, the arguments put forward by the proponents and opponents are often highly detailed and complex and sometimes so convoluted that only those with academic interest in the field take the trouble to read them<sup>1,2,3</sup>. Despite the scholarly input, none of the arguments put forward have been decisive.

The short article, by focusing on some basic principles/ features of actual traditional death which are widely if not universally accepted across the whole spectrum of human society, together with basic logical arguments, demonstrates that brain death is not actual death.

Brain death is death is a time-bound concept of convenience rather than the accumulated understanding and wisdom of what actual death is over centuries of practical experience.

If we accept the reality that brain death is not actual death but a new entity, a new understanding of death which was proposed in 1968 to reflect time bound societal needs and values then this opens up a number of ethical questions which need to be discussed by Muslim scholars and Muslim doctors. Do the societal needs and values on which the concept of brain death was proposed reflect our Islamic values and traditions?

### Introduction

The question of whether brain death is death or not has been posed since 1968, when the Harvard Ad Hoc Committee<sup>4</sup> under the chairmanship of Henry Beecher proposed equating brain death with death. Many experts from various fields of knowledge have tackled this question from different perspectives: medical, ethical, philosophical, religious etc. There is a huge amount of academic literature on the issue, yet the question remains unsettled. The problem is partly due to the fact that the word “death” is a vague term in that there are many different kinds of death, such as social death, spiritual death, human death, clinical death, religious death, legal death, biological death, and actual death. So, when we ask the question “Does brain death equate with death”, we need to qualify what kind of death we are referring to,

in order to make the question more specific and allow us to derive at a more meaningful answer.

A further complication is that the Harvard Ad Hoc Committee had proposed a new understanding of death, effectively a new entity to be regarded as death. This entity characterised by irreversible coma and apnoea was labelled “brain death”, and it gained acceptance over the forthcoming years. But it remained unclear what exactly was being diagnosed and why it should be called death, since this new entity was very different from the traditional understanding of death in terms of its features and criteria for diagnosis.

Over the years some people tried to put forward the idea that brain death was another way of diagnosing actual traditional death on the basis that the brain is the master integrator and without it the rest of the body will disintegrate. This theory is probably what led to the

confusion and controversy regarding brain death. Even though this theory has been successfully refuted the controversy continues.

Whatever criteria we propose to diagnose or declare death must fit in with our general understanding of the word death. After all, death is not a new phenomenon, it has been around ever since human beings have inhabited the Earth and transcends all human societies without exception. Furthermore, whether brain death is actual death or not should be applicable to all human beings, irrelevant of country, jurisdiction, race, or religion.

## Basic Principles

While trying to answer the question: "Is brain death actual death?" let us consider the following four basic principles related to death:

1. A person who is known to be alive continues to be alive unless there is evidence to the contrary.
2. An individual undergoes only one actual death.
3. Actual death is irreversible. A dead body does not move, it will not make any kind of recovery, instead it will start to decompose.
4. Actual death is not synonymous with legal death.

Let's look at each one of these basic principles in a bit more detail:

1. A person who is known to be alive continues to be alive unless there is evidence to the contrary.

This basic principle of presumption of continuity is accepted universally. In the context of death, it means that a person who is alive when admitted to the ICU remains alive unless there is clear-cut evidence to the contrary. If brain death is to be accepted as actual death, then the onus is on the proponents of brain death to prove death has indeed taken place, and not for the opponents to prove the brain dead person is alive. The question then is what degree of evidence should be required to declare an individual dead. Is a dominant probability of 51% sufficient or should a diagnosis of death be based on near certainty or at least as certain as possible?

2. An individual undergoes only one actual death.

Actual death takes place only once in each individual; it is wholly irreversible, barring an act of God Almighty.

3. Actual death is irreversible. A dead body does not move, it will not make any kind of recovery, instead it will start to decompose.

This feature is universally accepted as a feature of actual death. The dead body of an individual who is actually dead is totally unresponsive to any external stimuli, it does not move. Yet a large percentage of brain dead patients exhibit spontaneous movements or movements in response to external stimuli<sup>5,6,7</sup>. Furthermore, the body of brain dead individuals can continue to absorb and digest food, thereby, able to grow and mature; the body of a brain dead individual does not decompose, it can be kept in that state for years, as can be seen from the case of Jahi McMath<sup>8,9</sup>.

