

## Clippings

### What's the best way to reduce venipuncture pain?

□ The answer according to researchers is to make them watch a cartoon on TV during the procedure! In a study of 69 children aged 7-12 years passive TV watching was found to be more effective than active distraction by mother and if no distraction was provided. This was possibly due to the emotional participation of mothers in the active procedure, or of the distracting power of television. *Arch Dis Child*. Published Online First: 18 August 2006. doi:10.1136/adc.2006.097246

**Comments:** The idiot box finally seems to be of some use!

### What size needles for vaccination?

□ This study tried to assess the immunogenicity of vaccines for infants and to investigate whether the incidence of reactogenicity is reduced after each immunisation dose using needles of varying lengths and gauges. 696 healthy infants vaccinated at 2, 3, and 4 months of age, with follow-up to 5 months of age using a combination vaccination as per local guidelines were vaccinated using either a wide, long needle (23 gauge, 25 mm), a narrow, short needle (25 gauge, 16 mm), or a narrow, long needle (25 gauge, 25 mm). Long (25 mm) needles for infant immunisations can significantly reduce vaccine reactogenicity at each dose while achieving comparable immunogenicity to that of short (16 mm) needles. Little difference was found between needles of the same length but different gauges in local reaction or immune response. *BMJ*, doi:10.1136/bmj.38906.704549.7C (published 4 August 2006).

**Comments:** Interesting data that gives much needed scientific basis for choosing the proper size needle for infant vaccinations.

### Doing MRI's in preterm neonates to assess long term outcome

□ Magnetic resonance imaging (MRI) is a superior predictor of adverse neuro-developmental outcomes in very pre-mature infants compared with other measures. The prospective longitudinal study compared the clinical usefulness of abnormal findings on an MRI scan at term equivalent in 167 very premature infants with findings of other standard assessments, including cranial ultrasound. While cranial ultrasonography, currently the most widely used imaging technique, has many advantages, it is of limited value in diagnosing, particularly diffuse white-matter injuries, due to its poor visual resolution. Its usefulness lies in the detection of less common abnormalities such as cystic periventricular leukomalacia. Out of the total study group, only 4 babies had this specific abnormality. In contrast, 120, or 72% of the study group, had mild to severe white-matter injuries, most commonly of the diffuse form that were better appreciated by an MRI. *N Engl J Med* 2006; 355: 685.

**Comments:** Given the fact that this is not an easily available investigation for preterm babies and the analysis requires expertise this technology is likely to be of limited use in the present scenario.

### Comparison of budesonide/formoterol combination with budesonide for treating pediatric asthma

□ In a 12 week, double-blind study, a total of 630 children with asthma were randomized to either budesonide/formoterol or a corresponding dose of budesonide alone. The primary efficacy variable was the change from baseline

to treatment in morning peak expiratory flow (PEF). Budesonide/formoterol significantly improved morning PEF, evening PEF and FEV<sub>1</sub> compared with budesonide. The researchers<sup>1</sup> conclude that budesonide/formoterol significantly is a safe and effective treatment option for the treatment of asthma in children (aged 4-11 yrs) compared with budesonide alone. *Pediatr Allergy Immunol* 2006;17(6): 458-465.

**Comments:** Use of a LABA (long acting beta agonists) to inhaled steroids does have significant benefit in improving the quality of life of kids with asthma, and its use should be encouraged in appropriate cases.

#### **Impact of influenza infection in healthy children**

□ It is important to know the disease burden of influenza in the outpatient setting in developing countries so that appropriate immunization schedules can be formulated. Researchers from Greece found that influenza was documented in 573/1462 (39%) outpatients with febrile respiratory illness and accounted for 13.5% of all outpatient visits during the 14 weeks of each winter season. Acute otitis media (AOM) was the most common complication (18.5%) and AOM and antibiotic use were more common in children younger than 5 years of age who accounted for 58% of all patients. Family members of influenza positive children were more likely to develop a secondary respiratory illness and to require medical visits and antibiotic prescriptions. Thus researchers conclude that influenza is associated with a heavy morbidity burden in the community that may be reduced considerably with the implementation of immunization in children younger than 5 years of age. *Vaccine* 2006; 24: 5-70.

**Comments:** Epidemiological studies of this sort are needed in India to establish the exact role of influenza vaccine in our country.

