

Clippings

❑ Does thiomersal (thimerosal) cause neurological problems?

It has been hypothesized that early exposure to thimerosal, a mercury-containing preservative used in vaccines and immune globulin preparations, is associated with neuropsychological deficits in children. One thousand and forty seven children between the ages of 7 and 10 years were administered standardized tests assessing 42 neuropsychological outcomes. Exposure to mercury from thimerosal was determined from computerized immunization records, medical records, personal immunization records, and parent interviews. The study does not support a causal association between early exposure to mercury from thimerosal-containing vaccines and immune globulins and deficits in neuropsychological functioning at the age of 7 to 10 years. *N Engl J Med.* 2007; 357: 1278

Comments: More evidence that the presently available vaccinations are safe, and demands for thimerosal free vaccines should not be a priority.

❑ Preventing Diabetes - Do omega fatty acids have a role?

Cod liver oil supplements in infancy have been associated with a decreased risk of type 1 diabetes mellitus in a retrospective study. To examine whether intakes of omega-3 and omega-6 fatty acids are associated with the development of islet autoimmunity (IA) in children, the Diabetes Autoimmunity Study in the Young (DAISY), conducted in Denver, Colorado, between January 1994 and November 2006, of 1770 children at increased risk for type 1 diabetes was done. The mean age at follow-up was 6.2 years. Islet auto-immunity was assessed in association with reported dietary intake of polyunsaturated fatty acids starting at age one year. Fifty-eight children developed IA. Adjusting for HLA genotype, family history of type 1 diabetes, caloric intake, and omega-6 fatty acid intake, omega-3 fatty acid intake was inversely associated with risk of IA ($P = 0.04$). Dietary intake of omega-3 fatty acids is associated with reduced risk of IA in children

at increased genetic risk for type 1 diabetes. *JAMA.* 2007; 298: 1420

Comments: Given the fact that India has become the Diabetes capital of the world, any method to reduce this disease is most welcome.

❑ Carvedilol in pediatric heart failure - does it work?

Although beta-blockers improve symptoms and survival in adults with heart failure, little is known about these medications in children and adolescents. A multicenter, randomized, double-blind, placebo-controlled study of 161 children and adolescents with symptomatic systolic heart failure from 26 US centers was undertaken. In addition to treatment with conventional heart failure medications, patients were assigned to receive placebo or carvedilol. There was no statistically significant difference between groups for the composite end point based on the percentage of patients who improved, worsened, or were unchanged. Among 54 patients assigned to placebo, 30 improved (56%), 16 worsened (30%), and 8 were unchanged (15%); among 103 patients assigned to carvedilol, 58 improved (56%), 25 worsened (24%), and 20 were unchanged (19%). The rates of worsening were lower than expected. These preliminary results suggest that carvedilol does not significantly improve clinical heart failure outcomes in children and adolescents with symptomatic systolic heart failure. However, given the lower than expected event rates, the trial may have been underpowered. There may be a differential effect of carvedilol in children and adolescents based on ventricular morphology. *JAMA.* 2007; 298 : 1171

Comments: While many a times drug usage is extrapolated from adult to pediatric usage, it always inspires more confidence if pediatric trials are done too.

❑ Occlusion therapy for Amblyopia - how much is enough?

A total of 97 children with a confirmed diagnosis of amblyopia associated with strabismus, aniso-

metropia, or both were prescribed 18 week period of wearing glasses (refractive adaptation) followed by occlusion prescribed ("patching") for six or 12 hours a day. The mean age of children at study entry was 5.6 (SD 1.5) years. The mean change in visual acuity of the amblyopic eye was not significantly different ($P = 0.64$) between the two groups. The visual outcome was similar for those children who received three to six hours a day or more than six to 12 hours a day, but significantly better than that in children who received less than three hours a day. Younger children required the least occlusion. *BMJ*. 2007 Oct 6;335(7622):678-9.

Comments: This is a definite change from the conventional opinion wherein pediatric ophthalmologists prescribe patching for as long as possible. This should make it easier for the parents too.

