

Penicillin allergy: high prevalence of a vague history in skin test-positive patients

The authors of "Penicillin allergy, high prevalence of a vague history in skin test-positive patients," (Ann Allergy Asthma Immunol 2000;85:195-199) address an important clinical problem. This study adds useful information to the recently published practice parameters on management of drug hypersensitivity.¹ This may further assist the allergist in establishing more appropriate standards for the evaluation and management of the patient with a history of penicillin allergy in their local community.

We are aware of the tendency to make judgments regarding the evaluation and management of these patients with a reputed history of penicillin allergy based only upon the history available. The current study, however, places the available research in perspective, and correctly concludes that the patient with an unclear or vague history of penicillin allergy should still have skin tests to clarify their risk of a penicillin reaction.

Despite the availability of the major determinant of penicillin hypersensitivity (penicilloyl-polylysine-PPL) for over 20 years, the usage of this extremely safe and effective test reagent has remained low. Some possible factors for this low usage include the following:

(1) The unavailability of a major determinant mixture which includes penicillin itself, as well as other antigens that have been identified as occasionally involved in patients with penicillin sensitivity. Nevertheless, studies have indicated that penicillin itself is the main antigenic determinant in minor determinant mixture, and this

is available by a simple dilution of aqueous penicillin G to 10,000 units per milliliter. We are looking forward to having a simple reagent which includes most if not all the possible minor determinants of penicillin allergy, but we already have extremely effective tests at hand with penicilloyl polylysine and penicillin G. These tests have been shown to reduce the risk of using penicillin in history-positive patients to that of the history-negative population if the tests are indeed negative. The likelihood of a true minor determinant mixture preparation becoming commercially available remains problematic, and may well be related to the very low utilization of the currently available penicilloyl polylysine;

- (2) The increased availability of alternative antibiotics, especially the cephalosporins. Nevertheless, the penicillins remain the drug of choice for many important diseases secondary to their low cost, lack of toxicity, and clinical effectiveness. The cephalosporins have some degree of cross-reactivity with penicillin, at least with the first generation agents, which are still widely used, often without the added safety of screening with penicillin skin testing;
- (3) The lack of familiarity and experience with skin testing of most physicians, as well as the occasional unavailability of trained allergists in the often urgent situation when antibiotics are needed;
- (4) The common reflex decision to use alternative drugs when even a

question of penicillin allergy is raised. This frequently leads to less than optimum therapy for often serious infections, as well as adverse reactions due to the inappropriate use of broad spectrum antibiotics with higher toxicity. A recent example was the finding of the study by the Pennsylvania PRO² of the very high utilization of vancomycin leading to a rising incidence of vancomycin-resistant enterococci. This study found that the most common reason for the inappropriate use of vancomycin was a history of penicillin allergy.

Penicillins and related beta-lactam antibiotics remain extremely useful agents in the management of infectious diseases. The high incidence of a reputed history of penicillin allergy remains a major concern, with the effective use of these antibiotics. The allergist can be an important clinical asset in the management of patients with a history of penicillin allergy and serious infections.

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REFERENCES

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