



EDITORIAL

Current “limit of viability”☆

«Límite de la viabilidad» en la actualidad

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Very often, when an infant at the limit of viability is about to be born, the uncertainty surrounding the possibility of survival has an impact on families and medical teams alike. At times, this uncertainty causes emotional stress for which the family is unprepared. We ought to bear in mind that all the family is hoping to bring home a “healthy” child, no matter what it takes to reach that point, and these expectations should always be a priority objective in healthcare.

While the survival rate of the most preterm infants has been rising in recent decades, defining the limit of viability still poses a challenge today, and in many cases it is done randomly, although there is a general consensus that the limit falls between weeks 21 and 25.

It is quite likely that the shift in the approach to treating extremely premature newborns, which aims to make easier ease and aid their transition to postnatal life without aggressive measures, has reduced the rates of some of the common sequelae. More importantly, it has brought about a situation where, from the very first minutes, it is the newborn who dictates what care is needed at each point in an individualised fashion. The measures now being applied are, in most cases, geared not towards “resuscitating” but rather easing the transition in the least dramatic and aggressive way possible. A simple example is the strategy that seeks to prevent pulmonary damage at birth: avoiding intubation and lung overexpansion, unnecessary exposure to high levels of oxygen, or the administration of vasoactive drugs. The extreme “frailty” of these patients is often obscured by ill-defined therapeutic goals mirroring cardiopulmonary resuscitation in full-term newborns with perinatal asphyxia.

The ethical dilemma that inevitably goes with working in neonatal units specialising in the care of these patients is vast, and is necessarily grounded in the wide-ranging training of all the staff involved. It is a recognised yet not always respected reality that these patients and their families must receive care in centres with the required level of knowledge, resources, and experience, as it is the only ethical way to achieve the best possible results. As part of their care, healthcare systems and their centres must have accurate knowledge of how to manage this pathology, as it poses a health problem whose consequences are often miscalculated. Knowing how care should be provided, which resources are available, and what the immediate as well as the mid- and long-term outcomes are is a prerequisite for our healthcare system. In the times we live in, not only is it unacceptable that the family is not involved in the care of their newborn, but also that the family does not actively participate in taking the decisions that will invariably need to be made. To be able to do this we need adequate and up-to-date information in our setting, something that can only be achieved by means of a nationwide database.

In this regard, and considering the shortfall of data from institutions, this work must be carried out by scientific societies and then transmitted to healthcare centres so that they can be aware of and use it. In the current issue of ANALES DE PEDIATRÍA¹, the Spanish Society of Neonatology (Sociedad Española de Neonatología, SENeo), through its SEN1500 network, is publishing for the first time survival and sequelae data of premature infants born at the limit of viability (22-26 weeks), stratified by gestational age. We need to have access to rigorously-analysed nationwide data

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in order to reach clear conclusions regarding real morbidity and mortality rates by gestational age in our setting. While being broadly representative of all Spanish healthcare sites, the database covers just 75% of cases, figures that come close to those provided by the Canadian Neonatal Network study.²

Broadly speaking, the reported data show a very active approach for this group of premature infants at the limit of viability, in which the high frequency of twin births stood out (12-34%), with high percentages of antenatal steroid administration, caesarean delivery, intubation in the delivery room, and administration of surfactants at some point in time, with figures highly similar to those found in other studies for survival and survival without sequelae³. The great frailty of this group is reflected in the high rate of delivery room death among those born at 22 and 23 weeks, but with a high percentage of advanced resuscitation, with a mean of 77% (62.5% in week 22, 80.2% in week 23, 86.6% in week 24, 78.7% in week 25, and 70.1% in week 26), which probably does not reflect the conservative approach to birth in newborns younger than 25 weeks recommended by the SENEo itself⁴. This database confirms once again that mortality is higher when advanced resuscitation measures are required, and that the presence of severe neurological sequelae is more frequent in patients who survived after resuscitation. The overall results are similar to those published by other networks or population databases^{2,3,5,6}, with the low rate of survival without major sequelae in this gestational age standing out, in particular for weeks 22-24. The manifest improvement in terms of survival in recent decades does not correlate with the necessary reduction in sequelae in this group of patients. In fact, as the US network⁶ recently demonstrated, there could be more sequelae once we apply the new definition by stages of bronchopulmonary dysplasia, or its physiological definition, rather than oxygen dependency at 36 weeks of corrected gestational age.

As happens with other databases, the data presented by García Muñoz et al. does not include children born outside the network and then transferred to it, or those deceased and not transferred, whose inclusion would probably change the overall results obtained and would be a better representation of the reality of these patients.

The current challenge is to obtain reliable follow-up data for children born at the limit of viability. Just as in many cases it is difficult to collect and analyse the survival data for these patients, it is often even more complicated to analyse the follow-up data. We should not forget that the outcomes in the follow-up data are influenced not only by the comorbidities of the patients, but also by the socio-economic level of the families, the degree of intervention, and the early detection of sequelae. Furthermore, the way in which development follow-up is analysed can also vary from site to site. And this is critical, as our ultimate objective is to know the outcome of healthcare practices in this highly vulnerable population, in which the variability between the practices of different centres can also be considerable. This explains the wide variability of the data published in different studies, which often confounds accurate prognosis in this population.

We are grateful for the efforts of the centres that enter and send their data to the SEN1500 network, as this is the best way to obtain reliable nationwide population data beyond local or interventional studies and clinical trials that inevitably produce biased results.

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