❑ Steam inhalation and scald injuries

To determine the numbers of pediatric scald injuries associated with the practice of inhaling warmed vapour or warm-humidification of rooms for treatment of upper respiratory tract infection (URTI). Cases comprised a 6-year consecutive series of scalds in children 0-14 years attending the Royal Children's Hospital (RCH) in Brisbane, Australia. During 2001-2006, 27 children were treated for scald injury associated with breathing humidified air. Aged from 7 months to 14 years, 44% were under 3 years old. Injuries included steam burns to the hands from commercial vapour-producing devices in children younger than three, and spills from containers of hot water which resulted in larger scalds to multiple body sites in children aged 5-14. No child received an airway scald from hot vapour. Two children required grafts and four had a prolonged hospital stay. The common practice of warm-humidification of inspired air as home treatment of URTI's carries an under-recognised risk of serious scalding. An alternative means of providing humidified air is to sit with your child in a closed bathroom whilst running the shower for a short time. If warm humidification is to be used, increased awareness of the risk by both parents and health professionals may reduce the incidence of serious burn. *Burns*. 2007 Oct 20; [Epub ahead of print].

Comments: A wonderful study into a common and

definitely under-reported and under-recognised problem. All pediatricians should be doubly careful, since this is a rare situation where our advice can result in harm to a child.

❑ BCG vaccination and reducing allergies

The increase in the prevalence of allergic diseases in countries with a so-called western lifestyle may be due to a decrease in exposure to infectious agents in early life. To establish the effect of Bacille-Calmette-Guerin (BCG) vaccination in 6-week-old high-risk infants in a prospective single-blind, randomized, placebo-controlled trial on the prevalence of allergic disease at the age of 4 and 18 months, 121 high-risk newborns, having either a mother, or both a father and at least one sibling with past or present allergic disease were studied. BCG or placebo was administered at the age of 6 weeks, and repeated once when both a post-vaccination scar and a positive TB skin test were absent at the age of 4 months. At the age of 18 months, the prevalence of allergic disease was not significantly different between the two groups. A trend towards less eczema ($P = 0.07$) and significantly less use of medication for eczema was shown in the BCG group compared with the placebo group ($P = 0.04$). For definite proof, a larger study should be carried out. *Clin Exp Allergy*. 2007 Oct 23; [Epub ahead of print]

❑ Managing pediatric kidney stones?

A retrospective review was conducted of all ureteroscopic procedures for lower-pole stone disease at a pediatric institution from 2000 through 2005. A total of 13 girls and 8 boys with a mean age of 15 years (range 1-20 years) underwent flexible ureteroscopy for lower-pole calculi. The success rate for stones <15 mm was 93% v 33% for stones ($P = 0.01$). Ureteroscopy and laser lithotripsy are safe and effective in children with lower-pole calculi. Ureteroscopy can be considered a primary treatment option for children with lower-pole calculi <15 mm. *J Endourol*. 2007; 21: 1179

Comments: Another trial that confirms that an adult modality of treatment is safe and effective in pediatric population.

❑ Using Levetiracetam in Infantile Spasms

While adrenocorticotrophic hormone remains

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the choice of treatment for many neurologists, and recent controlled studies support vigabatrin as first-line therapy. Levetiracetam is effective for treating localization-related epilepsy, but it is uncertain whether it is effective for treating West syndrome. To evaluate the efficacy of levetiracetam monotherapy in newly diagnosed cryptogenic West syndrome, levetiracetam was used initially in the treatment of five patients with cryptogenic West syndrome. On admission, levetiracetam (30 mg/kg) tablets were crushed and administered via nasogastric tube. Two patients were seizure free, two patients experienced a 50% reduction in seizure frequency, and one patient had no improvement in

seizure frequency. There were no relapses in the two patients at 6 months after the cessation of seizures. It appears that levetiracetam may be effective in the initial treatment of selected patients with cryptogenic West syndrome. *Pediatr Neurol* 2007; 37: 350.

Comments: Infantile spasms are a devastating pediatric epilepsy syndrome, wherein control of seizures can lead to reduced developmental delay. This small study gives pediatric neurologists more ammunition to fight this dreaded condition.

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