

## Ethical challenges in pregnant women with brain injury

Mariano Paternoster, Gabriele Saccone, Giuseppe Maria Maruotti, Cristina Bianco, Claudia Casella, Claudio Buccelli & Pasquale Martinelli

To cite this article: Mariano Paternoster, Gabriele Saccone, Giuseppe Maria Maruotti, Cristina Bianco, Claudia Casella, Claudio Buccelli & Pasquale Martinelli (2017): Ethical challenges in pregnant women with brain injury, The Journal of Maternal-Fetal & Neonatal Medicine, DOI: [10.1080/14767058.2017.1339271](https://doi.org/10.1080/14767058.2017.1339271)

To link to this article: <https://doi.org/10.1080/14767058.2017.1339271>



Accepted author version posted online: 07 Jun 2017.  
Published online: 22 Jun 2017.

---



Submit your article to this journal [↗](#)

---



Article views: 22

---



View related articles [↗](#)

---



View Crossmark data [↗](#)

---

## Ethical challenges in pregnant women with brain injury

Sir,

Brain death was first defined by Mollaret and Goulon in 1959, and it remains the medically and legally accepted framework for the diagnosis of death [1,2]. Brain death is caused by a bilateral hemispheric injury that has secondarily resulted in loss of all brainstem function, including breathing and resulting in hypotension requiring vasopressor [3].

Recent improvements in life support technology and critical care management make it possible to maintain the patient's vital functions after the brain death. The question whether or not to offer support to brain-dead patient has become a controversial ethical issue, especially when brain death occurs during pregnancy [2–5].

On 23 November 2013, M.M. a 33-year-old pregnant woman at 14 weeks was found unconscious in her home in Texas, USA, after a massive pulmonary embolism which led to a brain death. Her husband requested that life support be discontinued. The hospital declined the family's request to "protect the unborn child". However, almost 2 months after and following a judge's order the life support was removed [4]. Notably, Texas is not unique in constraining pregnant women's end-of-life care and decision making. More than half of USA states have some such restrictions [4].

In the same year in Dublin, N.P., a 26-year-old pregnant woman at 15 weeks, was declared clinically dead on 3 December after suffering brain trauma [2]. Her family requested that somatic life support be discontinued. However, because the State of Ireland vindicates the right to life of the unborn, doctors decided to keep her on life-support treatment, worrying about the legal implications of her pregnancy. Currently, she is still on life support. Hence, the case was appealed to the High Court of Dublin, which, according to the Act of 26 December 2014 authorizes the interruption of any somatic life support, albeit leaving open the possibility to resort to a different option in the event that the fetus were to have a reasonable chance of survival.

Equally revealing is a third case, which despite dating back to 1986, is nonetheless worth mentioning for the purpose of our analysis. That year, in Georgia, USA, D.P., a 26-year-old pregnant woman at 16 weeks, was found unconscious in the rest room of a mall owing to an overdose. In the following weeks, her clinical conditions worsened towards brain death. Four weeks after

hospitalization (20th weeks of pregnancy), whereas her husband requested that she be taken off life support, her biological father demanded that her treatment be prolonged. In the end, the Superior Court of Richmond County ruled that she be maintained on life support until the birth of her child. Unfortunately, the infant, born prematurely, died few hours after birth because of multiple organ failure [6].

Esmailzadeh et al. [2] in a systematic review discussed the management of brain-dead mothers and gave an overview of recommendations concerning the organ supporting therapy. They found 30 cases reported between 1982 and 2010; the mean gestational age at brain dead and mean gestational age at delivery was 22 and 29.5 weeks, respectively. They concluded that the management of a brain-dead pregnant woman requires a multidisciplinary team which should follow available standards, guidelines and recommendations both for a nontraumatic therapy of the fetus and for an organ-preserving treatment of the potential donor. A nontraumatic brain injury was the cause of the brain dead in 26 of 30 women. Twelve viable infants were born and survived the neonatal period [2].

In 2011, a FIGO Committee for the Ethical Aspects of Human Reproduction and Women's Health, stated six recommendations for brain death during pregnancy. They concluded that women have the right to die in dignity and the goal of fetal rescue does not exonerate health-care givers from the duty to respect this right of the primary patient, i.e. the women; questions regarding maintaining pregnancy must be answered in consultation with the remaining family and should be decided in light of fetal viability [5]. The decision about whether attempts to maintain pregnancy are likely to be successful depends first on the gestational age of the fetus. For brain death in early pregnancy, supportive care may lead to the birth of a desperately premature neonate. However, starting at 12–14 weeks of gestation, fetal survival has been successfully prolonged for 15 weeks, bringing the fetus beyond the threshold of viability [5].

