

INVESTIGATION OF BRAIN DEATH FROM THE PERSPECTIVE OF MEDICINE, LAW, AND ISLAMIC JURISPRUDENCE

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Abstract: Life and death are some of wonderful phenomena have been always considered by human over the history. Human is interested in understanding life beginning and its reasons. Meanwhile, perception of human life end is one of issues considered by human to understand it and its reasons so that accurate diagnosis of death time is one of the most important ethical challenges (medically and legally) at the moment, because when human understands these odd secrets of creation then numerous of medical, legal and social problems will be solved. When judges face with victims with disabled brain and heart in legal cases, they will properly judge about the accused person of case and issue the judge if they have a correct recognition of death and its reasons.

Keywords: brain death, law, Islamic, jurisprudence

1. Death Diagnosis

Death diagnosis is one issues the human is always facing it. Since human is not able to determine the main element of life and since major reasons of death are not clear, human sometimes faces people who have had cardiac attacks while can feel and sometimes faces people with disabled brain while have heart and breath. Accordingly, the following questions can be considered in determination of death.

Is cardiac arrest a reason for human death? Are patient with disabled heart and breathe the real dead people? Is brain failure the reason for human death? Are the patients with disabled brain even if with working heart and breathe treated as real dead people? Whether all of vital signs such as heartbeat, breathing and brain activities should be stopped for death realization? Do physicians, lawyers, and jurists agree on definition of death and life? If there is any disagreement, what is the reason for such disagreement? Finally, which one of definitions should be accepted as comprehensive definition? Diagnosis of death due to old age or accidents, in which the heart and brain stop working, is not often so difficult. Sometimes, despite signs of death, diagnosis of death is not that easy. Brain death is an example of this type of dubious death which has been the subject of interest among jurists and physicians since the second half of the nineteenth century. This issue is of great importance in many cases such as allowing or not allowing euthanasia of the patient, organ transplant, burial, etc.

2. Definition of Death from Perspective of Jurists

In opinion of jurists such as Dr. Mohammad Tantavi (former Al-azhar Sheikh) that defined death as follows: in opinion of jurists, death is exclusion of soul from body and its diagnosis reference is reliable physicians. In other words, when soul, which is not a physical element, is disconnected from body the life of human is ended. In other words, this theory assumes the relation between soul and body as the main reason for life. If this relationship is disconnected for any reason, the human will die and the life of human will be finished.

Although this theory is clear, it should be accepted that immediate diagnosis of the moment of soul and body disconnection is not simple for human; hence, it is not simple to distinguish vegetable life from real life. Therefore, when we face an injured person or a victim with disabled brain with non-normal heart activity and breathe while his heart and lungs are working using artificial respiration device so that blood and oxygen are reaching to his organs, it is not possible to issue verdict in this case considering the mentioned definition. Such persons are not dead people and the verdicts for dead people cannot be issued for such patients.

3. Traditional Definition of Death from the Perspective of Physicians

In past, physicians believed, with adherence to jurisprudential viewpoint, that heart is life agent and consciousness and feeling as well as human life are subjected to heart. Since heart is active, human is alive but when heart and breathe are disabled at the same time, human life is also finished due to disconnection of blood flow and oxygen delivery to cells. Although this theory was accepted in majority of cases and disconnection of blood and oxygen flow in body would lead to end of life, physicians faced some exceptional cases practically. In such cases, although the patient was at deep coma and there was not any heartbeat or breathing sign, the patient could return to normal situation after several hours or even after a day and vital signs could be revived. The belief in mentioned definition of death was eliminated due to violation case; hence, there are a few believers of this viewpoint.

Historically before 1960, death was defined as the complete and irreversible cessation of spontaneous cardiac and respiratory functions. Refinement of cardiopulmonary resuscitation techniques and the advent of Intensive Care Units (ICUs) with mechanical ventilators enabled temporary support of cardiopulmonary function in the absence of brain function. Hence, the cardiopulmonary definition of death lost relevance in such cases. Conversely, the functional loss due to damage to the vital centers of the brain is irreversible and hence brain-stem death concept evolved. It is relatively a new concept, and it is hard for relatives to believe that the patient is dead (brain dead) when his/her heart is still beating.

4. New Definition of Death from the Medicine Perspective

Death is defined as irreversible disconnection of all cortical brain activities (cerebral cortex), subcortical (layer below cerebral cortex) and brainstem. Death is irreversible stop of brain activities.

According to this definition, when all brain activities of human are stopped although the lung is full of oxygen using ventilator, the heart is beating through oxygen delivery, and the skin is warm with normal color, such person is considered as dead person. This is because when brain, its cerebral cortex and brainstem stop working at the same time, blood and oxygen supply to brain is stopped, brain loses its function and cerebral cells would be damaged irreversibly within 3-5 minutes. In such conditions, if other human organs such as heart, liver, and lung are active, activity of such organs are not able to revive the person. Therefore, since brain activity is the main agent of human life, the life of human is finished and revival will be impossible if this agent stops working due to any reason.

Majority of Islamic scientists and lawyers approved brain death concept and its diagnosis indexes based on this viewpoint; the evidence for such claim is third conference of Muslim Lawyers in October 1986 in which, it was determined that almost half of required kidneys for transplant in Saudi Arabia are obtained from dead bodies using these brain death indexes.

