

Ethical Challenges to Determination Brainstem Death in Intensive Care and Its Medicolegal Aspects: A Case Report

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Abstract

A 21-year-old female patient treated in the Intensive Care Unit (ICU) due to a traffic accident, after two days of treatment was declared brainstem death, the patient's family asked the doctor to continue treatment efforts in the hope of improving the patient's condition. The team of doctors differed in response to the patient's family request. Doctor A said that brain stem death meant that the patient had died and that no further action was needed, but Doctor B was of the opinion that the medical indications were absent but needed to provide an opportunity for the patient's family to see the patient's condition until he could eventually die naturally. According to doctor B it is not easy to determine brain stem death because it has several ethical and medicolegal consequences such as termination of life assistance, a certificate of brain stem death, and post-brain stem death organ transplantation. The medical decision taken is to keep the patient in care and after 3 days the patient is declared dead.

Keywords

brain death; ethical challenges; intensive care; medico legal aspects



I. Introduction

Brainstem death (BSD) is a medical condition that is rare but often causes controversies, conflicts and ethical dilemmas. It is not easy to determine brainstem death and also not easy to convey this to the patient's family. It is necessary to understand ethics and humanism in the decision making of brainstem death (Laio & Ito, 2010). There are two ways to determine someone's death, that is by manually looking at the cessation of breathing and heart rate, usually done in an emergency room or emergency unit (Indonesian law, 2014) and modern technology by looking at the termination of the pillars of life with a monitor, usually done in a treatment in ICU (Machado, 2010). The concept of determining the clinical death by seeing the cessation of heart and lung function, for patients in the ICU cannot be used considering that currently with technological and scientific advancements there are efforts to reanimate with the availability of effective mechanical ventilators and pulmonary resuscitation (Yuwono, 2005). However, if the brain has lost its function marked by the absence of a brainstem reflex response, then resuscitation is impossible to succeed even though the other organs continue to function, so the question arises, whether the patient is declared alive or has died? (Machado, 2010).

According to the American Academy of Neurology, to determine brain stem death by its parameters emphasizes the 3 clinical findings needed to assess irreversible signs of all

brain system functions namely coma (with known causes), absence of brainstem reflexes, and apnea (AAN, 1995; Greer et al., 2008). Brainstem Death (BSD) is a major clinical expression of a disorder in the brain that is characterized by the loss of all brain function which includes irreversible loss of brain stem function (Machado, 2010; Greer et al., 2008). Other signs that are often found in brain stem death are hypothermia below 33°C, electrolyte disturbances, heavy acid and endocrine acid, and hypotension with systolic pressure <90 mmHg. Examination of brainstem death can be repeated 6 hours later for evaluation. Additional tests that can be done to determine brain stem death are brain angiography, electroencephalogram, or brain nuclear scan (Laio & Ito, 2010).

Ethical and medicolegal problems that often arise are the lack of understanding of the patient's family on the issue of brain stem death (Laio & Ito, 2010). How to make decisions, delivery to families and responses to brain stem death information submitted by the hospital doctor team? The ethical and medicolegal aspects discussed in this case refer to the basic ethical principles (Beauchamp & Childress, 2013), clinical ethics (Jonsen et al., 2010), the code of Indonesian medical ethics and the applicable laws and regulations in Indonesia. The following is reported a case of brainstem death decision making and its ethical and medicolegal challenges.

II. Research Methods

A 21-year-old female patient was admitted to the ICU because of a traffic accident and intracranial hemorrhage. After two days being treated in the ICU the patient was declared dead brain stem. The team of doctors delivered the diagnosis of brain stem death to the family. The patient's husband asks the doctor to continue treatment while hoping for an improvement in the patient's condition. There was a discussion between the doctor and the patient's husband. There are differences in attitudes among doctors regarding a patient's husband's request. Doctor states that after the patient is declared dead brain stem then the patient has died and all sophisticated medical equipment must be revoked because it no longer provides benefits. Doctor B still gives an opportunity to fulfill the patient's wishes to maintain treatment with a note that after a few days there is no improvement then the patient is declared dead. The end of the discussion decided to keep the patient in care, but after 3 days later the patient was declared dead naturally.

III. Discussion

Care in intensive care units is critical care that requires speed and accuracy in making medical decisions. Medical decision making does not always run smoothly, sometimes there are ethical conflicts or dilemmas between medical indications and patient and family preferences. In the condition of patients in terminal conditions even brainstem death there have been several ethical dilemmas that occur. The diagnosis of BSD must be carried out appropriately and with extreme care because after the patient is determined BSD, the life support tool will be released immediately and soon the patient will experience a cardiac arrest. Before upholding the MBO it is better to discuss with the family whether there is a plan for an organ donor, or the patient has previously stated that he would donate his organ if he died (advanced directive) (Indonesian Law, 2014; Queensland, 2018). Before the patient is declared dead brain stem, must be re-evaluated already found prerequisites, whether the patient is comatose and get artificial ventilation, is there any structural brain damage, has been investigated the rejection criteria, are there signs of negative brain stem reflexes and

whether the patient experiences stopping breathing persist while ventilating released? (Beauchamp & Childress, 2013). Ethical challenges that can arise from the decision to diagnose brain stem death for patients and their families include:

