Complexities and Controversies in Brain Death

Phil Sargent
ANZICS/ACCCN ASM 2018
The Boundaries which divide Life from Death are, at best shadowy and vague. Who shall say where the one ends and where the other begins

Edgar Allen Poe, The premature Burial
1844
The problem with language and perceptions of associations

- Why do we need Death versus Brain Death
- Death by Brain Stem Criteria
- Death by Whole Brain Criteria
- Death of the Nervous System
- Total Brain Failure
<table>
<thead>
<tr>
<th>Year</th>
<th>Event/Invention</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>Advanced Life Support. Safar</td>
</tr>
<tr>
<td>1953</td>
<td>First ICU Norway Ibsen</td>
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<tr>
<td>1955</td>
<td>First PICU Sweden</td>
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<tr>
<td>1958</td>
<td>Mollaret and Goulon “Coma dePasse”</td>
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<tr>
<td>1954</td>
<td>First Kidney transplant</td>
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<tr>
<td>1963</td>
<td>First Liver Transplant</td>
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<tr>
<td>1965</td>
<td>First Australian Kidney Transplant</td>
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<tr>
<td>1967</td>
<td>First Heart Transplant Barnard</td>
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</tbody>
</table>
1968 Harvard Ad Hoc Committee

Anaesthetist
Transplant Surgeon.
3 Neurologists
Neurosurgeon.
Nephrologist.

Attorney
Neuroscientist
Professor of Public Health
Historian
Ethicist

A definition of Irreversible Coma
Definition of Brain Death

JAMA August 5 1968
Death is a gradual process at the cellular level with tissues varying in their ability to withstand the deprivation of oxygen. But clinical interest lies not in the state of preservation of isolated cells but in the fate of the person...the point of death of the different cells and organs is not so important as the certainty that the process has become irreversible.
Legal Framework

• 1975 Australian Law Reform Commission

• Human Tissue Transplants

  • Create a draft legislation suitable for Uniform adoption by the states and territories for the removal of tissue and organs for the purpose of transplantation.

  • Including a definition of death for all purposes and should define death by reference to cessation of all function of the brain....and also irreversible cessation of circulation of the blood
Uninjured brain

Minimally Conscious State

Permanent Vegetative State

Irreversible Apneic Unconsciousness

Necrotic (liquified) Brain

Brain Death

Taken from Troug 2018
Other Legalised Physiologies

- Adulthood vs Childhood
- Blindness vs Sightedness
- Intoxication vs Sober
- 1979 Qld Anatomy and Transplant Act
- 1980 Presidents Commission
- 1982 Victorian Human Tissue Act
- 1983 Cyclosporine released by FDA
- 1984 First Heart Transplant Australia
- 1985 First Liver Transplant Australia
We should all remember the past, to prevent our having to relive it in one way or another. No doubt the surgeons ... are really nice people, kind to dogs, cats and their own children – once they take off their masks and leave the supercharged atmosphere of the operating room. But then away from the laboratory, probably Dr Mengele was kind to children too (as long as they were Arayan and he surely had spotless hands.”
• **1993** First release of the ANZICS statement on Brain Death and Organ Donation

• **1995** American Association of Neurology guideline on diagnosing Brain Death in Adults
• 2008 Presidents Council on Bioethics - Controversies in the Determination of Death

• 2008 Multiple cases of Brain Death Survivors
Zach Dunlap was clinically dead. An organ-harvesting team was on the way to harvest his organs for transplantation into other patients when his cousins, both nurses, realized he was still alive.
• 2000 The incident of the plane in the night
• 2009 Donatelife created by the ODATA
• 2010 National Protocol for DCD
• 2011 Still trying to change the QLD law
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WHAT DOES IT MEAN TO DIE?

When Jahi McMath was declared brain-dead by the hospital, her family disagreed. Her case challenges the very nature of existence.

By Rachel Aviv
Brain Death and the Controversial Case of Jahi McMath
Wednesday, April 11, 2018
5:00 - 7:00 p.m.
MCPHS University*
Neurologist review

- MRI does not look like the liquified disorganised mass of previous Brain Dead Patients
- There are some movements which although infrequent appear to be responsive
- Jahia has gone through Pubertal changes and has menstruated
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Jahia
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Taken from Troug 2018
Jahi McMath to be buried in Hayward while fight over her death continues

Rachel Swan  |  July 3, 2018  |  Updated: July 3, 2018 6:18 p.m.

Nailah Winkfield appears at a news conference with her attorney Christopher Dolan (left), her brother Omari Sealey and husband Marvin Winkfield to discuss the death of her daughter Jahi McMath in San Francisco, Calif. on Tuesday, July 3, 2018.
The Conundrum

Certainty

Vs

Truth
THE ANZICS STATEMENT
ON DEATH AND ORGAN DONATION

Edition 3.2
2013
The concept of Brain death is at once too flawed to endure and too engrained to abandon

Rob Truog 2018