PARENTAL MANAGEMENT OF ASTHMA TRIGGERS WITHIN A CHILD'S ENVIRONMENT


Purpose of the Study. To assess the type and frequency of attempts by families to control environmental precipitants of asthma symptoms and their degree of consistency with current National Heart, Lung, and Blood Institute (NHLBI) asthma guidelines.

Study Population. A nationwide sample of 896 children (ages 2–12 years) with asthma who had used asthma-related health care within the previous 2 years. Patients were selected randomly from the panels of 106 primary care clinicians participating in a trial to evaluate the effect of physician asthma education on health care utilization.

Methods. A cross-sectional, telephone-based survey was conducted. Respondents were asked open-ended questions to identify triggers for their child's asthma and to describe specific actions taken to eliminate these triggers in the home. Demographic information regarding the patient (age, race, gender, type of insurance, and health care utilization for asthma within the last year) and the household (income, number of persons in the household, education of the caregiver) was collected. Specific queries were used to discern patient asthma severity, if smokers resided in the home, and if the family had received asthma education from their primary care manager. Actions to address asthma triggers were categorized as recommended, reasonable, neutral, or not recommended based on NHLBI recommendations.

Results. Eighty percent of parents (717 of 896) could identify at least 1 asthma trigger (mean: 2.2; range: 0–9). Eighty-two percent (582 of 717) of these parents had attempted an environmental-control measure. Of the 1788 actions reported by these respondents, 51% were not likely to be useful for the specified trigger (eg, the purchase of an air filter when the environmental trigger reported would not likely be addressed by an air filter). Two hundred sixteen (24%) children lived with a smoker. Only 16 of these 216 families (7%) reported attempts to reduce or eliminate smoke exposure. No specific demographic characteristic predicted which parents were more likely to institute environmental controls. Characteristics positively associated with addressing triggers included receiving asthma education (odds ratio [OR]: 1.78; 95% confidence interval [CI]: 1.26, 2.52) and the number of primary care office visits in the last year (OR: 1.05; 95% CI: 1.00, 1.10).

Conclusions. More than half of the environmental modifications initiated by families are not consistent with current NHLBI guidelines. Despite the proven benefits of reducing tobacco-smoke exposure, few families reported any attempt to decrease smoke exposure. The lack of reliable correlation between an identifiable demographic group and environmental modification underscores the importance of education and encouragement in all families.

Reviewers' Comments. Physician contact and physician asthma education, rather than family education or finances, seemed to correlate with attempts at environmental modifications. However, it is unclear from this study if the modifications instituted were endorsed by physicians. The NHLBI guidelines describe tobacco smoke as the “most important environmental indoor irritant.” Tobacco smoke remains a difficult challenge. Continued effort by health care providers to encourage smoking cessation is essential.

INCREASED PREVALENCE OF LATEX-SENSITIZATION AMONG CHILDREN WITH CHRONIC RENAL FAILURE


Purpose of the Study. To assess the prevalence of latex sensitization and identify risk factors for latex sensitization among children with chronic renal failure.

Study Population. Ninety-three patients (44 boys and 49 girls; median age: 10.5 ± 6.0 years) with chronic renal failure who presented to the University of Vienna Children’s Hospital Nephrology Clinic between 1997 and 2000.

Methods. Latex sensitization was assessed by a questionnaire-based history and measurement of total and latex-specific serum IgE by solid-phase immunoassay. Patients and parents were queried regarding the etiology of renal failure, age at onset, number of renal transplantations, surgical procedures, hemodialysis, clinical symptoms with latex exposure, personal and family history of allergy, and history of pacifier use. Patient responses were compared with medical histories and were consistent. Patients were designated as latex sensitized if their latex-specific serum IgE was ≥0.35 kilounits of allergen-specific IgE per liter (kUa/L). Neither skin-prick testing nor provocation testing was performed.

Results. Of the 93 patients enrolled, 10 (10.8%) were found to have latex-specific IgE levels (0.35–9.44 kUa/L). Of those, only 1 patient reported clinical symptoms on latex exposure compared with 4 patients with no demonstrable latex-specific IgE. No reactions to latex were reported to occur during medical care. A personal or family history of allergy, a greater number of urogenital surgeries, and hemodialysis were reported more frequently in latex-sensitized children. Gender, age at enrollment, age at first urogenital surgery, renal transplantation, and the use of pacifiers did not differ between latex-sensitized and -nonsensitized children.

Conclusions. The prevalence of latex sensitization among children with chronic renal failure is greater than that previously reported for the general pediatric population (10 of 93 vs 8 of 1175 in an unslected pediatric population). Eight of the 10 sensitized patients in this study had renal disease diagnosed within the first year of life and therefore had early and repeated exposures to latex. The small sample size prevented detection of significant associations with any determinant of renal disease or definite risk factor for sensitization.

Reviewers' Comments. Atopy and repeated exposure to latex allergens have been previously associated with sensitization to latex. Children with chronic renal failure are frequently exposed to latex and therefore are likely at increased risk. A larger study population would be required to further characterize this increased risk. This study raises interesting questions regarding the impact of both timing and cumulative amount of latex exposure for all children with chronic illnesses.
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