

Abstract

Introduction: Resuscitation and intensive care from the 26 weeks of gestation is usually mandatory in developed countries because infants born at this week have a very high chance of survival without severe disabilities. The period between the 22-25 week of gestation is known as the *grey zone*, during which the results of care are uncertain and unpredictable in advance.

Thesis: Decision-making about offering intensive care at the threshold of viability is done in uncertainty, whether or not such treatment is at the best interest of the newborn, for out of principle, it is impossible to predict whether the infant will survive at all and if so, if it will continue to live without severe disability.

Viability of the fetus and the newborn: Determining the threshold of viability (the ability to survive outside the uterus) is the initial point in considering medical treatment. Viability depends - aside from the level of maturity of the fetus and its health condition - on the advancement of medical technology. It is also based upon given socio-economical, and cultural factors. The threshold of viability in regard of the *possibility* to be born alive and survive lies between the 22-24 weeks. An expert agreement on providing active care is based upon the *probability* of survival and survival without serious disability.

Deciding in uncertainty: Decision-making about offering intensive care at a time when survival or survival without severe disability is not *impossible* but is *improbable* or only slightly *probable* cannot be, given its nature, based upon evidence but is done in uncertainty which originates in our incapability to predict the effects of our decisions. The *objective epistemological uncertainty* is caused by the inaccuracy in determining gestational age, by the impossibility to state individual prognosis according to group results, and by insufficient knowledge regarding the initial perception of pain. The reason for *objective ontological uncertainty* is the influence of biological factors on the prognosis (in utero fetal development, causes of preterm delivery and postnatal adaptation complications), the duration of survival (early death phenomenon) and therapeutical approach (facts influenced by values). Medical uncertainty is also inseparably joined together with an ethical uncertainty. *Subjective moral uncertainty* exists due to the incapability to base decisions on bioethical principles. It is impossible to predict whether intensive care will benefit or damage the infant, but unless we provide it, the child will surely die. In regard of the unpredictable prognosis, the best interest of a nonautonomous newborn is unclear and we do not know who should be defending it. It is impossible to judge which decision is rightful. The innermost reason for moral uncertainty is the *rule uncertainty*. We lack guidelines for decision making in situations of precarious prognosis regarding not only survival but also the quality of life.

Strategy to reduce the uncertainty of rules: Physicians are looking for a way to reduce such uncertainty by accepting one of four strategies: the “*wait until certainty strategy*”, the “*statistical prognostic strategy*”, the “*strategy of unconditional respect to the decision of parents*”, and the “*individualized prognostic strategy*”. The validity of these strategies can not only be measured by rules, but it must be and it is our responsibility to do so. I have proven that the “*individualized prognostic strategy*”, which does not conceal uncertainty, is the only strategy that enables us to decide about each extremely premature newborn as a unique individual acknowledging the risk, that in the future we might find out that the decision taken was not the right one.

Key words: decision-making, uncertainty, survival, threshold of viability, best interest, providing intensive care, survival without serious disability