#### **Opposing influences of prenatal and postnatal growth on the timing of menarche**

□ Menarche is a milestone of reproductive development and its timing may be differentially influenced by the growth conditions before birth and by those between birth and puberty. A total of 156 girls aged 8 yr from a birth cohort of full-term babies had height, weight and waist circumference measured and various tests performed including dual x-ray absorptiometry and blood analyzed for insulin, leptin, IGF-1, estradiol and DHEAS levels. Girls were followed up at age 15 yr and their age of menarche was recorded. It was found that the timing of menarche appears to be influenced in opposing directions by pre- and postnatal growth. Menarche was found to occur earlier in girls who were long, light at birth and who had a higher fat mass and circulating IGF-1 in childhood. These findings may partly explain ethnic differences and secular trends in the age of menarche. *J Clin Endocrinol Metab* 2006 Aug 22 [Epub ahead of print].

**Comments:** Given the fact that menarche seems to be occurring earlier in Indian girls, this study may help in explaining some of the variables.

#### **Sildenafil prevents rebound pulmonary hypertension after withdrawal of nitric oxide in children**

□ Rebound pulmonary hypertension (PHT) can complicate the weaning of nitric oxide (NO), and is characterised by increased pulmonary artery (PA) pressure, cardio-pulmonary instability, and in some cases the need to continue NO beyond the intended period of use. The authors investigated the role of sildenafil in preventing rebound (an increase in PA pressure of 20% or greater, or failure to discontinue NO) in patients in whom previous attempts had not been made to wean NO in thirty ventilated infants and children. These

children were randomized to receive 0.4mg/kg of sildenafil, or placebo, 1 hour before discontinuing NO. Rebound occurred in 10/14 placebo patients, and 0/15 sildenafil patients. Four placebo patients could not be weaned from NO due to severe cardiovascular instability, whereas all sildenafil patients were weaned. Duration of ventilation after study was 98.0 hrs for placebo patients and 28.2 hrs for sildenafil patients, thus leading to the conclusion that a single dose of sildenafil prophylaxis should be considered when weaning patients from inhaled NO. *Am J Respir Crit Care Med* 2006 (Epub ahead of print).

**Comments:** Sildenafil molecule may be relatively new but its increasing neonatal usage continues to amaze one and all.

**Comparison of neurocognitive outcomes in ALL treated with cranial irradiation or methotrexate.**

□ For most ALL patients, cranial irradiation (CRT) has been replaced with intensified systemic and intrathecal chemotherapy, often including methotrexate (MTX). The impact of chemotherapy-only protocols on neurocognitive outcomes is unclear, and the importance of systemic MTX dose has not been established. Seventy nine children diagnosed with high-risk ALL between the ages of 1.0 and 4.9 years participated in this retrospective cohort study. All patients were treated on a uniform chemotherapy protocol, in addition to this CNS prophylaxis consisted of either CRT, high-dose intravenous (IV) MTX or very high-dose IV MTX. Neurocognitive assessment was conducted at least 5 years after diagnosis. Children treated with CRT performed more poorly than the MTX group on most measures, while no difference was detected between

children treated with high-dose or very high-dose IV MTX. *J Clin Oncol* 2006; 24: 3858.

**Comments:** This study confirms that the present day practice of not exposing the developing brain to irradiation is not without merit.

**Delayed cord clamping for reducing anemia in low birth weight infants; a meta-analysis.**

□ Cheap and effective interventions are needed to reduce the risk of infant anemia in developing countries. While Delayed cord clamping (DCC) has been shown to be an effective procedure that augments red cell mass in appropriate-for-gestational-age term and preterm infants, its efficacy and safety in small-for-gestational-age (SGA) infants has not been established. This study analysed the available evidence to generate a balanced inference on the use of DCC in developing countries. DCC in a group that contains both AGA and SGA infants was associated with higher hemoglobin levels at 2-3 months of age in term infants and a reduction in the number of blood transfusions needed in the 1st 4- 6 weeks of life in preterm infants. No reliable conclusions could be drawn about the potential adverse effects of DCC. The authors feel that the paucity of information on DCC in SGA infants justifies further research, especially in developing countries. *Ann Trop Pediat* 2006; 26: 157.

**Comments:** It seems that prevention of one of the most common pediatric ailment in our country (infant anemia) lies in the hand of the obstetricians!

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