

Clippings

Milk consumption and birth weight

□ Some pregnant women may choose to restrict milk consumption and may not take appropriate supplements. It was hypothesized that maternal milk restriction during pregnancy, can reduce intakes of protein, calcium, riboflavin and vitamin D, and this might represent a health risk by lowering infant birth weight. Women between the ages of 19 and 45 years who were attending prenatal programs in Calgary, Alberta were screened for low milk consumption (< or = 250 mL/d). Women who consumed < or = 250 mL/d of milk gave birth to infants who weighed less than those born to women who consumed more. Infant lengths and head circumferences were similar. In multivariate analyses controlled for previously established predictors of infant birth weight, milk consumption and vitamin D intake were both significant predictors of birth weight. Neither protein, riboflavin or calcium intake was found to predict birth weight. (CMAJ 2006; 25; 174: 1273-1277)

Comments: Milk and vitamin D intakes during pregnancy are each associated with infant birth weight, independently of other risk factors.

Safety of rectal quinine

□ The objective of this study was to compare the safety and efficacy of quinine given by the rectal route with quinine given by the intramuscular route in children with moderately severe *Plasmodium falciparum* malaria. In 898 children with moderately severe *P. falciparum* malaria who were unable to take oral treatment rectal quinine (20 mg/kg diluted to 30 mg/ml in water solution) or intramuscular quinine (12.5 mg/kg) every 12 hours was administered until oral quinine could be taken. Primary efficacy

outcome was early treatment failure and secondary efficacy outcomes were late clinical and parasitological failures, fever clearance time, and time to oral intake. Side effects of rectal quinine were rare and transitory. Early treatment failure was higher in the rectal group. Fever recurrence on day 7 was higher in the intramuscular group. Other efficacy outcomes (late clinical failure, late parasitological failure, fever clearance time, time to starting oral intake and rate of deterioration to severe malaria) did not differ. (BMJ 2006; 332: 1055-1059).

Comments: Quinine given by the rectal route has an acceptable safety profile and could be used in the early management of moderately severe malaria in children halting progression to severe disease.

Scabies

□ Scabies is a neglected parasitic disease that is a major public health problem in many resource-poor regions. It causes substantial morbidity from secondary infections and post-infective complications such as acute post-streptococcal glomerulonephritis. Disease control requires treatment of the affected individual and all people they have been in contact with, but is often hampered by inappropriate or delayed diagnosis, poor treatment compliance, and improper use of topical compounds such as permethrin, lindane, or benzyl benzoate. In addition to concerns over toxicity with such compounds, parasite resistance seems to be increasing. Oral ivermectin is an alternative that has been used successfully in community control programmes. Plant derivatives such as turmeric, neem, and tea tree oil are also promising future treatments. (Lancet 2006; 367:1767-1874).

Comments: Treatment of scabies in poor countries needs to integrate drug treatment programs with efforts to improve the socioeconomic conditions and education programs to reduce stigma.

Intranasal lorazepam for convulsions.

□ In sub-Saharan Africa, rectal diazepam or intramuscular paraldehyde are commonly used as first-line anticonvulsant agents in the emergency treatment of seizures in children. These treatments can be expensive and sometimes toxic. In this open randomised trial in a paediatric emergency department of a tertiary hospital in Malawi, 160 children aged over 2 months with seizures persisting for more than 5 min were randomly assigned to receive either intranasal lorazepam (100 microg/kg, n = 80) or intramuscular paraldehyde (0.2 mL/kg, n = 80). The primary outcome measure was whether the presenting seizure stopped with one dose of assigned anticonvulsant agent within 10 min of administration. Intranasal lorazepam stopped convulsions within 10 min in 60 (75%) episodes treated (absolute risk 0.75, 95% CI 0.64-0.84), and intramuscular paraldehyde in 49 (61.3%; absolute risk 0.61, 95% CI 0.49-0.72). No clinically important cardio-respiratory events were seen in either group. (Lancet 2006; 367:1591-1597).

Comments: Intranasal lorazepam is effective, safe, and provides a less invasive alternative to intramuscular paraldehyde in children with protracted convulsions. The ease of use of this drug makes it an attractive and preferable prehospital treatment option.

