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# NEONATAL ENCEPHALOPATHY AND DEVELOPMENTAL DELAY

Marlow and colleagues report the neurodevelopmental outcomes at school age of a group of infants who developed encephalopathy of at least 24 hours duration in the first week of life. Although no child had a congenital anomaly or an identified postnatal cause for their encephalopathy, the causes of the encephalopathies in this study and the extent or timing of any contributory hypoxic ischaemic event were not characterised in detail. Amongst the 50 children without motor disability on follow up were 18 children who had severe encephalopathy. They had reduced cognitive scores compared to controls. Scores were not reduced after moderate encephalopathy. This study challenges the view that survivors of encephalopathy who do not have cerebral palsy have normal outcome and should provoke further prospective research into the cognitive outcomes of children with encephalopathy, particularly those in whom the nature of any hypoxia-ischaemia can be more clearly characterised.

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#### FETAL CRYING?

Gingras *et al* describe what they interpret to be a fetus crying. The behaviour was observed on ultrasound scan performed in association with vibroacoustic stimulation of the fetus at 33 weeks of gestation. As well as reading their report, you can download their video and judge for yourself (http://adc. bmjjournals.com/supplemental/).

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### **NEONATAL RESUSCITATION**

In three linked papers, O'Donnell and colleagues describe the development of a mannequin for the detailed evaluation of the flows, volumes, and pressures generated by clinical staff during simulated neonatal resuscitation and use it to compare the delivery of ventilation using different devices. With mask ventilation, air leaks around the mask were often large and made airway pressure a very poor proxy for the volume of gas delivered to the lungs of the mannequin. Tidal volumes generated using a Laerdal bag were larger than those generated at similar inflation pressure using a Neopuff but this may substantially reflect the fact that there is no significant positive end expiratory pressure (PEEP) generated with the Laerdal bag. Although participants preferred the Neopuff the study data do not indicate clear superiority for either device. Good quality data of this nature from real life newborn resuscitations would be a very useful contribution to the knowledge base.

See pages 388, 392, and 397

### WHAT IS PERFUSION INDEX MEASURING?

De Felice and colleagues evaluated prospectively whether a measurement immediately after birth of pulse oximeter perfusion index could identify infants who were exposed to histological chorioamnionitis. The measurements were made using a Masimo SET pulse oximeter and appeared to perform well. What is it really measuring? Will it prove useful? Are others evaluating it?

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## **EUROVISION FOR CONGENITAL ANOMALIES**

The concept of replacing national control with regionally devolved systems contributing to a greater European body has taken quite a beating of late but is alive and well in the world of congenital anomaly surveillance. After reading the report of Misra and colleagues on the National Congenital Anomaly System (NCAS) and the review by Dolk of the European network of population based registers (EUROCAT), Martin Ward Platt argues persuasively in support of EUROCAT over NCAS. Ironically, one of the barriers faced by EUROCAT to greater progress in public health measures such as this is the difficulty in reporting imposed by variations in interpretation of the European directive on consent. Rankin and colleagues review data from five regional anomaly databases looking at secular trends and regional variations.

See pages 354, 355, 368, and 374