

ORGAN DONORS? (Association of Greek Scholars “Prooptiki”)

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Many of us would happily donate one of our organs after death, for the sake of another human being. But are our organs removed after death? Or are they removed at the time of the so-called ‘brain death’? How was the term ‘brain death’ coined? Why all this controversy in the Greek and international medical community? Why do some doctors deny that ‘brain death’ is equated with the definitive biological death?

INTRODUCTION

Most organ donors seem to be ignorant of the term ‘brain death’ and what really takes place in the operating theatre. “When they read the phrase ‘after my death’ many imagine a pulseless corpse and might be horrified to learn that it really means *after I become comatose and apneic but all my other organs are working fine* and that *I will be eviscerated while still pink and warm, with my heart spontaneously beating and blood circulating*. Moreover, no one is informed that the rationale for equating “brain death” with death remains controversial and that empirical evidence has been accumulating that casts serious doubt on the mainstream rationale. Thus, information highly relevant for the potential donor’s moral decisionmaking is systematically withheld.”[\[1\]](#) With these words we are introduced to the problem by the distinguished Professor of Child Neurology at UCLA (University of California, Los Angeles), Dr Alan Shewmon.

Indeed, both the concept of brain death and the application of ‘brain death’ diagnostic criteria have brought about a lot of opposition within the medical community. Eminent doctors in Greece (K. Karakatsanis 2001, E. Panagopoulos 1998, M. Vrettos, 1999, I. Kountouras 1999, K. Christodoulidis 1995, N. Balamoutsos 1999, N. Konstantinides 1999, M. Giala 1999, A. Avramidis 1995, P. Kougias 1999, A. Goulianos 1999 and others) and abroad (R.D. Truog 1992, D.A. Shewmon 1997, R.M. Taylor 1997 and others) raise strong medical objections or even suggest abandoning the very concept of “brain death”.[\[2\]](#)

According to Dr Robert D. Truog, Professor of Child Anaesthesiology at Harvard University and director of ICU at Children’s Hospital, Harvard Medical School, Boston “ ‘brain death’ remains incoherent in theory and confused in practice. Moreover, the only purpose served by the concept is to facilitate the procurement of transplantation organs.”[\[3\]](#)

Interestingly, in the state of New Jersey, USA, the law forbids the doctor to pronounce dead every patient who is opposed to the concept of ‘brain death’[\[4\]](#).

WHAT IS DEATH

Assistant Professor of Neurology at the Ohio State University, Dr Robert M. Taylor, defines death as “the event that separates the process of dying from the process of disintegration” and emphasizes that **“the proper criterion of death in human beings is ‘permanent cessation of the circulation of blood’”**. [5] This is also the proper definition according to other experts[6].

In Greece Dr Emmanuel Panagopoulos, assistant director of the 2nd Surgery Clinic at “Agios Savvas” Hospital in Athens and Professor of Surgery at the University of Athens, explicitly states that “ ‘brain death’ is a process of death but **not death**”. [7] Asked whether in a ‘brain dead’ person the process of disintegration has started, Dr Em. Panagopoulos highlights that this is not the case, since “what we, doctors, do through technologically supporting a brain dead person is delaying the coming of death. In other words, there is no disintegration then.” [8] Moreover, another eminent doctor, Dr Konstantinos Karakatsanis, Associate Professor of Nuclear Medicine at the Aristotle University of Thessaloniki, pinpoints that “biological death is not a continuous process but an instantaneous event”. [9]

Finally, Dr Alan Shewmon, initially an ardent supporter of ‘brain death’, after studying ‘brain dead’ people with a prolonged survival, shift his ground and now explicitly states that “only a circulatory-respiratory statutory definition has the potential for universal acceptance.” [10]

THE ONSET OF ‘BRAIN DEATH’

When the first heart transplant operation was performed in 1967 in South Africa the risk of justice intervention was posed. In order to avoid this problem there was only one solution: redefining death. [11] Thus, in 1968 an ad hoc committee of the Harvard Medical School publicly redefined death as ‘brain death’ on the grounds that : a) the patients in irreversible coma, coma dépassé, are a burden to themselves, their families and the hospitals b) objections may occur to the obtaining of organs for transplantation if the old criteria of defining death continue to be valid. [12]

According to Dr Mita Giacomini, Assistant Professor at Mc Master University, Ontario, Canada, who studied extensively the files and proceedings of the Harvard ad hoc committee, the decision made was distorted and adulterated in relation to medical data. The findings of Giacomini’s research were that “the early criteria for brain death did not emerge solely from physical features of the dead or even from the capacities of diagnostic and life-support technologies. **Brain dead bodies had to be created, recognized, described and defined in the development of brain death criteria: brain death was socially as well as clinically constructed.**” [13] Indeed, a host of experts (Taylor 1997, Truog 1997, Raper & Fisher 1995 [14] and others) agree that the concept of brain death is not equated with that of death and that it was invented for the purpose of harvesting organs for transplantation.

