IMPROVED GROWTH OF EXTREMELY AND VERY CHILDHOOD MORBIDITIES AFTER NEONATAL A196

Arch Dis Child

Aim Measure weight gain in preterm infants after introduction of a nutritional care bundle.

Methods 509 infants less than 32 weeks gestation were studied until discharge home from the tertiary unit or their local neonatal unit. Growth and feeding data were prospectively collected for 18 months before and after the intervention. The intervention consisted of increasing the urgency of parenteral nutrition, routine introduction of enteral feeds from the first day of life, standardised weight-based daily increments of enteral feeds, use of donor human milk until at least 34 weeks corrected gestation (if insufficient mothers’ own milk) and routine fortification of human milk from 120 ml/kg/day.

Results After the intervention, growth velocity by discharge home increased by 1 g/kg/day to 12.7 ± 2.2 g/kg/day (p<0.00002) and weight z score change reduced from -1.38 ± 0.77 to -1.16 ± 0.76 (p=0.005). The largest effect was seen in infants discharged home from the tertiary unit (z score change from -1.35 ± 0.73 to -1.04 ± 0.77, p=0.007) and in those discharged home on exclusive human milk (z score change from -1.65 ± 0.8 to -1.20 ± 0.9, p=0.006, growth velocity from 10.8 ± 22 g/kg/day to 13.0 ± 2.8 g/kg/day, p<0.00001). The significant differences in growth previously seen between infants discharged on exclusive human milk compared to any infant formula were eliminated.

Conclusion Introduction of a simple nutritional bundle was associated with improved weight gain, particularly in those fed exclusive human milk at discharge. In order to achieve international growth recommendations further intensification of macronutrient provision may be required.

CHILDHOOD MORBIDITIES AFTER NEONATAL ABSTINENCE SYNDROME: A SYSTEMATIC REVIEW AND META ANALYSIS

P04

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Aim To explore the association between Neonatal Abstinence Syndrome (NAS) and adverse childhood outcomes.

Methods A systematic review and meta-analysis of studies examining the association between NAS and adverse childhood outcomes was undertaken. Studies were included if they measured the effect of NAS on adverse childhood outcomes, defined as those occurring up to the age of 16 years. Studies were included if they measured outcomes such as school performance, cognitive function, diabetes, obesity, substance abuse, mental health, physical health and any other outcome that could be related to a diagnosis of NAS.

Results Of the 11,549 children included in the meta-analysis, those with NAS were more likely to experience adverse childhood outcomes, as measured by a range of different outcomes. The most common outcomes were school performance, cognitive function, and mental health. The odds ratios ranged from 1.72 to 6.49, with 95% confidence intervals ranging from 1.06 to 2.48.

Conclusion NAS was significantly associated with adverse childhood outcomes, including school performance, cognitive function, and mental health. These findings highlight the importance of early intervention and support for children with NAS.

ASSESSMENT OF CONTINUOUS SIDE-STREAM END TIDAL CAPNOGRAPHY MONITORING ON THE NEONATAL INTENSIVE CARE UNIT

G552

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Background End tidal capnography (EtCO₂) provides a non-invasive form of continuous monitoring, but there have been concerns about its reliability on the neonatal unit. Our aim was to evaluate a novel side-stream capnograph device against gold standard mainstream capnography and in ventilated infants with differing respiratory disease severities.

Methods A prospective study of ventilated infants was undertaken. Simultaneous measurements of EtCO₂ were made using a gold standard mainstream capnograph and the newer side-