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JOURNAL articles

INTRODUCTION: In severe asthma, management of life-threatening air trapping that persists despite initiation of standard asthma treatment is difficult in the absence of extracorporeal membranous oxygenation. CASE STUDY: Three children with life-threatening asthma could not be adequately ventilated despite maximum conventional treatment because of severe air trapping. A novel method of active expiration by abdominal compression with a standard ventilator was adopted with immediate effect with significant improvement in ventilation. CONCLUSION: Synchronized abdominal compression is a novel and simple method that allows an effective treatment of severe air trapping in an intubated paralyzed asthma child.

Asthma is a complex heterogeneous disease characterized by reversible airflow obstruction. After appropriate diagnosis, the management in school-aged children centers on 3 broad domains: pharmacologic treatment, treatment of underlying comorbidities, and education of the patient and caregivers. It is important to understand that the phenotypic differences that exist in the school-aged child with asthma may impact underlying comorbid conditions as well as pharmacologic treatment choices. Following initiation of therapy, asthma control must be continually evaluated in order to optimize management.


Despite reported health benefits of urban greenspace (gs), the epidemiological evidence is less clear for allergic disease. To address a limitation of previous research, we examined the associations of medium- and high-resolution residential gs measures and tree and/or grass canopies with allergic outcomes for children enrolled in the longitudinal cincinnati childhood allergy and air pollution study (ccaaps). We estimated residential gs based on 400 m radial buffers around participant addresses (n = 478) using the normalized differential vegetation index (ndvi) and land cover-derived urban greenspace (ugs) (tree and grass coverage, combined and separate) at 30 m and 1.5-2.5 m resolution, respectively. Associations between outdoor aeroallergen sensitization and allergic rhinitis at age 7 and residential gs measures at different exposure windows were examined using multivariable logistic regression models. A 10% increase in ugs-derived grass coverage was associated with an increased risk of sensitization to grass pollens (adjusted odds ratio [aor]: 1.27; 95% confidence interval = 1.02-1.58). For each 10% increase in ugs-derived tree canopy coverage, nonstatistically significant decreased odds were found for grass pollen sensitization, tree pollen sensitization, and sensitization to either (aor range = 0.87-0.94). Results similar in magnitude to ugs-tree canopy coverage were detected for ndvi and allergic sensitizations. High-resolution (down to 1.5 m) gs measures of grass- and tree-covered areas showed associations in opposite directions for different allergy outcomes. These data suggest that measures strongly correlated with tree canopy (e.g., ndvi) may be insufficient to detect health effects associated with proximity to different types of vegetation or help elucidate mechanisms related to specific gs exposure pathways.


BACKGROUND: Although research on the negative effects of childhood poly-victimization is substantial, few studies have examined the relationship between poly-victimization and younger children's physical health and diseases. OBJECTIVE: This study examines the associations between poly-victimization and children's health problems requiring medical attention. METHODS: A national stratified cluster random sampling was used to select and approach 25% of the total primary schools in Taiwan, and 49% of the approached schools agreed to participate in this study. We collected data with a self-report questionnaire from 6233 (4th-grade) students aged 10-11, covering every city and county in Taiwan. RESULTS: Logistic regression analyses
demonstrate a significant dose-response relationship between children's poly-victimization exposure and their health problems including hospitalization, serious injury, surgery, daily-medication requirements, heart murmurs, asthma, dizziness or fainting, allergies, kidney disease, therapies for special needs, smoking, and alcohol use. The results indicate that children's risk of having a health problem grew significantly with each increase in the number of victimization types that children experienced. CONCLUSIONS: These research findings underscore the effect of poly-victimization on children's health problems requiring medical attention, and stress the need for both proper screening methods for children's exposure to poly-victimization and stronger awareness of poly-victimization's effects on health conditions in healthcare clinics.

In the NEWS


Cimons, Marlene. Your car's exhaust is giving kids asthma. Popular Science. April 25, 2019.


Barcelona Institute for Global Health. Particulate matter takes away 125,000 years of healthy life from Europe's child population. Medical Xpress.

Bodkin, Henry. Asthma-causing bugs found in e-cigarettes for the first time. The Telegraph. April 24, 2019.


