

Clippings

❑ ENCPAP - make an early start!

The use of early nasal continuous positive airway pressure (ENCPAP) has been proposed as a mechanism for respiratory support in preterm infants to avoid the need for endotracheal intubation and mechanical ventilation. This retrospective review examined outcomes of 228 consecutive very low birth weight infants (mean birth weight 995 g) and this was compared with a benchmark control group selected from a large national NICU database. The mean length of hospital stay was significantly lower in the ENCPAP group than in the benchmark group (56 vs. 61 days). The most pronounced difference was among the smallest infants (1251-1500 g). The incidence of chronic lung disease also was significantly lower in the ENCPAP group. The authors conclude that the use of ENCPAP in VLBW infants reduced the length of hospitalization, possibly because of a reduced incidence of chronic lung disease.

Comments: Although not a randomized controlled study, the observations clearly indicate that the use of ENCPAP in VLBW infants reduces the incidence of chronic lung disease and, hence, the length of hospitalization. Thus, all efforts should be made to provide this form of delivery-room support by encouraging high risk deliveries in such hospitals. There is everything to be said for a good beginning. *J Perinatol* 2006; 26: 593.

❑ A new side-effect of phototherapy

Children who received light therapy (phototherapy) for jaundice as infants appear to have an increased risk of developing skin moles in childhood. Eighteen children had phototherapy as newborns; 40 who were the same age served as controls. Those who were exposed to phototherapy had significantly more moles of this size than those who did not - an average of 3.5 vs. 1.45 per child. Whether it would translate into a potentially higher risk of melanoma is not clear and requires further evaluation.

Comments: Even traditionally well accepted

therapies can have unusual side-effects. All therapies should only be used when indicated, especially in neonatology. *Arch Dermatol.* 2006; 142: 1599

❑ Low-dose oral erythromycin in treating feed intolerance in preterm infants.

Prospective, double-blind, randomized, placebo-controlled trial on 60 premature infants suffering from feeding intolerance was conducted. Thirty infants were given oral erythromycin 1 mg/kg every 8 h and 30 infants were given placebo (normal saline). For infants with gestational age >32 weeks, the erythromycin group achieved full enteral feeding earlier than placebo group, had fewer episodes of gastric residuals and shorter duration of parenteral nutrition. On the other hand, in infants with gestational age 32 weeks, there were no significant differences between erythromycin and placebo groups. **Comments:** A safe and effective addition to the fight against feed intolerance in preterms. *J Perinatol* 2007; 27: 39

❑ Milk fortification to reduce childhood morbidity

To evaluate the efficacy of milk fortified with specific multiple micronutrients on morbidity in children compared with the same milk without fortification. The study was interestingly enough conducted in Delhi, it was a community based, double masked, individually randomised trial. Six hundred and thirty three children aged 1-3 were randomly allocated to receive fortified milk (n = 316) or control milk (n = 317). One year of fortified milk providing additional 7.8 mg zinc, 9.6 mg iron, 4.2 microg selenium, 0.27 mg copper, 156 microg vitamin A, 40.2 mg vitamin C, 7.5 mg vitamin E per day (three feeds). The fortified milk reduced the odds for days with severe illnesses by 15%, the incidence of diarrhoea by 18%, and the incidence of acute lower respiratory illness by 26%.

Comments: Consumption of milk fortified with specific micronutrients can significantly reduce the burden of common morbidities among preschool children, especially in the first two years of life. If

implemented across developing communities this could lead to healthier children and reduced workload for pediatricians. *BMJ*, doi:10.1136/bmj.39035.482396.55 (published 28 November 2006).

❑ **A 'new' drug for malaria - back to chloroquine**

In 1993, Malawi became the first country in Africa to replace chloroquine with the combination of sulfadoxine and pyrimethamine for the treatment of malaria. At that time, the clinical efficacy of chloroquine was less than 50%. The molecular marker of chloroquine-resistant *falciparum* malaria subsequently declined in prevalence and was undetectable by 2001, suggesting that chloroquine might once again be effective in Malawi. A randomized clinical trial involving 210 children with uncomplicated *Plasmodium falciparum* malaria showed that treatment failure occurred in 1 of 80 participants assigned to chloroquine, as compared with 71 of 87 participants assigned to sulfadoxine\pyrimethamine. The cumulative efficacy of chloroquine was 99% and the efficacy of sulfadoxine\pyrimethamine was 21%. Chloroquine is again an efficacious treatment for malaria, 12 years after it was withdrawn from use in Malawi.