On very rare occasions, brain dead individuals have recovered, something which can never happen in actual death. Lewis Roberts<sup>10,11</sup>, a 19-year-old man who suffered serious trauma to the head following a motor vehicle accident, was declared brainstem dead at University Hospitals of North Midlands NHS Trust in the United Kingdom. However, hours before surgery to remove his organs for transplantation, he began to breathe on his own and a few weeks later he began to talk.

Zack Dunlap<sup>12</sup> was declared brain dead in 2007, in Wichita Falls, Texas, after suffering severe brain injury following a motor accident. A PET scan confirmed a diagnosis of whole brain death by showing no blood flow to Zack's brain. While waiting for the organ-harvesting team to arrive Zack's family noticed signs of life. 48 days after being declared brain dead Zack went home.

Roberts and Versnick reported two cases of brain death in Canada who regained spontaneous respiration<sup>13</sup>.

One reason why the incidence of recovery from brain death is extremely low may be due to the fact that soon after diagnosis of brain death life support systems are withdrawn, or organ retrieval takes place. Both these interventions result in actual death.

4. Actual death is not synonymous with legal death.

Legal death is a state when an individual is considered dead in the eyes of the law even though in some cases the individual may not be actually dead.

Ideally, an individual should be declared legally dead after actual death has taken place. This is what happens in the vast majority of cases and there is no need to distinguish between legal death and actual death.

However, in certain circumstances it is not possible to ascertain if an individual has actually died or not, such as

a person who goes missing for many years, in which case the law courts can issue a declaration of presumed death based on evidence. Individuals diagnosed as brain dead are also presumed to be dead, thereby allowing such patients to be declared legally dead.

A society can determine the definition of legal death to suit its needs, but actual death is an act of nature or, for the religiously minded, an act decreed by God Almighty. Consequently, legal death varies from country to country and sometimes from State to State within one country. Unlike legal death, the features defining actual death are immutable; it is a universal phenomenon with no boundaries of land, religion, or race.

In a similar way, society can decide the age of majority, that is when a child becomes an adult. This age varies from country to country. However, if a 15-year-old girl becomes pregnant then she is an adult by the law of nature even though she may be treated as a child in the eyes of the law.

Determining precisely when a child becomes an adult, or when exactly a person dies is very difficult to do in practice, but it is necessary to draw an arbitrary line in time when a child become an adult and when a living person becomes a dead body from a legal standpoint for the smooth functioning of a civil society.

It is important to realise the limitations of man-made laws, in that they can conflict with reality. Unlike actual death, legal death, can on rare occasions, be reversed in the case of a missing person<sup>14</sup> and it has also happened in a case of brain death. Jahi McMath<sup>8,9</sup>, who was declared brain dead and legally dead in California was transferred to New Jersey, where she remained brain dead, but she was no longer legally dead. Two death certificates were issued for Jahi McMath: one in 2013 and the second one in 2018. The first death certificate was at the time of diagnosis of brain death and the second one 5 years later at the time of actual death.

For Muslims there are two obvious questions:

- i) Is brain death legal death in Islam?
- ii) Does brain death equate with the removal of the soul from the body by the Angel of Death?

These two questions have been discussed by the author in the paper entitled: Is the "Concept" of Brain Death Compatible with the "Reality" of Religious Death?<sup>3,15</sup> to which the reader may refer for details. Regarding legal opinions on brain death by Muslim scholars, the people who seek legal opinions from Muslim jurists or *fiqh* councils on brain death are almost always from the

transplant community. So, the information provided to the jurists may be incomplete or even biased. It is important to look at the details of the discussions that took place before the ruling was issued and whether medical experts were consulted.

Whether someone is declared dead or not should not be dependent on whether the individual is an organ donor or not. However, the declaration of brain death as legal death is inextricably linked to organ donation. For the Muslim transplant community, the issue of whether a brain dead individual is legally dead or not is crucial because if the brain dead individual is not considered to be dead then the removal of vital organs for donation will be the cause of his death and there is liability within Islamic law for such a type of homicide.

