

## Clippings

❑ Microbiologic confirmation of the diagnosis of pulmonary tuberculosis in children has been difficult and has relied so far on the use of sequential gastric aspirates taken over three days. How does Sputum Induction compare with the sequential gastric lavages in children with suspected pulmonary tuberculosis? A study was done comparing the two methods in 250 young children <5 years of age from Cape Town, South Africa, an area with high prevalence of HIV and tuberculosis. A positive smear or culture for M tuberculosis was obtained from 62 (25%) children. Samples from induced sputum and gastric lavage were positive in 54 (87%) and 40 (65%) children, respectively (difference in yield 5.6% [1.4-9.8%],  $P = 0.018$ ). All sputum induction procedures were well tolerated with minor side effects being increased coughing, epistaxis, vomiting, or wheezing. *Lancet* 2005; 365 (9454): 130-134.

❑ Does suppression of interictal electroencephalographic (EEG) activity in children with epilepsy result in a better behavioral outcome? While treatment of clinical seizures is the primary goal in epilepsy, focal interictal discharges may be involved in causing several behavioral problems in epileptic children. A double-blinded, placebo-controlled, crossover study was done in 61 children with well-controlled or mild epilepsy who were randomly assigned to add-on therapy with either lamotrigine followed by placebo or placebo followed by lamotrigine. Ambulatory EEG recordings and behavioral scales were performed during baseline and at the end of placebo and drug phases. The results showed significant improvement in global rating of behavior in patients who showed a significant

reduction in either frequency ( $P < 0.05$ ) or duration of discharges ( $P < 0.05$ ) during active treatment but not in patients without a significant change in discharge rate. This improvement was mainly seen in patients with partial epilepsy ( $P < 0.005$ ). *J Pediatr* 2005; 146(1): 112-117.

❑ Can administration of anti-oxidants help in reducing the oxidative stress in lungs of preterm babies and help prevent chronic lung disease? Low levels of glutathione have been associated with subsequent chronic lung disease in preterm infants and its administration after incorporation into liposomes offers a novel method of increasing tissue levels with a prolonged half-life compared with direct inhalation. A study was done on 14 ventilated preterm infants who received a single dose of liposomal glutathione (1 mg/kg or 10 mg/kg intratracheally) and its effectiveness at raising glutathione at 12 and 24 h after treatment was measured with bronchoalveolar lavage fluid collected prior to treatment, and at 12 and 24 h after dosing. The results showed an increase in mean glutathione levels but whether it has any significant antioxidant effects or whether it helps in preventing chronic lung disease needs further study. *Biology Neonate* 2005; 87: 178-180.

❑ What are the clinical and epidemiological features of *Plesiomonas shigelloides*-associated diarrhea in children? Hospital-based surveillance records of 38 children with *P. shigelloides* associated diarrhea revealed that it was isolated throughout the year. Of those 38 children, 29 (76%) were <2 years of age and 28 (74%) were male. Thirty-two (84 per cent) children presented with watery diarrhea and six (16%) had dysenteric

stools. Vomiting was a feature in 27 (71%) and clinically significant dehydration was observed in nine (23%) children. Fever was present in three (8%) children and five (13%) had diarrhea >14 days. Thirty-three (87 per cent) children were successfully treated with ORS alone and only five (13%) required intravenous fluid in addition to ORS. Further large scale studies are required to further characterise the public health importance of this pathogen. *J Trop Pediatr* 2004; 50: 354-356.

❑ Can Sildenafil help patients with cystic fibrosis? Patients with cystic fibrosis with abnormal retention of mutant gene protein (F508-CFTR) within the cell may be helped with pharmacological agents that can move F508-CFTR to its correct location in the apical cell membrane. A study done on the nasal epithelial cells obtained from CF patients measured the effect of sildenafil treatment on CFTR chloride transport function using an iodide efflux assay. CFTR location was determined using immunofluorescence and confocal imaging in untreated cells and cells treated with Sildenafil. Exposure of cells to sildenafil (2 hours at 37°C) resulted in recruitment of F508-CFTR to the apical membrane and the appearance of chloride transport activity. Sildenafil also increased F508-CFTR trafficking in cells from individuals with CF with a single copy F508 (F508/4016ins) or with a newly described CF trafficking mutation (R1283M). This exciting new finding will need further clinical studies. *Thorax* 2005; 60: 55-59.

