Highlights from this issue

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CONGENITAL ANOMALIES

Congenital anomalies are even more important than we might think, not just in terms of their obvious morbidity, but in relation to their contribution to avoidable deaths across the world. Boyle *et al* have demonstrated that the WHO massively underestimates the impact of congenital anomalies in relation to the global burden of disease, mostly by excluding malformed stillbirths and terminations for fetal anomaly. Little progress has been made in Europe with regard to primary prevention of congenital anomalies; in particular the absence of universal folate supplementation represents a tragic failure of public health policy to which specific attention was drawn recently in these pages (*Arch Dis Child* 2016;101:604–7). ***See page F22.***

DOES MRI HELP?

The act of doing an investigation comes with potential unintended consequences and even harms, so it was important to ask the question of the effect of MRI brain scans in preterm babies who have reached around 40 weeks postmenstrual age. Edwards *et al* compared MRI with ultrasound imaging: all babies were imaged but there was randomisation between sharing with parents the knowledge of MRI or ultrasound results. As expected, neither modality was sufficiently specific on an individual basis to predict neurodevelopmental outcomes at 18 to 24 months, though on a group analysis MRI performed a bit better than ultrasound. Maternal state anxiety scores were lower in the MRI group at 12 months, though there was no difference at 14 days or 18 months and this was the only significant result among 16 anxiety comparisons; MRI was considerably more expensive. There was no difference between the MRI and ultrasound groups on measures of quality of life. It is a real shame that there was no control group that was not imaged at all at 40 weeks, so we still don't know the answer to the question 'does any imaging improve the care and well-being of preterm infants and their families?' ***See page F15.***

FAST FOOD FOR ELGANS

Just how fast can enteral feeds be advanced to minimise the progressive nutritional deficit that is well recognised to occur among extremely low gestational age neonates? Maas *et al* have shared some interesting observational data that illuminates this question. In a cohort of babies <28 weeks, in which quite an aggressive approach to enteral feeding resulted in full feeds being achieved in between 5 and 11 days postnatally, they demonstrated average growth rates of weight and head circumference over the first 8 weeks which compare favourably with other published data. At the end of this edition Hyperion notes the beneficial effect of ignoring gastric residuals when advancing enteral feeds but Maas *et al* make no mention of exactly how they managed to achieve their accelerated regime. And of course we need more randomised trials of fast feeding. ***See page F79 and F90.***

RESUSCITATION—PAYING ATTENTION

Over the last decade or two we have come to understand many aspects of resuscitation, but one aspect that is easy to observe yet difficult to study is behaviour and attention, within and between individuals in the team. To try to get a handle on aspects of visual attention, Law *et al* have reported a pilot study of an innovative approach using video recordings from head-mounted eye-tracking glasses worn by the airway manager/team leader. From the five usable recordings it was apparent that attention was only directed towards the infant for a third of the time; another third was directed at monitors and the rest elsewhere. This result did not surprise me: I have long observed how, during resuscitations, the moment the person doing mask ventilation stops watching the baby's chest, the chest stops moving. It would be nice to find out whether my random observations can be objectively verified, and now there is the technology to do that. ***See page F82.***

RESUSCITATION—T-PIECE VERSUS BAG

The relative merits of using T-piece devices with pressure limitation, versus self-inflating bags with a blow-off valve, have long been debated and there are clearly situations in which there is no choice, such as locations where there is no gas supply other than ambient air. But when there is choice, what about efficacy, as measured by mortality? Guinsburg *et al* have brought us tantalising closer to an answer, though unfortunately they have not been able to provide the rigour of a randomised trial. In their observational cohort of 1962 babies, across 20 Brazilian neonatal centres (and including 1248 babies of less than 29 weeks), logistic regression analysis found that use of the T-piece was associated with a 38% increase in the chances of surviving to discharge without significant morbidity (intraventricular haemorrhage, bronchopulmonary dysplasia) when compared with the self-inflating bag. As the adoption of T-piece technology is accelerating across Europe and in other parts of the world, a definitive trial will probably never be feasible, but these data should increase our confidence that this move is in the right direction. ***See page F49.***

PROTECTING THE NEONATAL NOSE

One of the most common unintended consequences of providing non-invasive respiratory support is pressure injury to the nose, and there are various ways of mitigating this problem as systematically reviewed by Imbulana *et al*. They show that the use of nasal masks, high-flow nasal cannulas, and barrier dressings all have a clear and positive effect in reducing septal damage. The effect was strongest for high-flow cannulas but some babies that can maintain stability on continuous positive airway pressure fail to do so on high-flow cannulas. It is therefore important to be aware of the other options, and in particular that the effect size for barrier dressings looks very similar, though with wider confidence intervals, to that for high-flow cannulas. ***See page F29.***