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THE QUESTIONING OF ‘BRAIN DEATH’

1. ‘Brain death’ **is defined differently from country to country** and as time goes by one can observe “**a gradual decrease of the essential presuppositions for its diagnosis.**”[\[15\]](#) Specifically, in 1968 the ad hoc Harvard committee defined as a brain death criterion the irreversible loss of all activity of the entire CNS (central nervous system), while in 1981 the new committee of specialists on death set up by the then President of the USA formulated the new ‘uniform determination’ of death, according to which a person is dead if he shows: a) irreversible cessation of circulation and breathing b) irreversible loss of all the functions of the entire brain, including the brainstem.[\[16\]](#) In 1971 two neurosurgeons from the University of

Minnesota, Mohandas and Chou suggested new 'brain death' criteria, namely the irreversible loss of the functions of the brainstem alone.[17] These new criteria, known as the "Minnesota criteria", are today accepted in Great Britain and Greece, whereas in the United States the stricter criteria of 1981 are accepted.[18] In Greece Dr Athanasios Avramidis, Professor of Pathology at the University of Athens, asks the Greek National Health Council to have the existing regime changed and the uniform determination of death applied.[19] Furthermore, at the 2nd International Symposium on 'brain death' in 1996, "it becomes gradually accepted that 'brain death' is equated with **the irreversible loss of consciousness**, the existence of biological (vegetative) signs not being critical for the diagnosis of brain death." [20]

2. Serious objections have been expressed about the substantiation of the term 'necrosis of the brainstem because this term "is pathologoanatomical and **can be substantiated only after the posthumous removal of the patient's brain** and its examination by a special pathologist". [21] As a result, experts in Greece and abroad support that "brain death has never acquired a precise clinical or pathological basis and its diagnostic criteria are, therefore, arbitrary." [22]

3. Some patients who met the clinical criteria for brain death survived much longer than the anticipated survival period, which is usually less than 2 weeks.[23] Specifically, Truog (1992), Shewmon (1998) and Karakatsanis (2001) mention cases of 'brain dead' patients who survived from 36 days up to 6 months and also a few cases of 'brain dead' patients who survived **from 6 months up to 17 years** after the diagnosis of 'brain death'. In other words, 'brain death' does not lead to imminent cardiac arrest.[24] Or simply put, **we should not confuse the prognosis of 'dying' with the diagnosis of death.**

4. The difficulties in diagnosing 'brain death' were shown in a 1989 study concerning doctors and nurses involved in the harvesting of organs for transplantation. The study proved that "**only 42%** of the doctors and 25% of the nurses correctly identified the legal and medical criteria for the definition of death, which revealed the confusion around the issue." [25] Furthermore, a more recent study in 1999 presented to the Society of Critical Care Medicine demonstrated that "**only 39%** of pediatric attending physicians correctly defined brain death...Neurologists, neonatologists and other subspecialists were less accurate than pediatric intensivists in correctly defining brain death, interpreting a clinical scenario, and determining whether confirmatory testing was necessary." [26] Notably, Dr E. Wijdicks, Professor of Neurology at Mayo Clinic, USA, provides us with valuable information : 22% of 93 children who were considered 'brain dead' did not have their organs removed, despite their parents' consent for organ transplantation, because after a careful neurologic examination it was ascertained that **the 'brain death' diagnosis was erroneous.** [27]

5. It is noteworthy that 'brain dead' people, if properly supported, maintain a steady temperature and many 'brain dead' patients retain complex, spinal reflexes, absorb and digest food, gain weight, heal up wounds, continue their pregnancy for weeks or months and give (Caesarean) birth to viable infants. [28]

6. Despite the fact that, according to the 9/20-3-1985 decree of the Greek National Health Council, death is defined as the irreversible loss of consciousness and the irreversible loss of spontaneous respiration, **“there do not exist medical or other criteria for the diagnosis of the loss of consciousness, since consciousness is by nature a subjective experience** ... Furthermore, it is impossible to check for the performed content of consciousness”.[\[29\]](#) And in the 2nd International Symposium on ‘Brain Death’ in 1996 it was supported that “deeply comatose patients fulfilling all brainstem criteria of death, with destroyed brainstems but preserved cerebral hemispheres, **might be capable of thinking, feeling** and so forth.”[\[30\]](#)

7. What is the interpretation of the existence of unusual, complex movements, known as “Lazarus sign” made by some ‘brain dead’ people? Dr Fred Plum, eminent Professor of Neurology, defines these movements as “semipurposeful” and “semidirected”.[\[31\]](#)

8. Could the rare, yet recorded, cases of what has been called recovery from ‘brain death’ be concealed?[\[32\]](#)

CONCLUSION

Concluding, since the concept of ‘brain death’ is not unanimously accepted by the national or international medical community, we suggest that the equation of ‘brain death’ with death should be re-examined from a purely medical viewpoint, free from any interests whatsoever.

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[\[1\]](#) Shewmon DA. *“Brainstem Death”, “Brain Death” and Death: A Critical Re-evaluation of the Purported Equivalence.*

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[\[2\]](#) See 1 above & Truog RD. *Is it time to abandon brain death?* Hastings Cent Rep (United States), 1997.

[\[3\]](#) See 2 above

[\[4\]](#) Olick RS. *Brain Death, Religious Freedom, and Public Policy New Jersey's Landmark Legislative Initiative,*

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[8] Panagopoulos Emmanuel, *Interview*. Nemecis, July 2001.

[9] Karakatsanis Konstantinos, *'Brain Death': equated with death?*, University Studio Press, 2001, p.107.

[10] See 1 above

[11] See 7 above

[12] *A definition of irreversible coma. Report of the ad hoc committee of the Harvard Medical School to examine the definition of brain death*. JAMA 1968, 205 : 85-88.

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[17] Mohandas A, Chou SN. *Brain death. A clinical and pathological study*. J Neurosurg 1971 35: 211-218

[18] See 7 and 8 above

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[22] See 21 above

[23] Truog RD, Fackler JC. *Rethinking brain death*. Crit Care Med 1992, 20.

[24] See 1 above

[25] Balamoutsos N, Karakatsanis K, *Brain death. Should we reconsider the diagnosis?* Iatriki 1999, 76(3): 219-228.

[26] Van Norman G. *Can Brain Death Testing Be Perfect?* Anesth 2000, Vol.92., No 4.

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