Corticosteroid therapy for wheezy infants

□ Asthma is preceded by a stage of recurrent episodes of wheezing during the first years of life and that inhaled corticosteroid therapy during symptomatic episodes in this early phase may delay progression to persistent wheezing. One-month-old infants were

randomly assigned to treatment with two-week courses of inhaled budesonide or placebo, initiated after a three-day episode of wheezing, in this single-center, randomized, double-blind, prospective study of three years' duration. The primary outcome was the number of symptom-free days; key secondary outcomes were the time to discontinuation due to persistent wheezing and safety, as evaluated by height and bone mineral density at the end of the study. The proportion of symptom-free days was 83 percent in the budesonide group and 82 percent in the placebo group. Twenty-four percent of children in the budesonide group had persistent wheezing, as compared with 21 percent in the placebo group. The mean duration of the acute episodes was 10 days in both groups and was independent of respiratory viral status. Height and bone mineral density were not affected by treatment. (N Eng J Med 2006; 354: 1998-2005.)

Comments: Intermittent inhaled corticosteroid therapy had no effect on the progression from episodic to persistent wheezing and no short-term benefit during episodes of wheezing in the first three years of life.

Children and chronic cough

□ The objective of this study was to evaluate the use of an adult-based algorithmic approach to chronic cough in a cohort of children with a history of > 3 weeks of cough and to describe the etiology of chronic cough in this cohort. All included children followed a pathway of investigation (including flexible bronchoscopy and evaluation of airway cytology via BAL) until diagnosis was made and/or their cough resolved. In this cohort of 108 young children (median age 2.6 years), the majority had wet cough (n = 96; 89%), and BAL fluid samples obtained during bronchoscopy led to a diagnosis in 45.4% (n = 49). The most common final diagnosis was protracted bacterial bronchitis (n = 43; 39.8%). These patients had

neutrophil levels on BAL samples that were significantly higher than those in other diagnostic groups ($p < 0.0001$). Asthma, gastroesophageal reflux disease (GERD), and upper airway cough syndrome (UACS), which are common causes of chronic cough in adults, were found in <10% of the cohort. (Chest 2006;129:1132-1141).

Comments: The adult-based algorithmic approach of investigation and treatment of asthma, GERD, and UACS is largely unsuitable for use in the management of chronic cough in young children as the common etiologies of chronic cough in children are different from those in adults.

Neonatal hyperbilirubinemia.

□ In otherwise healthy infants, extremely high total serum bilirubin levels, usually more than 30 mg per deciliter are known to cause kernicterus but the risks associated with less extreme elevations of total serum bilirubin levels are unclear. Treatment recommendations reflect this uncertainty. For example the American Academy of Pediatrics recommends performing exchange transfusion for full term healthy newborns at least four days of age if their total serum bilirubin level is 25 mg per deciliter or more and does not decrease sufficiently with phototherapy alone whereas other recent textbooks of neonatology recommends exchange transfusions for healthy full term newborns who have total serum bilirubin levels of 20 to 25 mg per deciliter. In this study 140 infants with neonatal total serum bilirubin levels of at least 25 mg per deciliter and 419 randomly selected controls from a cohort of 106627 term and near term infants born from 1995 through 1998 in northern California were identified. The study showed that when treated with phototherapy or exchange transfusion, total serum bilirubin

levels in the range included in this study were not associated with adverse neurodevelopmental outcomes in infants born at or near term. (N Engl J Med 2006; 354:1889-1900.)

Comments: This data provides reassurance that total serum bilirubin between 20 and 25 mg per deciliter are unlikely to put an infant at risk for acute encephalopathy in the absence of other contributing factors like reduced albumin binding of bilirubin, low gestational age, glucose-6-phosphate dehydrogenase deficiency and acidosis.

Enhancing communication in the 21st century.

□ Quality communication is a critical component in all aspects of public health and clinical care. The quality of the process of communication between the patient/family and the physician affects the quality of the patient/family-physician relationship, patient behavior, and health outcomes. Advances in communication and information technologies can enhance the quality of communication, not only between patients/families and their physicians but also between clinicians and public health professionals. Communication and integration between the domains of personal health and public health have the potential to improve the delivery of health care and public health services and to yield the desired seamless continuum of health care. (Pediatrics 2006;117: S315-S319).

Comments: This article discusses some of the advances and efforts in the use of information technology to facilitate enhanced communication for quality health care.

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