## Discussion and Conclusion

If all the four basic principles stated above are accepted, then the answer to the question: "Is brain death actual death?" is "Absolutely not!" This applies to all different types of brain death currently in clinical practice.

The concept of brain death is a social construct based on time-bound social needs and values, a pragmatic utilitarian approach to get from A to B. A number of medical developments occurred in a relatively short period of time in the 1950s and 1960s to give birth to the concept of brain death. There was a cohort of patients with total brain failure (irreversible coma) with no hope of survival who could be kept alive by modern artificial ventilators. These patients were a burden on the health care system. Besides the costs, they were occupying precious resources such as intensive care beds. There was another cohort of patients with other types of end-stage organ failure such as kidney, heart, and liver. This second group were salvageable if a new organ could be transplanted into their bodies to replace their own failing organ. But the new organs to be transplanted must be living organs and living organs can only be obtained from living individuals.

If the patients with total brain failure who were effectively "as good as dead" since medicine had nothing to offer them could be labelled as "dead" then the futile use of expensive medical treatment could be stopped, thereby freeing up precious ICU beds and additionally, their organs could be used for transplantation. A value judgment was made. Effectively, sacrificing one life to improve or save the lives of a few. Those who do not accept that brain dead patients are truly dead but accept it as legal death then for them organ procurement from

brain dead patients is still homicide, but it is not illegal. Those who came up with the concept of brain death as death in 1968<sup>4</sup> did not have any malicious intent to kill patients, they were serving the needs of their society, the greatest good for the greatest number. The proposal put forward by the Harvard Ad Hoc Committee was not an alternative way to diagnose traditional actual death but a new entity, a new way to understand death. However, over time some people tried to equate brain death with actual traditional death by suggesting that the body could not survive without a functioning brain, the body would soon disintegrate. This false perception has been one of the root causes of the controversy and confusion surrounding brain death. Brain death is not actual traditional death but a separate distinct entity, a social construct, a value-based judgment when an individual will be treated as if he or she is dead. The British neurologist, Christopher Pallis, who is accredited with introducing the concept of brainstem death in the U.K. stated that his definition of death had a sociological basis.<sup>16</sup>

Brain death and actual or biological death should be seen as two separate entities. Brain dead individuals are not truly dead in the traditional sense, and neither are donors declared dead after controlled circulatory arrest (DCD), both are in the process of dying with very poor prognosis, but they are not truly dead at the time of organ procurement. The underlying basis for declaration of death after controlled circulatory arrest is brain death. It is assumed by depriving the brain of a blood supply for 5 minutes (this is the standard used in U.K.) ensures loss of brain functions thereby fulfilling the brain death criteria. Declaration of death after controlled circulatory arrest of 2-5 minutes can be said to be a state of impending death but not actual death because the patients can be potentially resuscitated after the heart stops beating for 2-5 minutes. In fact, hearts can be transplanted from such patients. If such a patient, after being declared dead after 2-5 minutes of cessation of the heart beating, is resuscitated, which every doctor accepts is possible, then we would have to conclude that death is reversible. And since successful heart transplantation takes place from such donors then one has to conclude that the irreversible can be reversed. The conclusion in both of these scenarios is ludicrous and the only logical explanation is that the assumption brain death is actual death is false. Scholars have also discussed whether life and death are interconnected or independent entities. If they are considered to be independent entities then it should be possible for an individual to be alive and dead at the same time, which clearly does not occur, leaving us with

the conclusion that life and death are inter-connected, our are either dead or alive.

There is no disagreement that living organs can only be obtained from living human beings. If organs could be procured from truly dead individuals, then there would be no shortage of organs. This is further evidence that organ donors after brain death and controlled circulatory death are not actually dead.