- 1) The patient's family refuses if the BSD has been declared and asks the doctor to continue therapy, in the case above there are 2 different opinions from the doctor, it can also trigger the patient's lack of trust in the doctor's decision. Doctor A who stated that he no longer continued therapy on the grounds that any medical action was unnecessary because it was in vain. While doctor B reasoned to continue therapy until the patient dies naturally.
- 2) It has happened in a non-government hospital, the patient's family requests that therapy be continued, in fact the doctor has said that the patient has died of a brain stem and there is no hope of recovery, but his family continues to insist and is willing to pay for all the actions of the doctor. This can be a moral hazard, if doctors continue to treat patients by imagining honoraria when in fact doctors already know that patients are not likely to be saved.
- 3) If therapy is continued with state of the art equipment in a patient's condition that is no longer a response to treatment and has been declared brain stem dead, then if medical equipment is not removed it can extend death to the patient, of course this is detrimental to the patient and his family spiritually. However, if there is an organ donor plan, the use of life support tools shortly after determining the BSD diagnosis is still maintained to function to obtain quality organs for transplantation. If the patient is an organ donor, the ventilator and all therapies continue until the required organs are removed (Machado, 2010; Greer et al., 2008).

In principle, the diagnosis of BSD in patients with BSD is sufficiently done by clinical examination in the form of brain stem reflex examination and apnea that must be proven (Pandhita, 2010). However, before a diagnosis of BSD is made in a patient, it must be ensured beforehand that the patient is in a coma and is dependent on a ventilator. Before diagnosing brain stem death, it must be ensured that the patient does not exhibit abnormal postures such as decerebration or decortication and does not have active reflexes and seizure activity. If the activity is not found in the patient, then it can be ascertained that the patient has experienced BSD. Tests carried out on patients with suspected BSD do not have to use sophisticated equipment. It only requires checking for brain stem reflexes and checking for blood gas analysis. The 5 reflexes that are absent in BSD patients are: (1) no response to light, (2) no corneal response, (3) no vestibulo-ocular reflex, (4) there is no motor response in the distribution of cranial nerves to adequate stimulation in the somatic area, (5) there is no gag reflex and cough reflex to the stimulation of a suction catheter that is inserted into the trachea (MFUI, 2012; Yuwono, 2005; Samil, 2001). The test can be repeated to prevent observer errors and changes in brain stem death signs. Repeat time intervals range from 25 minutes to 24 hours, depending on hospital regulations.

After the patient is declared dead, the ventilator must be released immediately. The patient dies when the brain stem is declared dead, not when the ventilator is released from the patient and the heart stops beating. For the diagnosis of brain stem death, no EEG or angiography is needed. The ethical question here is whether the termination of sophisticated medical equipment includes euthanasia?. Misunderstandings often occur, such as the term pulling out the ventilator pipe and stopping life support. It is necessary to give informed consent to the family that when removing the ventilator, it means letting a person die naturally (Beauchamp & Childress, 2013; Samil, 2001).

Determination of which is extraordinary or extraordinary becomes very important so that doctors and nurses believe that their professional actions do not violate ethics or

medicolegal. This extraordinary or extraordinary principle distinguishes exactly which is euthanasia and which is not euthanasia. Not giving the ordinary is euthanasia, while not giving the extraordinary is not euthanasia (Kurmaryanto, 2012; Suryadi, 2017).

If this principle is applied in the context of euthanasia, there are a number of conditions that can be simulated (Kurmaryanto. 2012): (1) a patient is not given medication with the aim that the patient dies because he feels sorry for his suffering, this is called passive euthanasia, but if the patient is not given medicine because the drug is no longer available (extraordinary drug availability) or because his family is no longer able to buy the drug because it has gone all out financially (extraordinary financial) which results in the patient dying so it is not euthanasia but withholding and withdrawing life support; (2) a patient is not given medication because there is no healing benefit for the patient and then the patient dies (extraordinary benefits), this is also not euthanasia but futile treatment; (3) a patient is not given medication because the patient's condition is terminal and the patient dies (extraordinary indication), it is also not euthanasia but a terminal state patient's condition, (4) a patient is diagnosed with brain stem death and revoked his medical equipment, not euthanasia, because euthanasia's intention and purpose for the patient to die, while the brain death of the patient has indeed died (Kurmaryanto, 2012; Suryadi, 2017). Active euthanasia is generally not ethically acceptable, but passive euthanasia can still be recommended (Rampen, 2006).

IV. Conclusion

Enforcement of BSD cannot be done directly; it must pass several clinical trials conducted by anesthetists and neurologists, because in patients who have been diagnosed with BSD, all life support devices must be revoked. Patients with a diagnosis of BSD must be certain that brain damage is irreversible and does not constitute the effects of certain diseases or the effects of the drugs used. The enforcement of BSD does not necessarily mean that it can be enforced right away; the patient must be in care for at least 24 hours. Ethical challenges in determining brain stem death can be faced if doctors make professional decisions and have good communication with families.

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