

2nd International Conference on

Central Nervous System Disorders & Therapeutics

December 05-07, 2016 Dubai, UAE

Understanding of brain death depends on an advancement of technology

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Brain death (BD) is the clinical condition of complete loss of brain function and the state of being in an irreversible coma diagnosed by apnea test, testing for brainstem reflexes and other examinations depending on country. There is a consensus among the neuroscientists that the total brain malfunction is considered as the death of the whole body. However, people diagnosed as BD nevertheless retain full homeostasis despite no case of full recovery from that condition documented. What it tells us is that the tests like EEG is not sufficient for BD diagnosis which was eliminated from the BD diagnosis in Commonwealth countries. Even the apnea test is not included as confirmatory for BD diagnosis in some countries and in others it differs in timing. In 1947 when the first defibrillation of heart was implemented the death was “Reversible”. The recent studies on patients in coma show that using optogenetic rehabilitation made it possible for patients in coma to achieve harmonic psychosomatic balance. Recently, Bioquark Inc. and Revita Life Sciences received IRB approval for the first-in-human brain death study where they will implement the use of stem cells and try to “Cure” BD patients. If the study succeeds, we will need other criteria to determine BD as a disease or as the death of the whole body. In this poster presentation, the analysis of BD criteria and diagnosis since 1967 will be discussed, and how it changed and will change over time with the advancement of technology.

Biography

Galymzhan Kuatbay has completed his Bachelor at the Nazarbayev University, majoring in Biological Sciences. Currently, he is a 2nd year Medical Student at the Nazarbayev University School of Medicine and his research interest is in the area of brain dysfunctions and the use of optogenetics.

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