The concept of brain death increased the supply of living organs, perhaps not by design, but controlled circulatory arrest (DCD) criteria for death was designed specifically to further increase the supply of living organs. Despite these new criteria for declaring death, the demand for organs still outstrips the supply of organs. In response to this shortage some countries have introduced donation prior to death (DPD)<sup>17,18</sup> thereby firmly putting to one side the dead donor rule<sup>19</sup> which was probably being violated anyway, other countries such as the U.K. have introduced a system of presumed consent. Both these methods are controversial. You only need one case to refute a theory. The theory of brain death is actual death is refuted by cases like Lewis Roberts<sup>10,11</sup> and Zack Dunlap<sup>12</sup>. Lewis Roberts and Zack Dunlap were both clearly declared brain dead and scheduled for organ retrieval, but both showed signs of recovery just a few hours before their organs were due to be removed. They both went on to make full recoveries. Lewis was playing football sixteen months after being diagnosed as brain dead; Zack went home 48 days after being declared brain dead and went on to get married and have a family. We, doctors used to say: "No one who has met the criteria for brain death has ever survived." That statement may no longer be true.

If the question is: "Is brain death legal death?" then the answer is a firm, "Yes." In many jurisdictions around the world brain death is accepted as legal death. Actual death is either presumed or it does not really matter.

An important question for Muslims is: "Is brain death legal death according to Islamic law?" Some religious authorities have said "Yes," while others have said "No."<sup>3</sup> Law makers and jurists have the authority to determine what constitutes legal death in their jurisdiction or sphere of influence, but they do not have the same authority to dictate what actual death is. Actual death is determined by nature or from a religious perspective by God Almighty. Some commentators have put forward the idea that an individual undergoes a legal death and an actual death thereby suggesting that there



two types of death that an individual undergoes, but it also implies that brain death is not actual death.

Under certain circumstances what matters is legal death rather than actual death, in other circumstances actual death is more relevant than legal death.

The chances of a brain dead person making any meaningful recovery is miniscule. So, keeping such individuals alive with high-tech medical interventions is futile in the majority of cases. Added to this is the huge economic burden brain dead individuals place on the health care system and in some cases their families together with the prolonged emotional trauma suffered by close relatives if these patients are kept alive. Many religious authorities sanction the cessation of life support systems in individuals where the specialist doctors consider the case to be futile even if the individual does not fulfil the criteria of brain death.

Brain dead individuals can be said to be “as good as dead,” or at least “dead enough” to declare them legally dead. The individual as a person is dead, he has no perception, no interaction with either people or his environment. What is the point of keeping such individuals alive at great cost except up to the point of retrieving their precious organs for transplantation? It makes medical, economic, and perhaps ethical sense to label them as dead. This is the utilitarian approach to the problem. The concept of brain death as death has been very successfully marketed. There are no stakeholders to challenge this notion and it seems essential for the success of the solid organ transplantation program which besides being cost-effective<sup>20</sup> brings with it huge health benefits to the recipients.

Besides the significant economic benefits and obvious health of labelling brain dead patients as legally dead it has one other major benefit. The potential charge of homicide against those doctors who retrieve vital organs from these brain dead patients is eliminated. This is a very important consideration.

The debate on brain death and organ donation needs to move on. The question of whether organ donation is permissible in Islam or not has been exhausted. We must accept that organ donation from the truly dead is a myth. Only tissues and corneas can be retrieved from truly dead individuals. Only organs retrieved from living individuals are suitable for transplantation. Once we accept these realities then the ethical and moral debate can move forward to consider the new challenges facing our communities:

1. Is it morally justifiable not to discuss the issue of brain death in a transparent manner when trying to recruit potential organ donors?
2. To what extent is the rule “first, do no harm” applicable in modern medicine and Islam?
3. Do the social and ethical values on which brain death was founded fit in with Islamic values?
4. Is it justifiable to take one life in an effort to try to save several lives?
5. Can killing an innocent vulnerable individual ever be justified?

Even though there may be no benefit to society in keeping brain dead individuals alive, a case could be made that the individual himself may benefit from a religious perspective, in that such suffering may be a means of expiating sins.

In the future, if xeno-transplantation or another alternative becomes widespread such that human organs are no longer required then the concept of brain death will be relegated into the history books.

Until then, the combination of presumption of death in patients declared brain dead combined with presumed consent for organ donation should be of concern to the Muslim community but surprisingly the Muslim community did not raise any concerns when there was an opportunity to do so.

Transplantation surgery has been a great success of modern medicine and we should try to promote it but within the limits of permissibility of Islam. There is a need for greater dialogue and discussion on the subject between Muslim doctors and Muslim scholars as well as a need for greater transparency and involvement of the public.

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