CLIPPINGS

Theme: General Pediatrics

Endotracheal administration of surfactant. (*Pediatr Pulmonol. 2017 Feb 2. doi:10.1002/ppul.23651*)

This systematic review evaluated the clinical outcomes of surfactant administration in preterm infants via a thin endotracheal catheter during spontaneous breathing compared with conventional administration involving tracheal intubation, mechanical ventilation and tracheal extubation. Data were analyzed using the Cochrane Collaboration methods. Primary outcome measures included the incidence of mechanical ventilation and bronchopulmonary dysplasia. Four randomized controlled trials (RCTs), two cohort studies, and six historical controlled studies involving 5,261 preterm infants were analyzed. In RCTs, surfactant administration though a thin catheter reduced the incidence of mechanical ventilation (MV) (RR 0.74; 95% CI 0.66, 0.81) in 72 h and bronchopulmonary dysplasia (BPD) (RR 0.69, 95% CI 0.50, 0.97) compared with conventional administration. In non-randomized studies also, there was significant reduction in the incidence of MV (RR 0.55, 95% CI 0.45, 0.68) and BPD (RR 0.70, 95% CI 0.60, 0.82) in favor of the thin catheter group. There were no significant differences between the two procedures in terms of short-term pulmonary complications, intracranial pathology, necrotizing enterocolitis, retinopathy of prematurity, and mortality.

Influence of parental television viewing on children. (*Acta Paediatr. 2017 Feb 1. doi: 10.1111/apa.13771*)

Excessive television (TV) exposure has negative impacts on a child's development, health and behavior. This study examined the under-researched area of what impact infant and parental TV viewing during a child's infancy had on the child's later viewing habits. Data on 18,577 children born in 2005 were collected from the Taiwan Birth Cohort Study. Group-based trajectory analysis was conducted to identify childhood TV viewing trajectories at 18, 36 and 66 months of age.

Multinomial logistic regression was used to examine the influence of parents' TV behavior on their children's TV viewing trajectories. The percentage of children falling into the TV viewing trajectories that were identified were: low (20%), increasing (46.5%) and high (33.5%). The child's TV viewing trajectory was significantly associated with the child's sex, parent's monthly income, child's daycare arrangements, maternal and paternal education, and maternal and paternal TV viewing time. The results particularly highlight the need to restrict child and parental TV viewing time in infancy.

Vitamin D and preterm birth. (*J Obstet Gynaecol Res. 2017;43:247-56*)

A meta-analysis of randomized controlled trials (RCTs) and observational studies was done to answer the two following questions: (*i*) whether low maternal circulating 25-hydroxyvitamin D (25(OH)D) is associated with an increased risk of preterm birth or spontaneous preterm birth; and (*ii*) whether vitamin D supplementation alone during pregnancy can reduce the risk of preterm birth. Maternal circulating 25(OH)D deficiency (pooled OR 1.25; 95% CI 1.13, 1.38) rather than insufficiency (pooled OR 1.09; 95% CI 0.89, 1.35) was associated with an increased risk of preterm birth, and vitamin D supplementation alone during pregnancy could reduce the risk of preterm birth (pooled RR 0.57; 95% CI 0.36, 0.91). This was also the case for the spontaneous preterm birth subgroup.

Interleukin levels and bacteremia. (*Turk J Haematol. 2017 Feb 1.doi: 10.4274/tjh.2016.0434*)

Despite improvements in diagnosis and treatment, infections are still major causes of morbidity and mortality in children with febrile neutropenia. In majority of febrile episodes, infection source cannot be defined. This study aimed to identify the earlier predictors of bacteremia/fungemia, and a useful cytokine to identify the source of infections and to discriminate the patients with culture-confirmed bacterial/fungal infection. Interleukin (IL)-6, IL-8 and IL-10 circulating levels were higher in the state of infection. The most sensitive cytokine was IL-10, and the most specific was IL-8 in predicting culture-confirmed infections. IL-8 had greater sensitivity and specificity in determination of Gram-negative bacterial infections.

Low muscle mass and cardiometabolic risk. (*Pediatr Diabetes. 2017 Feb 1. doi: 10.1111/pedi.12505*)

Increased cardiometabolic risk (CMR) is documented in obese and non-obese adolescents with low muscular fitness. However, the association of low muscle mass (LMM) with CMR, independent of weight status, has not been examined. This observational study in 660 adolescents analyzed the relationship of LMM with CMR in adolescents, regardless of their weight status. Body mass index (BMI), waist circumference (WC) and arterial blood pressures (ABP) were measured. Total fat mass (TFM), total lean tissue (TLT), and appendicular skeletal muscle mass (ASM) were estimated. Fasting lipid profile, glucose, and insulin were measured; and metabolic syndrome (MetS) was diagnosed as per standard (AHA/NHLBI/IDF) criteria. ROC analysis was performed to find the optimal cut-offs of TLT percentage for MetS diagnosis. Values below these cut-offs defined LMM. In both sexes, TLT showed better sensitivity and specificity than ASM for MetS diagnosis. Adolescents with LMM, regardless of nutritional status, had significantly increased values of MetS Z-score, ABP, TG, TC/HDL-chol, and HOMA-IR than non-obese non-LMM adolescents. Adolescents having both obesity and LMM had the unhealthiest CMR profile.

K RAJESHWARI
drkrajeshwari@hotmail.com