Abstract from Current Literatures

Seasonal Variation in Serum 25-hydroxy Vitamin D and its Association with Clinical Morbidity in Healthy Infants from Northern India

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Objective: To evaluate the seasonal change in serum 25-hydroxyvitamin D (25-OHD) level in healthy infants and to relate it to common childhood morbidities. Methods: 72 healthy breastfed infants residing in Delhi were enrolled at the end of summer and followed till the end of winter [mean (SD) duration 200 (10) d]. Serum 25-OHD was estimated at baseline and follow-up. Infants were monitored for common childhood diseases.

Results: Mean (SD) serum 25-OHD level was lower at the end of winter (20.7 (8.02) ng/mL) than summer (22.9 (8.70) ng/mL) [mean difference (95% CI) –2.14 ng/mL (–3.36, –1.06), P<0.001). The seasonal distribution of children according to vitamin D status in summer and winter Deficient (15.3%, 12.5%), Insufficient (19.4%, 30.6%) and Sufficient (65.3%, 56.9%), respectively was comparable P=0.17). The morbidity profile remained unaffected by change in vitamin D status from summer to winter.

Conclusions: Seasonal changes in vitamin D levels do not have significant clinical effect or effect on overall vitamin D status in apparently healthy infants from North India. This may have implications for results of population surveys for vitamin D status, irrespective of the season when they are conducted.

Review of Integrated Management of Childhood Illness (IMCI) in 16 countries in Central Asia and Europe: implications for primary healthcare in the era of universal health coverage

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The Integrated Management of Childhood Illness (IMCI) was introduced in Central Asia and Europe to address the absence of evidence-based guidelines, antibiotics misuse, polypharmacy and over hospitalization. This study in 16 countries analyses status, strengths of and barriers to IMCI implementation and investigates how health systems affect the problems IMCI aims to address. 220 key informants were interviewed ranging from 5 to 37 per country (median 12). Data were analyzed for arising themes and peer-reviewed. IMCI has not been fully used either as a strategy or as an algorithmic diagnostic and treatment decision tool. Inherent incentives include: economic factors taking precedence over evidence and the best interest of the child in treatment decisions; financing mechanisms and payment schemes incentivizing unnecessary or prolonged hospitalization; prescription of drugs other than IMCI drugs for revenue generation or because believed superior by doctors or parents; parents' perception that the quality of care at the primary healthcare level is poor; preference for invasive treatment and medicalized care. Despite the long-standing recognition that supportive health systems are a requirement for IMCI implementation, efforts to address health system barriers have been limited. Making healthcare truly universal for children will require a shift towards health systems designed around and for children and away from systems centred on providers' needs and parents' expectations. Prerequisites will be sufficient remuneration, sound training, improved health literacy among parents, conducive laws and regulations and reimbursement systems with adequate checks and balances to ensure the best possible care.

Association of Food Allergy and Decreased Lung Function in Children and Young Adults with Asthma

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Objective: To determine if an association be-tween food allergy (FA) and lung function exists in children and young adults with and without asthma.

Methodology: One thousand sixty-eight children and young adults aged 0 to 21 years enrolled in the Chicago Food Allergy Study were recruited between August 2005and June 2011. Participants were categorized as having FA by physician diagnosis, evidence of specific immunoglobulin E, and typical symptoms within 2 hours of food ingestion. Asthma was categorized by physician diagnosis. A standardized questionnaire was used to obtain information regarding demographics, home environment, diet, life-style, history of FA, and other atopic diseases. Blood samples and allergy skin prick test results were collected to determine food-specific and total immunoglobulin E measurements.

Results: Of the 1068 participants, 417 (39%) had asthma,402 (38%) had at least 1 FA, and 162 (15%) had 2 or more FAs. In the entire cohort, there was no significant association between FA number and lung function. In children with asthma, there was a statistically significant difference in predicted forced expiratory flow at 25% to 75% (FEF 25% to 75%) between children with 2 or more FAs compared with those with none. Participants with asthma and only 1 FA did not have any significant differences in percent predicted FEF 25% to 75% compared with those with no FAs. There was no significant association be-tween FA number and other pulmonary function tests.

Conclusion: Having 2 or more FAs is a potential risk factor for greater small airway airflow obstruction among children with asthma.

7**Characterization of neonatal seizures and their treatment using continuous EEG monitoring: a multicenter experience**

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Objective: The aim of this multicenter study was to describe detailed characteristics of electrographic seizures in a cohort of neonates monitored with multichannel continuous electroencephalography (cEEG) in 6 European centers.

Methods: Neonates of at least 36 weeks of gestation who required cEEG monitoring for clinical concerns were eligible, and were enrolled prospectively over 2 years from June 2013. Additional retrospective data were available from two centers for January 2011 to February 2014. Clinical data and EEGs were reviewed by expert neurophysiologists through a central server

Results: Of 214 neonates who had recordings suitable for analysis, EEG seizures were confirmed in 75 (35%). The most common cause was hypoxic-ischaemic encephalopathy (44/75, 59%), followed by metabolic/genetic disorders (16/75, 21%) and stroke (10/75, 13%). The median number of seizures was 24 (IQR 9–51), and the median maximum hourly seizure burden in minutes per hour (MSB) was 21 min (IQR 11–32), with 21 (28%) having status epilepticus defined as MSB>30 min/hour. MSB developed later in neonates with a metabolic/genetic disorder. Over half (112/214, 52%) of the neonates were given at least one antiepileptic drug (AED) and both overtreatment and under treatment was evident. When EEG monitoring was ongoing, 27 neonates (19%) with no electrographic seizures received AEDs. Fourteen neonates (19%) who did have electrographic seizures during cEEG monitoring did not receive an AED.

Conclusions: Our results show that even with access to cEEG monitoring, neonatal seizures are frequent, difficult to recognize and difficult to treat.