HAEMODYNAMIC ASSESSMENT AND MANAGEMENT OF HYPOTENSION IN THE PRETERM

The haemodynamic management of preterm infants has evolved over time, supported by epidemiological data, physiologically reasoned and well intentioned, but with little sophistication and little evidence to guide drug treatment. Rachel Mullaly and Afif Faisal El Khuffash review the present state of knowledge, highlighting the flaws of using mean blood pressure to guide treatment and describing the range of haemodynamic inferences that can be drawn with more sophisticated echocardiographic investigation. Their article is nicely illustrated and includes a summary of the presently used drugs and their potential effects. They acknowledge the weakness of the evidence supporting the wider range of agents increasingly in use and call for trials that use detailed physiological assessment to determine treatment approaches to take us forward. See page F120

STAPHYLOCOCCUS CAPITIS

Staphylococcus capitis has generated a lot of anxiety of late among neonatologists, with concerns that it may be more pathogenic that other coagulase negative staphylococcus species and implicated in outbreaks in nurseries. Jin-Min Yuan and colleagues provide reassuring information describing the outcomes of hospitalised infants up to 90 days of age with any coagulase negative staphylococcus infection in neonatal units in England and Wales from 2015 to 2021. They were able to gather information from more than 16,000 infection episodes. Reassuringly, there was no increase in frequency over time. Where speciation data were available (>10,000 episodes), S. epidermidis was most frequently detected (45.7%), followed by S. capitis (22.9%), S. haemolyticus (14.7%), other speciated CoNS (9.2%) and S. warneri (7.5%). The survival to discharge was 93.6%. There was no difference in mortality risk identifiable between these more commonly isolated species. See page F128

TWO-YEAR NEURODEVELOPMENTAL DATA FOR PRETERM INFANTS BORN OVER AN 11-YEAR PERIOD IN ENGLAND AND WALES, 2008-2018

Emily Van Blankenstein and colleagues report neurodevelopmental outcome data for preterm infants cared for in neonatal units in England and Wales between 2008 and 2018. United Kingdom guidelines recommend all infants born <30 weeks’ gestation receive neurodevelopmental follow-up at 2 years corrected age. They obtained the information from the National Neonatal Research Database, which includes information on all neonatal unit admissions. Of the 41,505 infants included 58% had a 2 year outcome reported, but this increased from 32% to 71% over time. The rate of increase appears to have reached a plateau for the last few years. A standardised assessment tool was used in 50% of cases. Rates of assessment in this national database are now approaching but remain below those achieved in randomised trials with funded 2 year outcome assessments. The use of routinely collected data for research outcomes is tantalisingly within reach if the clinical community commits further effort. See page F143 and F117

CONGENITAL DUODENAL OBSTRUCTION REPAIR WITH AND WITHOUT TRANS-ANASTOMOTIC TUBE FEEDING

Population studies suggest that a transanastomotic tube is used for feeding after congenital duodenal obstruction about half the time. George Stephen Bethel and colleagues report a systematic review and meta-analysis of studies reporting time to full enteral feed and duration of parental nutrition. Nine studies reporting outcomes of 469 infants were included in a quantitative meta-analysis. None of the studies was randomised. Transanastomotic tube use was associated with a reduction in time to full feeds of 3.34 days and with six fewer days of parental nutrition, with an estimated saving of £867 per patient. See page F182

NEURODEVELOPMENTAL OUTCOMES AT AGE 3 AFTER MODERATE PRETERM, LATE PRETERM, AND EARLY TERM BIRTH IN JAPAN

Katsuya Hirata and colleagues used the Japan Environment and Children’s Study database to assess the association between gestation at birth and neurodevelopmental outcome at 3 years. This nationwide, multicentre, prospective birth cohort study, included the data of over 100,000 pregnancies at 15 regional centres between January 2011 and March 2014. Neurodevelopment was assessed using the 36 month Ages and Stages Questionnaire (third edition; ASQ-3), with cut-offs validated for Japanese Children. There were 86,138 children included in the study, with around 80% follow-up to 3 years. Outcomes for moderate preterm (32–33+6 weeks), late preterm (34–36+6 weeks) and early term (37–38+6 weeks) infants were compared with those of term controls and showed significantly increased adjusted ORs for scores below the cut-offs in all domains with an inverse dose-response relationship between gestational age and outcomes. This large scale prospective cohort study underscores the importance of recognising the risk of developmental disabilities of non-full-term birth. See page F189