

ABSTRACT FROM CURRENT LITERATURE

Pediatric Asthma and Food Allergy

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Indian J Pediatr. 2017 Aug; 84(8):585-590.

Objective: To quantitatively summarize the evidence from observational studies on the relation between pediatric asthma and food allergy.

Methods: A literature search was conducted in Medline and EMBASE (August 2016). Two independent reviewers appraised the studies and extracted the estimates of interest. Methodological quality of the included studies was assessed using National Heart Lung and Blood Institute (NHLBI) Quality Assessment Tools. Data were pooled using random effects meta-analysis.

Results: A total of 32 relevant studies were identified but only 8 studies met the inclusion criteria. Using random-effect model, food allergy showed strong association with asthma in children (OR = 2.87 [95% CI: 2.05–4.00]; P < 0.0001).

Conclusions: This study suggested that food allergy is associated with an increased risk of asthma in children.

Keywords: Pediatric; Asthma; Food allergy

Psychosocial Needs of Patient's Relatives and Health Care Providers in a Pediatric Critical Care Unit.

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Objective: To describe the needs of relatives of children admitted to an Intensive Care Unit and compare their needs with the perspectives of doctors, nurses and administrators.

Methods: This is a descriptive comparative study done at a tertiary care PICU from South India. A modified Critical Care Family Needs Inventory (CCFNI) (internal consistency reliability =0.93) was

used to assess the needs of 35 family members, 30 nurses, 30 doctors and 30 administrators. Four needs pertaining to developing countries were included. Their responses were ranked by means and analysed by multivariate analysis of variance.

Results: The responses were significantly different between the groups for 13 needs (28%) and two domain items of proximity and support. Needs of relatives correlated with doctors more strongly than with nurses ($r_s = 0.80$ vs. 0.68 ; $p < 0.001$). No significant difference was found between the perceived needs of family members and hospital staff for assurance, information and comfort. Both doctors and administrators underestimated the proximity needs but overestimated the support needs of relatives.

Conclusions: The CCFNI with minor modifications can be used in developing countries for assessing the needs of families of children in ICU. Making sure that the relative feels assured about the care given to the child and timely information regarding the child's condition, are the two most important domains from the perspective of family members and hospital staff. Meeting these needs might help family members to cope better and be more supportive to their critically ill child.

Keywords: CCFNI; Critically ill children; Family needs

The association of sleep and late-night cell phone use among adolescents

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Objective: This study aims to assess the relationship of late-night cell phone use with sleep duration and quality in a sample of Iranian adolescents.

Methods: The study population consisted of 2400 adolescents, aged 12-18 years, living in Isfahan, Iran. Age, body mass index, sleep duration, cell phone use

after 9 p.m., and physical activity were documented. For sleep assessment, the Pittsburgh Sleep Quality Index question-naire was used.

Results: The participation rate was 90.4% ($n = 2257$ adolescents). The mean (SD) age of participants was 15.44 (1.55) years; 1270 participants reported to use cell phone after 9 p.m. Overall, 56.1% of girls and 38.9% of boys reported poor quality sleep, respectively. Wake-up time was 8:17 a.m. (2.33), among late-night cell phone users and 8:03 a.m. (2.11) among non-users. Most (52%) late-night cell phone users had poor sleep quality. Sedentary participants had higher sleep latency than their peers. Adjusted binary and multinomial logistic regression models showed that late-night cell users were 1.39 times more likely to have a poor sleep quality than non-users (p -value < 0.001).

Conclusion: Late-night cell phone use by adolescents was associated with poorer sleep quality. Participants who were physically active had better sleep quality and quantity. As part of healthy lifestyle recommendations, avoidance of late-night cell phone use should be encouraged in adolescents.

Point-of-care C reactive protein to identify serious infection in acutely ill children presenting to hospital: prospective cohort study

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Objective: Acute infection is the most common presentation of children to hospital. A minority of

these infections are serious, but early recognition and adequate management are essential. We aimed to develop improved tools to assess children attending ambulatory hospital care, integrating clinical features with point-of-care C reactive protein (CRP).

Design: Prospective observational diagnostic study.

Setting and patients: 5517 acutely ill children (1 month–16 years) presenting to 106 paediatricians at six outpatient clinics and six emergency departments in Belgium.

Index test: Point-of-care CRP alongside vital signs and objective symptoms measurements.

Main outcome: Hospital admission for >24 hours with a serious infection <5 days after presentation.

Results: An algorithm was developed consisting of clinical features and CRP. This achieved 97.1% (95% CI 94.3% to 98.7%) sensitivity and 99.6% (95% CI 99.2% to 99.8%) negative predictive value, excluding serious infections in 36.4% of children. It stratifies patients into three groups based on CRP level: high-risk group with CRP >75 mg/L (26.8% risk of infection), intermediate-risk group with CRP 20-75 mg/L and at least one of seven clinical features (8.1%), and lower risk group with CRP <20 mg/L with at least one of the 11 features (3.8%). Children in intermediate-risk or low-risk groups with normal clinical assessment have 0.6% and 0.4% risk of serious infections, respectively.

Conclusions: Conducting a CRP test may first enable children to be stratified into three risk groups, guiding assessment of clinical features that could be performed by junior doctors or nurses. In one-third of acutely ill children, the algorithm could exclude serious infection. Prospective validation of the algorithm is needed.