PAF levels increased from 4% in the control groups to 20% in the group with grade 1 anaphylaxis, 71% in the group with grade 2 anaphylaxis, and 100% in the group with grade 3 anaphylaxis. There was an inverse correlation between PAF levels and serum PAF acetylhydrolase activity. The proportion of patients with low PAF acetylhydrolase activity increased with the severity of anaphylaxis. Serum PAF acetylhydrolase activity was significantly lower in patients with fatal peanut anaphylaxis than in control patients.

CONCLUSIONS. Serum PAF levels were directly correlated and serum PAF acetylhydrolase activity was inversely correlated with the severity of anaphylaxis. PAF acetylhydrolase activity was significantly lower in patients with fatal anaphylactic reactions to peanuts than in patients in any of the control groups. Failure of PAF acetylhydrolase to inactivate PAF may contribute to the severity of anaphylaxis.

REVIEWER COMMENTS. PAF is 1 of the proinflammatory mediators that are released systemically by the degranulation of mast cells and basophils. Although PAF is not the only mediator that plays a role in anaphylaxis, these results suggest that PAF is very important. Therefore, it may be useful to develop new pharmaceutical agents that block its actions. Additional research is also needed to determine if PAF and PAF acetylhydrolase measurements may be used as a screening tool to select patients at highest risk for fatal anaphylaxis.

DRUG HYPERSENSITIVITY

Drug Allergy Claims in Children: From Self-reporting to Confirmed Diagnosis

PURPOSE OF THE STUDY. To assess the prevalence of self-reported adverse drug reactions and drug allergy in a pediatric population and confirm the diagnosis in children with suspected drug allergy.

STUDY POPULATION. Patients (n = 1426) responded to an initial cross-sectional survey. A total of 60 of 67 patients with reported drug allergy were evaluated at an allergy clinic.

METHODS. The first phase included a cross-sectional survey that assessed the life occurrence of adverse drug reactions and self-reported drug allergy in the outpatient clinic of a pediatric hospital. The second phase involved a diagnostic workup in children with parent-reported drug allergy, including detailed clinical history and in vitro and in vivo investigations. Specific immunoglobulin E (IgE) level determination for β-lactams, prick and intradermal skin testing for β-lactams, local anesthetics and sulfonamides, and patch tests (if a delayed reaction was reported) were performed. If all other investigations were inconclusive and a provocation test was not contraindicated, this test was performed.

RESULTS. The prevalence of self-reported adverse drug reactions and drug allergy were 10.2% and 6.0%, respectively. The frequency of a medical diagnosis of drug allergy was 3.9%. The majority of the suspected allergic reactions were nonimmediate cutaneous events attributed to β-lactam antibiotics in younger children. Of 60 patients evaluated in the allergy clinic, 39 patients had a plausible clinical history, and additional investigation including a skin test, IgE-level measurement, and possible provocation tests were conducted. Drug allergy was diagnosed in 3 children on the basis of positive responses in skin (n = 1) and oral provocation (n = 2) tests.

CONCLUSIONS. Although adverse drug reactions and suspected drug allergy are frequently reported in children, after a complete evaluation, only a few of these reactions can be attributed to immediate and nonimmediate drug allergy. Overall, 94% of the patients could tolerate the initially suspected drug.

REVIEWER COMMENTS. This study underscores a serious problem: patients who experience or perceive a drug reaction are often classified as being truly allergic when this may not be the case. Such overdiagnosis and misdiagnosis may result in suboptimal medication choices. These results show that only 6% of the patients with initially suspected drug allergy were truly allergic. This study demonstrates the importance of a complete and detailed history, with consideration of additional testing including skin-prick tests, specific IgE-level determination, and provocation tests. It should be noted that for nonimmediate drug allergy, an oral provocation test may require prolonged treatment to observe for symptoms. Such provocation tests would not be undertaken for severe previous reactions (eg, toxic epidermal necrolysis).

HLA-B*5701 Screening for Hypersensitivity to Abacavir

PURPOSE OF THE STUDY. Abacavir is associated with severe and potentially life-threatening hypersensitivity reactions in up to 8% of the white population. In 2002, HLA-B*5701
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