

Ben J Stenson, *Edition Editor***PERINATAL CARE FOR EXTREMELY PRETERM INFANTS**

As I write, at the end of March, we are in lockdown. Deaths due to Covid-19 are rising at the rate predicted by epidemiological modelling, and there is enormous tension about whether intensive care treatment will be available for all the adults who need it. The harsh reality is that some adults may die who would otherwise have lived if they had been able to access intensive care, and healthcare workers may be involved in choosing which adults should get the care and who will not. Terrible though this may seem, this situation is long established in neonatal intensive care in well-funded health systems, in the case of infants born at the margins of viability. A great deal of evidence shows that an extremely preterm infant's chances of survival depend heavily on where they born and whether or not the clinical team favour treatment. Assessing the outcomes of treatment for these infants is complex and a range of views about the best interests of the infants is not surprising, but the starting point for parents and their babies is that they should be able to access the same information and range of options in different parts of the same healthcare system. In this issue we publish the Framework for Practice in this area developed by the British Association of Perinatal Medicine and first released in October 2019. The aim of the document is to assist decision-making prior to and/or at the time of birth relating to perinatal care and preterm delivery and to ensure consistency of practice within units and networks and acknowledgement of the importance of individualised care for families. There are two accompanying articles. Annie Janvier and colleagues discuss how perinatal caregivers can be trapped in a pessimistic pattern and they encourage people to re-think their categorisation of outcomes, basing decisions on the chances of survival with a good quality of life and supporting and encouraging parental hope. Dominic Wilkinson and colleagues discuss in more detail the reasoning behind their recommendation in the Framework for Practice that extremely preterm infants should receive chest compressions and/or epinephrine in the delivery room. They challenge the basis for previous

recommendations against these treatments and recommend using resuscitation algorithms used in more mature babies for extremely preterm babies. *See pages F232, F230 and F240*

POSTNATALLY ACQUIRED CYTOMEGALOVIRUS (CMV) INFECTION

Ravi Mangal Patel and colleagues report a secondary analysis from an observational cohort study that examined transfusion transmission of CMV in very low birth weight infants. Serial maternal and infant testing were performed in 598 infants. There were 392 mothers who were seropositive and 220 of them had detectable CMV DNA in their milk. There were 33 infants with postnatally acquired CMV infection. Necrotising enterocolitis was observed in 6/33 (18%) of infected infants in comparison with 37/563 (7%) of uninfected infants. There was a significant association between early CMV infection and NEC and between maximal viral load and NEC. This was a secondary analysis with relatively few cases of NEC that does not allow definitive conclusions, but it is consistent with other data and deserves further investigation in larger studies. In a separate article Seilesh Kadambari and colleagues review the current epidemiology and clinical manifestations of postnatally acquired CMV disease and outline a strategy to manage the condition. *See pages F259 and F340*

DELAYED CORD CLAMPING

Lindsay Armstrong-Buisseret and colleagues report the 2 year outcomes of infants who were enrolled on the Cord trial. In this pilot trial, immediate cord clamping and postnatal care were compared with deferring cord clamping for at least 2 min and allowing postnatal care to commence with the cord intact. Of the original 276 babies in the trial, data at 2 years were available for 218 (115 deferred clamping and 103 immediate clamping). The composite outcome of death or adverse neurodevelopmental outcome at 2 years corrected age was observed in 24/115 (21%) deferred clamping infants and 35/103 (34%) immediate clamping infants (risk ratio 0.61, 95% CI 0.39 to 0.96). This was a pilot study and there was some loss of follow-up. The data are exciting and will make an important

contribution to the emerging evidence base. The deferred cord clamping group were managed in a way with some similarity to physiologically based cord clamping. The evolving evidence base in this subject area means that immediate clamping is losing relevance as a comparison group, but future studies of transition with the cord intact have great potential to influence management for the better.

Elizabeth Foglia and colleagues report a pilot feasibility trial of initiating resuscitation before umbilical cord clamping in infants with congenital diaphragmatic hernia. Infants were intubated with the cord intact and cord clamping was delayed until colorimetric CO₂ detection indicated that ventilation was taking place. Of 20 enrolled infants, 17 were intubated with the cord intact. In comparison with historical controls, there were no adverse consequences and there were some short term physiological advantages. The duration of ventilation with the cord intact was short, so this is not an assessment of all of the physiological changes that might be observed with a more extended protocol. The demonstration of the feasibility and safety of the approach supports the conduct of larger randomised controlled trials. Madeleine Murphy and colleagues reviewed videos of 80 preterm infants <32 week's gestation. Of the 18 infants whose cord was clamped before or at the intended minimum of 60s, 16/18 breathed before any respiratory support was given. Of the 62 where the cord was clamped after 60s 57 infants breathed before any respiratory support was given. These data should allow clinicians to be more expectant in allowing infants to breathe at birth and not feeling an imperative to cut the cord and progress with respiratory support. *See pages F292, F322 and F331*

ASSOCIATION BETWEEN SMALL FOR GESTATIONAL AGE AND RETINOPATHY OF PREMATURITY

Abdul Razak and Maher Faden performed a meta-analysis of 21 studies including 190 thousand preterm infants. Being small for gestational age at birth was associated with increased odds of any stage of ROP, severe ROP and treated ROP (adjusted OR for treated ROP 1.39; 95% CI 1.18 to 1.65; three studies). *See page F270*