



Highlights from this issue

Ben J Stenson, *Edition Editor*

MARTIN WARD PLATT

The last week of July has seen some very sad news. Our great friend, senior editor, and inspirational colleague, Martin Ward Platt, has died after a long illness. Martin, who was also interim Editor in Chief in 2017, had the rare gift of being able to lift any conversation and to light up a room in every sense, his clinical and academic intellect invariably getting to the nub of an issue whether on the NICU, at Public Health England or in editorial discussion. We will miss this enormously as well as his worldly wisdom. What we will miss most, though, is Martin as a person and his generosity of spirit: he is truly irreplaceable.

INTUBATION DIFFICULTIES

The who, why, how, where, when of intubating newborn infants is a rich source of debate, which usually means that there is also an evidence vacuum. Editor's choice this month is the article by Taylor Sawyer and colleagues reporting observational data about difficult intubation episodes from the National Emergency Airway Registry for Neonates (NEAR4NEOS) database. This registry gathers information about intubation episodes from 10 academic NICUs in the USA, Germany, Singapore and Canada, with the goal to improve neonatal intubation safety and quality. Over two and a half years, data were gathered from 2009 intubation episodes. 276 (14%) episodes met their definition of difficult (requiring three or more attempts by a non-resident provider). Only NICU intubations were included and elective re-intubations were excluded. Difficult intubations were not easily predicted from pre-intubation characteristics and were associated with greatly increased odds of adverse events. The paper and the subject area in general are discussed in detail in an accompanying editorial by Colm O'Donnell. A big challenge is the dwindling number of intubation events and the growing number of individuals expected to achieve competence conspiring against the planning of safe services. These data from real life practice support the evidence from studies that pre-medication, including use of

paralysing agents is associated with greater success and fewer complications. The limited opportunity for doctors in training to achieve competency at tracheal intubation might be a factor in the surprisingly slow uptake in the UK of less invasive surfactant administration (LISA). Eleanor Jeffreys and colleagues surveyed practice in the 196 UK neonatal units in mid 2018, getting a 95% response rate. LISA was being used in 18.7% of units overall. *See pages F461, F458 and F567*

COOLING FOR MILD HYPOXIC ISCHAEMIC ENCEPHALOPATHY (HIE)

Given that selection criteria for inclusion in trials of hypothermia deliberately selected infants considered to be at highest likelihood of benefit, it is reasonable to hypothesise that using these strict criteria in clinical practice might exclude other infants with reasonable chance of benefit, such as some infants with milder HIE. However, as the chance of benefit diminishes the potential for harm from unnecessary treatment exposure increases. Paulo Montaldo and colleagues provide further observational data in support of the hypothesis that treatment of milder HIE may be of benefit, with improved MRS and MRI biomarkers of brain injury and fewer seizures in treated infants with mild HIE. However, among 47 infants studied, adverse neurodevelopmental outcome at 2 years was observed in three babies. This highlights the importance of large trials to determine whether there is benefit and measure potential harms. The challenge will be achieving the sample sizes required to provide clear answers. Neonatal trials will have to get bigger and easier. *See page F515*

METABOLIC BONE DISEASE OF PREMATURITY

Whether or not, like me, you have left it too long since you last updated your knowledge on metabolic bone disease of prematurity, you will enjoy reading this very well-written article summarising current knowledge on the causes, recognition, prevention, treatment and long-term

consequences of this condition. *See page 560*

NEONATAL SEIZURES

Janet Rennie and colleagues report analyses of seizures identifiable by continuous EEG monitoring in a population of neonates considered to require EEG monitoring for clinical purposes in six neonatal units in Sweden, Ireland, the Netherlands and the United Kingdom. Among 214 infants who were studied, seizures were identified in 75 (35%). Both over and undertreatment of seizures were evident. 27 neonates received anti-epileptic drugs when there were no seizures and 14 infants with seizures were not treated. The authors conclude that, even with continuous EEG monitoring, neonatal seizures are frequent, difficult to identify and difficult to treat. *See page 493*

RESISTANCE OF CPAP INTERFACES

Elys Alexandra Green and colleagues demonstrate wide variation in resistance to gas flow through different current interfaces used to deliver CPAP. The differences are large enough to influence delivered pressure in some circumstances. *See page 535*

POINT OF CARE MEASUREMENT OF KETONES

Deborah Harris and colleagues validate a point of care device against standard laboratory methods. This is of interest because it places large datasets regarding ketone concentrations in newborn infants under various circumstances within reach. Considering their potential importance as an alternative energy source in the face of neonatal hypoglycaemia there is remarkably little information available about them during the days after birth. *See page 544*

ABDOMINAL ULTRASOUND IN THE DIAGNOSIS AND MANAGEMENT OF NEC

Jacqueline van Druten and colleagues discuss the emerging evidence for the role of ultrasound imaging in the assessment of this condition and illustrate it with some excellent images. *See page 551*