Gestational age and educational outcome

A series of papers in this journal and other journals over recent years has highlighted the fact that ‘near-term’ babies are disadvantaged, compared to ‘term’ babies, to a degree not previously recognised; Quigley et al have further investigated outcome in terms of subsequent school performance and found that near-term babies do markedly less well than those born at 37+ weeks. They also found that within the gestational age range of 37 up to 42 weeks, babies of 37 and 38 weeks do not do as well as those of 39 to 41 weeks. In the accompanying editorial, Neil Marlow further unpicks the artificial nature of the 1950 WHO definition of ‘Term’ as ‘37 up to 42 weeks’. If you are wondering how it came about that the WHO definition was invented, you should read the 1999 paper by Madar et al. This paper was one of the first to point out that surfactant deficiency lung disease is massively more likely to afflict a baby delivered before the onset of labour at 37 or 38 weeks compared to 39 to 41, which is of interest in itself, but it is in the discussion section that the story of the circular logic leading to the evidence-free definition of ‘Term’ is laid bare See page F167.

Allopurinol revisited

No, not for gout. Six years ago, Benders et al published their paper on the lack of effect of allopurinol (without cooling) on short-term outcome in birth asphyxia. Here, they publish their own 5-year follow up, and a pooled analysis of the follow-up of theirs and another trial, strongly suggesting that for moderate asphyxia, high-dose allopurinol (40 mg/kg) has a substantial neuroprotective effect. That the effect was confined to babies with moderate asphyxia is concordant with the cooling data, so it is likely to be robust although both trials were quite small. One’s first thought is that there may be potential for an additive or even synergistic effect if allopurinol is used together with cooling, so more trials will be needed. One’s second thought is that it is massively cheaper than xenon See page F162.

Workload, medical and surgical

Two papers in this edition address workload from different perspectives. The most novel is that of Burge and Drewett who have provided robust contemporary information about how much neonatal surgical cot capacity is needed to cater for predictable neonatal surgical workload on a population basis: the answer is one cot per 5000 births. Unless practice differs markedly across the developed world, this is likely to be a figure that has application in many countries beyond the UK. The paper by Fillay et al extends existing data on the capacity of neonatal nurses to care safely for babies at different levels of medical neonatal care by directly measuring delays in undertaking specific tasks and correlating these with nurse to baby ratios. This important dimension of quality has not previously been captured, and it reinforces the importance of providing adequate numbers of neonatal nurses if optimal care is to be delivered even when the case load is high See pages F179 and F174.

Abstinence syndrome: genes and feeds

Neonatal abstinence syndrome (NAS) fascinates clinicians for many reasons, one of which is the wide disparity between the clinical manifestations of some babies compared to others, even when exposure (particularly to methadone) appears to be broadly similar. Oei et al now provide a partial explanation for this variation in terms of polymorphisms in the dopamine D2 receptor gene. This is early work, but it gives a promising and plausible line of inquiry. Taking another angle, Dryden et al measured postnatal weight loss in infants of mothers using methadone and concluded that there were probably factors contributing to postnatal weight loss in those who were breast fed other than just difficulties in establishing lactation See page F193 and F214.

Syphilis making a comeback

In some countries, few paediatricians have ever seen congenital syphilis; for about the last 60 years, it has been a very rare condition in much of the developed world. But now it is making a comeback, so Tridapalli et al measured its birth prevalence in Italy over 12 months in 2006–2007 and found a rate of 20 per 100 000 births. The fact that the disease is now more prevalent in Italy seems to relate to population movements from countries where the general population prevalence of syphilis is high. It is likely that many other previously low-prevalence countries will be similarly affected. Tridapalli et al note that some of the neonatal cases appeared to result from inadequate maternal treatment during pregnancy, or failure to screen in early pregnancy. Even in countries where early screening followed by treatment of infected mothers is routine, it is important not to forget that syphilis may be acquired by a pregnant mother after she has been screened See page F241.

REFERENCES