Besides providing a short description of these cases, it behooves us to make some personal observations regarding each case. From the two recent cases of M.M. and N.P., it emerges that, in accordance with FIGO's ethical recommendations [5], the protection of "prenatal life" should not, under any circumstances, convey the misleading idea that a brain-dead pregnant woman is to be

considered as a mere “artificial container”. Such misconception would thereby expose the woman to useless therapeutic obstinacy and to the ensuing complications associated with the use of ever more invasive life support techniques. Supposedly, such measures are taken in the name of the sacredness of the fetus—the concept on which many antiabortionists rely on to support their conservative views. However, we maintain that blindly subscribing to this concept by prolonging the life of a brain-dead woman just for the fetus’s sake would expose not only the woman but also the fetus to undue suffering. Indeed, extreme premature babies usually develop very severe functional abnormalities and are therefore destined to a life of suffering; however, short it may be [7].

Given these premises, we fully support the decisions made by both the American and the Irish judges as they stemmed from the realization of a well-thought out balance struck between two lives: that which was conceived and developing, and that which was already endowed with biological and legal autonomy.

Regarding the D.P. case, instead, the judge’s decision to continue the life support treatment seems to be supported by no plausible reason other than the highly censurable one of carrying out some sort of atypical experiment on the brain-dead pregnant woman. If on one hand, such decision clearly defies the juridical obligation of the Superior Court to obtain a valid consensus on the treatments to carry out on the young woman, on the other hand, it also defies ethical and deontological responsibilities—that is evaluating whether or not the prolongation of somatic life support treatments would be “proportionally” aligned with the desired outcomes or vice versa.

In conclusion, if the free will of a brain-dead pregnant woman, as expressed by the woman’s attorney, is to be duly honored as a basic human right, so should the level of protection given to human life, both throughout its development and concretization. Thus, stemming from these ethical principles is the need to strike a delicate balance between the respective sides of the dispute, which should always be considered in their “existential uniqueness”.

### Disclosure statement

No potential conflict of interest was reported by the authors.

### ORCID

Gabriele Saccone  <http://orcid.org/0000-0003-0078-2113>

### References

- [1] Mollaret P, Goulon M. Le coma dépassé. *Rev Neurol*. 1959;101:3–15.
- [2] Esmaeilzadeh M, Dictus C, Kayvanpour E, et al. One life ends, another begins: management of a brain-dead pregnant mother – a systematic review. *BMC Med*. 2010;8:74.
- [3] Wijdicks EF. The diagnosis of brain death. *N Engl J Med*. 2001;344:1215–1221.
- [4] Ecker JL. Death in pregnancy-an American tragedy. *N Engl J Med*. 2014;370:889–891.
- [5] FIGO Committee for Ethical Aspects of Human Reproduction and Women’s Health. Brain death and pregnancy. *Int J Gynecol Obstet*. 2011;115:84–85.
- [6] Superior Court of Richmond County, 1986. *Issues Law Med*. 1987:415 ss.
- [7] Rysavy MA, Li L, Bell EF, et al. Between-hospital variation in treatment and outcomes in extremely preterm infants. *N Engl J Med*. 2015;372:1801–1811.

Mariano Paternoster

*Department of Advanced Biomedical Sciences, School of Medicine, University of Naples “Federico II”, Naples, Italy*

Gabriele Saccone  and Giuseppe Maria Maruotti

*Department of Neuroscience, Reproductive Sciences and Dentistry, School of Medicine, University of Naples “Federico II”, Naples, Italy*

 gabriele.saccone.1990@gmail.com

Cristina Bianco

*Department of Law, University of Naples “Federico II”, Naples, Italy*

Claudia Casella and Claudio Buccelli

*Department of Advanced Biomedical Sciences, School of Medicine, University of Naples “Federico II”, Naples, Italy*

Pasquale Martinelli

*Department of Neuroscience, Reproductive Sciences and Dentistry, School of Medicine, University of Naples “Federico II”, Naples, Italy*

Received 12 April 2017; revised 2 June 2017; accepted 4 June 2017

© 2017 Informa UK Limited, trading as Taylor & Francis Group