

Preface

Since 1986 the annual International Workshop on Surfactant Replacement has been hosted each year in European cities. The first small meetings were dedicated to the clinical applications of a non-commercial porcine surfactant designed by Bengt Robertson and Tore Curstedt and to the basic science linked with this potent mixture of phospholipids and hydrophobic proteins. Since then the small group of scientists has grown, paralleling the incredible spread of surfactant usage for treating neonatal respiratory distress syndrome. Even in our highly sophisticated medical environment, very few therapeutic interventions have made as powerful an impact on neonatal mortality as surfactant replacement therapy. However, neonatal mortality and, as importantly, morbidity are still worrisome especially in extremely-low-birth-weight infants. In this special issue of *Neonatology* the invited lectures and abstracts from the 23rd annual workshop held in Brugge, Belgium, from 5th to 7th June 2008, are published.

The 11th Nils W. Svenningsen Memorial Lecture was given by Barbara Schmidt from the Department of Pediatrics in the Children's Hospital of Philadelphia and the University of Pennsylvania. Dr. Schmidt addressed in her talk the effectiveness of evidence-based drug treatments in the prevention of bronchopulmonary dysplasia (BPD). Caffeine, one of the oldest medications in neonatology, is probably the drug of choice in this regard. However, more powerful and potentially more harmful treatments like corticosteroids need to be studied in further trials before new recommendations can be made. The lectures given by Rangasamy Ramanathan and Mats Blennow dealt with ventilation strategies and their impact on the occurrence of BPD. There is growing evidence about the advan-

tages of nasal continuous positive airway pressure (CPAP) compared to conventional ventilation whether used for resuscitation in the delivery room or as respiratory support after or instead of artificial ventilation. CPAP is largely used in Scandinavian countries where interestingly lower rates of adverse outcomes in very low birth weight infants, whether pulmonary or developmental, are reported. It is likely that these favourable results are not due to a single medical strategy such as CPAP. One can speculate that the general philosophy of care with an almost universal adoption of developmental and family-centred care might be one of the factors accounting for the better outcomes.

Differences among countries and among centers are also very striking as regards pain management, and this was discussed by Gopi Menon. Despite the large body of scientific evidence, the way neonatologists interpret what a preterm infant experiences is important and may affect their attitude to alleviation of pain. Colm O'Donnell developed the emotional content of the term 'resuscitation' and its impact on how neonatologists respond at the birth of a very preterm baby. He called for the abandonment of the term 'resuscitation' to be replaced by a term such as 'stabilisation' to indicate the need for less interference at birth in most cases of prematurity. Anne Greenough discussed the important long-term pulmonary morbidity of preterm birth reported in many studies. The graduates from classical BPD have now reached adulthood and appear to suffer from long-lasting effects on pulmonary function related to severity of their initial disease. On the other hand, long-term outcome of infants surviving with the 'new' BPD is unknown, as are the intervention strategies for enhancing lung growth in these infants.

Inflammation and infection are known to interfere strongly with lung development in preterm infants. Community-acquired respiratory syncytial virus infection often compromises lung function even further after discharge. Henk Haagsman highlighted the interaction between the surfactant collectins and respiratory pathogens. The collectins (SP-A and SP-D) are innate immune proteins that are important in host defence of the lung. Their addition to surfactant preparations may have important clinical benefits from an anti-inflammatory and anti-infectious point of view. Such new surfactant preparations might be effective in reducing rates of BPD in surviving preterm infants.

The articles and the abstracts published in this issue of *Neonatology* underline how poractant alfa, a drug developed more than 20 years ago, has stimulated a large amount of important research in clinical therapy and in basic science. The broadness of the research domains reflects our ongoing task: enhancing outcome of very preterm infants with the continuous search towards better medical strategies.

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