Highlights from this issue

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EPINEPHRINE DOSE AND FLUSH VOLUME

Evidence for the efficacy and optimal administration of epinephrine during neonatal resuscitation is hard to come by. Deepika Sankaran and colleagues performed a randomised study to model the use of epinephrine in a complex resuscitation situation that was based on the NRP algorithm. They studied newborn lambs that had been asphyxiated to the point of cardiac arrest by umbilical cord clamping before delivery. Five minutes after cardiac arrest positive pressure ventilation was provided and 1 min later chest compressions were provided and the FiO_2 was increased to 1.0. Epinephrine was administered into an umbilical venous catheter 5 min after the onset of resuscitation. Epinephrine doses of 0.01 mg/kg and 0.03 mg/kg were compared and flush volumes of 1 mL or 3 mL were compared in randomised groups. Epinephrine was repeated at the same dose every 3 min until return of spontaneous circulation. The higher dose of epinephrine was more effective than the lower dose and, with either dose, the response was better after the higher flush volume. The higher flush volume may be more effective at ensuring that the drug gets as far as the right atrium. *See page F578*

THERMAL MANAGEMENT IMMEDIATELY AFTER BIRTH WITH AND WITHOUT SERVO-CONTROL

Francesco Cavallin and colleagues performed a randomised controlled study in 15 Italian tertiary hospitals. They studied infants with estimated birthweight <1500 g or gestation <30+6 weeks. In one group manually adjusted thermal control was provided during initial stabilisation, with the heater set on full. In the other group servo control was used. There were 450 infants in the study. There was no difference in the rate of normothermia (temperature 36.5–37.5 C) at the time of neonatal unit admission. All infants were placed in plastic bags. Normothermia rates were relatively low in both groups (39.6% and 42.2%), with hypothermia being more frequent. Very few infants were hyperthermic. Servo control of temperature during initial stabilisation offered no advantage. Low normothermia rates show that initial thermal care is a complex dynamic process challenge that is not solved simply by choice of equipment. *See page F572*

OSTEOPATHIC MANIPULATIVE TREATMENT TO IMPROVE BREAST FEEDING

It is unusual for the *Fetal and Neonatal Edition* to receive a trial of a complimentary therapy. Osteopathic manipulative treatment (OMT) has been used to treat various health issues, including breastfeeding difficulties. Marie Danielo Jouhier and colleagues performed a double blinded randomised controlled trial. Mother baby dyads were eligible if there was suboptimal breastfeeding behaviour, maternal cracked nipples or maternal pain. The intervention consisted of two sessions of early OMT. To preserve blinding the manipulations were performed behind a screen. The primary outcome was the exclusive breastfeeding rate at 1 month. There was no significant difference in the primary outcome, OMT 31/59 (53%), control 39/59 (66%). The trial does not support the use of OMT for this indication. *See page F591*

TIME TO DESATURATION DURING ENDOTRACHEAL INTUBATION

Radhika Kothari and colleagues measured the time from the last application of positive pressure until desaturation <90% SpO_2 in preterm infants<32 weeks' gestation who were being electively intubated in the neonatal unit with pre-medication. There were 78 infants in the study and 73/78 desaturated to below 90% in a median of 22 s. The infants who desaturated to below 80% took a median 35 s to do so. As these were planned intubations in the neonatal unit, the times taken to desaturate may be longer than they would be for delivery room intubations, where the unrecruited lungs would not provide a reservoir of oxygen pending intubation success. The information may assist with the generation of guidelines. *See page F603*

PARENTERAL LIPID EMULSIONS IN THE PRETERM INFANT

Lauren Frazer and Camilla Martin review current the current evidence and physiological considerations around how to use parenteral lipid emulsions as part of parenteral nutrition for preterm infants. As with so many areas of current practice, the evidence is weak in many areas. It is useful to learn more about the hypothetical risks and benefits of newer preparations and to have knowledge gaps and research priorities identified so clearly. *See page F676*

TREATMENT THRESHOLDS IN EXTREMELY PRETERM INFANTS IN THE UK

Following the publication in 2019 by the British Association of Perinatal Medicine of professional guidance for the perinatal management of birth before 27 weeks of gestation, Lydia Mietta Di Stefano and colleagues surveyed UK health professionals to determine the lowest gestation at which they would now be willing to offer active treatment to an extremely preterm infant at parental request and the highest gestation at which they would agree to withhold treatment. The majority of respondents were willing to offer active treatment from $22^{+}0$ weeks. The highest gestation at which respondents would offer palliative care at parental request was $23+6/24^{+}0$ weeks for 59% of those surveyed (n=172). The survey data indicate that there has been a shift in practice in relation to both thresholds since the publication of the guidance. *See page F596*