Comments: This is a welcome sign indicating that malaria therapy may once again get easier and cheaper. While malaria eradication may still be far away, this maybe a another beginning. *N Engl J Med*. 2006; 355: 1959

❑ **Safety of influenza vaccines in young kids**

Beginning with the winter season of 2004-2005, influenza vaccination has been recommended for all children 6 to 23 months old in the United States. However, its safety in young children has not been adequately studied in large populations. In the largest population-based study to date of the safety of trivalent inactivated influenza vaccine in young children, there were very few medically attended events, none of which were serious, significantly associated with the vaccine. This study provides additional evidence supporting the safety of universally immunizing all children 6 to 23 months old with influenza vaccine.

Comments: With the increasing availability and use of Influenza vaccine in India too, this study should

provide us additional confidence about using this vaccine. Now if someone could prove the efficacy of the vaccine in our population, it would be priceless. *JAMA* 2006; 296: 1990

❑ **A comparison between behavioral side effects of phenobarbital and carbamazepine**

A Bangladesh based prospective randomised controlled single centre trial with 108 children aged 2-15 with epilepsy showed the following results. Ninetyone children were followed up for 12 months, six required a change of antiepilepsy drug. There was no excess in behavioural side effects with phenobarbital in children with epilepsy in a country with limited resources.

Comments: This study clearly suggests that for the economically weaker group of patients, phenobarbitone may still be used as a first line therapy without an extra risk of adverse seizure control or behavioural side-effects. *BMJ* 2006; Dec 4 [Epub ahead of print]

❑ **MRI in CP patients - does it help?**

Magnetic resonance imaging (MRI) findings have been reported for specific clinical cerebral palsy (CP) subgroups or lesion types but not in a large population of children with all CP subtypes. Cross-sectional, population-based investigative study conducted in 8 European study centers. Five hundred eighty-five children with CP were identified who had been born between 1996 and 1999; 431 children were clinically assessed and 351 had a brain MRI scan. Brain MRI scans showed that white-matter damage of immaturity, including periventricular leukomalacia (PVL), was the most common finding (42.5%), followed by basal ganglia lesions (12.8%), cortical/subcortical lesions (9.4%), malformations (9.1%), focal infarcts (7.4%), and miscellaneous lesions (7.1%). Only 11.7% of these children had normal MRI findings. There were good correlations between the MRI and clinical findings. These MRI findings suggest that obstetric mishaps might have occurred in a small proportion of children with CP. A systematic approach to identifying and treating maternal infections needs to be developed. Multiple pregnancies should be monitored closely, and the causes of infant stroke need to be investigated further so preventive strategies can be

formulated.

Comments: All children with CP should have an MRI scan to provide information on the timing and extent of the lesion. This is hardly surprising though since at present MRI is the best modality available for CNS visualization that is available to a majority of practitioners. However the challenge possibly lies in interpreting MRIs in infancy by radiologist not trained in Pediatric Radiology. JAMA 2006; 296: 1602.

❑ **Is more knowledge necessarily better? Fetal oxygen saturation and rate of cesarian sections**

The authors randomly assigned 5341 nulliparous women who were at term and in early labor to either “open” or “masked” fetal pulse oximetry. In the open group, fetal oxygen saturation values were displayed to the clinician. In the masked group, the fetal oxygen sensor was inserted and the values were recorded by computer, but the data were hidden. Labor complicated by a nonreassuring fetal heart rate before randomization was documented for subsequent analysis. There was no significant difference in the overall rates of cesarean delivery between the open and masked groups (26.3% and 27.5%, respectively). The condition of the infants at birth did not differ significantly between the two groups.

Comments: Proving that more knowledge is not necessarily better! N Engl J Med 2006; 355: 2195.

❑ **Whether routine calcium supplementation has any long term benefits?**

To assess the effectiveness of calcium supplementation for improving bone mineral density in healthy children and to determine if any effect is modified by other factors and persists after supplementation stops. In a meta-analysis including randomised placebo controlled trials of calcium supplementation in healthy children that lasted at least three months and had bone outcomes measured after at least six months of follow-up. There were 19 studies involving 2859 children that showed that calcium supplementation had no effect on bone mineral density at the femoral neck or lumbar spine. There was a small effect on total body bone mineral content and upper limb bone mineral density. This effect persisted after the end of supplementation only at the upper limb, independent of any other factor. However, this small effect of calcium supplementation on bone mineral density in the upper limb is unlikely to reduce the risk of fracture, either in childhood or later life.

Comments: Just like many other supplements, calcium is wasted on healthy children. We should curb our tendencies to prescribe 'routine' supplementation pending clinical data that it works. BMJ 2006; 333: 775.

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