

Public Health. Data were taken from reports filed by school nurses monthly for all students from the 2003–2004 school year for these 3 school districts.

RESULTS. A total of 181 schoolchildren (0.83%) in the 3 districts were dispensed injectable epinephrine during the school year studied. Diagnoses listed for the prescription of epinephrine included peanut/tree nut allergy (65%), stinging-insect allergy (19%), seafood allergy (6%), and egg or dairy allergy (3%). A miscellaneous group (7%) included diagnoses for latex, chocolate, pollen, fruit, cold air, and ibuprofen allergy. Males were more likely to be dispensed epinephrine than females (odds ratio [OR]: 1.44; $P < .02$). White students were nearly 5 times more likely to have been dispensed epinephrine for peanut and tree nut allergy (OR: 4.5; $P < .001$) and almost 9 times more likely for stinging-insect allergy (OR: 8.7; $P < .001$). Seventy-five percent of students dispensed epinephrine for peanut or tree nut allergy were enrolled in prekindergarten through grade 5.

CONCLUSIONS. Significant racial and socioeconomic differences for prescribing self-injectable epinephrine was seen in 3 school districts in Massachusetts.

REVIEWER COMMENTS. This study describes the racial and socioeconomic demographics of children prescribed injectable epinephrine but does not address the reasons for the disparity between affluent and nonaffluent or white and nonwhite populations. This study suggests that minority, socioeconomically disadvantaged students are being either underdiagnosed or undertreated for potential anaphylactic reactions that require epinephrine. Other studies have not shown racial differences in the incidence of food allergies, suggesting that other factors are involved in the lower rate of epinephrine dispensed to disadvantaged minority students.

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DRUG ALLERGY

Immediate Allergic Reactions to Cephalosporins and Penicillins and Their Cross-Reactivity in Children

Atanaskovic-Markovic M, Velickovic TC, Gavrovic-Jankulovic M, Vuckovic O, Nestorovic B. *Pediatr Allergy Immunol.* 2005;16:341–347

PURPOSE OF THE STUDY. To evaluate the frequency of anaphylactic reactions to cephalosporins and penicillins and their cross-reactivity in a pediatric population.

STUDY POPULATION. A prospective survey was conducted in a group of 1170 children with suspected immediate allergic reactions to cephalosporins and/or penicillins, which were examined during a period of 8 years.

METHODS. In vivo (skin tests and challenges) and in vitro tests (for specific immunoglobulin E) were performed with a standard concentration of penicillins and cephalosporins.

RESULTS. When 1170 children with a clinical history of allergy to penicillins and/or cephalosporins were tested in vivo for immediate hypersensitivity to β -lactams, 58.3% of cases overall were found to be skin- or challenge-test-positive. Among them, 94.4% of patients were positive to penicillins and 35.3% to cephalosporins. The frequency of positive reactions in the in vivo testing was in the range of 36.4% to 88.1% for penicillins and from 0.3% to 29.2% for cephalosporins. However, 31.5% of the penicillin-allergic children cross-reacted to some cephalosporin. If a child was allergic to a cephalosporin, the frequency of positive reactions to penicillin was 84.2%. The cross-reactivity between cephalosporins and penicillins varied between 0.3% and 23.9%. The cross-reactivity among different generations of cephalosporins varied between 0% and 68.8%, being the highest for first- and second-generation cephalosporins and 0% for third-generation cephalosporins.

CONCLUSIONS. The frequency of immediate allergic reactions to cephalosporins is considerably lower compared with penicillins, and the degree of cross-reactivity between cephalosporins and penicillins depends on the generation of cephalosporins, being higher with earlier-generation cephalosporins. The cross-reactivity among cephalosporins is lower compared with cross-reactivity between penicillins and cephalosporins.

REVIEWER COMMENTS. Penicillins and cephalosporins are common antibiotics inducing immunoglobulin E-mediated reactions in children. This large pediatric prospective study revealed that more than half of the children with a history of drug reaction to penicillin and/or cephalosporins were skin- or challenge-test-positive, unlike adults in whom the majority of those with a history of penicillin allergy are found to be skin test-negative. Almost one third of penicillin-allergic children are sensitized to cephalosporins. However, this sensitization was only to first- and second-generation cephalosporins; there was no cross-reactivity seen with third-generation cephalosporins. Interestingly, there was less cross-reactivity among the different cephalosporins. The results of this study can help guide antibiotic choices for penicillin-allergic children.

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Hypersensitivity Reactions to Paracetamol in Children: A Study of 25 Cases

Boussetta K, Ponvert C, Karila C, Bourgeois ML, Blic J, Scheinmann P. *Allergy.* 2005;60:1174–1177

Immediate Allergic Reactions to Cephalosporins and Penicillins and Their Cross-Reactivity in Children

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