For instance, Imam Khomeini and Great Leader Ayatollah Khamenei approved this opinion and stated, if brain death is proved and probability of recovery is not possible then organ donation is permissible, but if revival of person is possible, organ donation is not permissible and this case should be diagnosed by a specialist. Also, definition of brain death presented by the Single Article of Enforceable Act of Organ Transplant of Dead Patients is matched with mentioned definition.

Then Minister of Health of Egypt, Dr. Hamdi Al-Seyyed, which considers brain death as real death, has stated that medical equipment are able to diagnose human brain death before death of other organs. When the brain of human stops working then other organs stop working immediately. Brain is ruling over the human body. In case of brain death, there would not be any revival. Although some of organs of a person with brain death might be active using medical equipment in ICUs, such activity of organs is

not a sign of human life. Disconnection of this equipment from such person is not a murder, because such patient had been died before due to brain death despite having heartbeat. Some of proponents of this theory are Mohammad Naeem Yasin, and verdicts of Association of Islamic Jurisprudence issued in Jeddah and Islamic Medical Organization of Kuwait.

However, there are some physicians, Islamic Lawyers, and jurists that do not consider brain death as a real death.

One of these physicians is Sefvat Lotfi, Professor of Anesthesiology, which has stated, patients with brain death are not real dead people but they are patient alive people who are in the coma. It is observed in many of cases that patents with brain death have revived. Therefore, such persons cannot be treated as dead bodies so their organs cannot be harvested, because organ harvesting is subjected to murder punishment considering all of its components. Sefvat has explained that scientific studies have proven that conducted researches are not reliable for brain death diagnosis and studies conducted about experiment of electricity activities of brainstem cells have not valid results, because their results might be wrong since electricity activity does not exist in it always; therefore, brain cells will not always react against such signals (and or there is not always a natural reaction against electricity activity due to sensory functions' disorders) although brain life is continuing. In other words, lack of electricity activity in brain cells as well as sensory functions' disorders are not reasons for human death. Therefore, human death cannot be inferred even in absence of electricity activity and lack of feeling in brain. According to Sefvat, age is another factor for disagreements on brain death so that some of physicians state that brain death is not simply diagnosable in children below the age of 2 and some other physicians believe that brain death is not also diagnosable among children that are younger than 5 or 11. Therefore, this factor might be one of definite reasons for wrong concept of brain death, because constant natural realities, in particular the issue of death determination, are not different among human beings only due to age. Therefore, how can be a case definite when the issue that nor physicians are not unanimous on it neither age is ignorable case in it. Considering the success of organ transplants and the organ transplant being the only hope for end stage organ failures; in view of acute shortage of organs and availability of a large number of brain dead patients as potential organ donors; we must promote the timely diagnosis and declaration of brain dead patients. It will allow the organ transplantation to gift the life and will relieve the relatives of brain dead individual from undue anxiety and fruitless hope.

Nasir Farid Vaseli is one of proponents of this theory has claimed precisely in definition of death that if disconnection between soul and body is along with stopped functions of all human organs then the person can be a dead body. Accordingly, it is not possible to claim that person is dead just due to brain freeze, but also stopped function of other human organs besides brain freeze are required to call a person dead body.

Regarding this theory, when the human brain stops working while the heart is still beating, such person cannot be called dead body; if they are dead then what is this heartbeat? Therefore, when human brain has stopped working but the heart is naturally beating that person is alive and living considerations should be taken into account. Some of these considerations are ownership, marriage, and cleanliness. In this case, the patient is owner of his asset and is responsible for debts and obligations and his children are not allowed to own or use properties of the patient. The wife of such person is still his wife and deserves alimony and until his husband is in such conditions she is not allowed to marry another person. Such person is alive; hence, it is not permitted to harvest his organs such as heart that his life is dependent on it.

Following real and legal persons are proponents of this theory:

- Dar Al-Fata Al-Mesri
- Fatwa Committee of Kuwait's Ministry of Endowments
- Sheikh Jad Al-Hagh Ala Jad Al-Hagh, former head of Al-zahr
- Dr. Nasr Farid Vassel, former mufti of Egypt

- Dr. Bakr Abuzeid, Head of Islami Jurisprudence Association of Jaddeh
- Sheikh Badr Al-Motevali Abd Al-Baset
- Dr. Mohammad Ramezan Al-Booti, famous Islamic Jurist and Author
- Sheikh Mohammad Al-Mokhtar, Mufti of the Republic of Tunisia
- Ayatollah Makarem Shirazi
- Ayatollah Fazel
- Ayatollah Seyed Ali Sistani

5. Conclusion

According to the mentioned reasons, it can be stated that stopped activity of brain, cortex, and brainstem while the heart and lung of human is working would not lead to death of the patient so that in this case, the patient is not a dead body. Real death occurs when all brain, respiratory and cardiac activities are stopped and there is not any vital sign in human. As we know, Article 1 of Iran's Law for Diagnosis of Brain Death has considered brain activity failure as real death; however, findings obtained from this study indicate that this is a hasty opinion that ignores right to life of patient with brain diseases.

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