❑ What is the immune status of children with regards to most vaccine preventable diseases after chemotherapy for Acute Lymphoblastic Leukemia (ALL)? A retrospective study of a cohort of 70 Italian children who had been immunised as per schedule prior to onset of ALL showed that the protective level

of antibodies for tetanus and hepatitis B was present in 83% and 81% of patients, respectively. These data were comparable with published data regarding healthy children of the same age and from the same geographical areas. The authors recommend continuation of the vaccination schedule according to the child's age without any titration screening 6 months after the end of therapy. However, larger studies are needed to confirm these observations. *Eur J Haematol* 2005; 74: 20.

❑ Is respiratory illness more common in infants with nutritional rickets? A case control study was conducted to determine the frequency of nutritional rickets among hospitalized infants (3 months to 2 years age) and to assess their relation to respiratory diseases. Collection of relevant socio-demographic data, clinical assessment for signs of rickets and blood and radiologic investigations were carried out initially. The rachitic group (cases) was compared for statistical significance with the remaining non-rachitic infants (controls) for the data collected. Forty-seven infants (10.6 per cent) out of the 443 included in the study were found to have nutritional rickets. Forty (85.1 per cent) of the rachitic infants were admitted due to lower respiratory tract diseases compared with 30 per cent of the control group and the difference was statistically significant ( $p < 0.01$ ). Duration of hospital stay in the rachitic infants was also significantly more prolonged than the non-rachitic control group (9.5 days vs 7.4 days,  $p = 0.002$ ). *J Trop Pediatr* 2004; 50: 364-368.

❑ Do children in developing countries have a diet with a low bioavailability of iron? A prospective, longitudinal, free-living cohort study was carried out in iron-replete, non-anemic 6-10-year-old children ( $n = 126$ ) consuming their habitual cereal and legume-

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based diet. Iron status was measured at baseline and after 15 months and on the basis of the change in hemoglobin and body iron stores calculated from the serum transferrin receptor-to-ferritin ratio, iron balance and iron absorption were estimated. The results showed that mean daily iron intake was 10.8 mg/d, 97% of which was non-heme iron. Estimated non-heme iron bioavailability from algorithms was 1.0-4.3% adjusted for low body iron stores. Over 15 mo, the mean change in total body iron was 142 mg, and mean iron absorption was estimated to be 0.22 mg/d, or 2% of dietary iron. Mean hemoglobin concentration decreased 12 g/L. At 15 months, 75% of the cohort had deficits in tissue iron, and one-third had mild iron deficiency anemia. *Am J Clin Nutr* 2005; 81: 115-121.

□ Can serum C-Reactive Protein (CRP) levels predict the outcome in surgical infants and their length of stay? Since CRP levels

reflect the severity of metabolic response to injury in critically ill children and caloric overfeeding can increase complications and delay recovery, this study tested whether CRP levels and caloric intake correlated with outcome and length of stay (LOS). Data from 28 surgical infants showed that peak serum CRP was significantly correlated to LOS in all patients ( $r = 0.79$ ,  $P < 0.0001$ ). When net caloric balance did not exceed 5 kcal/kg/d ( $n = 9$ ), peak serum CRP was correlated positively with RQ ( $r = 0.66$ ,  $P = 0.05$ ) but when it exceeded 5 kcal/kg/d ( $n = 19$ ), the positive correlation of serum CRP with RQ was diminished ( $r = 0.23$ ,  $P = 0.33$ ). *J Pediatr Surg* 2004; 39: 139-143.

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