REFERENCES

1. Wessels MW, Doekes G, van Ieperen-van Dijk AG, Koers WJ, Young E. IgE antibodies to *Pityrosporum ovale* in atopic dermatitis. Br J Dermatol 1991;125:227-32.
2. Doekes G, van Ieperen-van Dijk AG. Allergen of *Pityrosporum ovale* and *Candida albicans*. I. Cross-reactivity of IgE-binding components. II. Physicochemical characterization. Allergy 1993 (in press).
3. Savolainen J, Broberg A. Crossreacting IgE antibodies to *Pityrosporum ovale* and *Candida albicans* in atopic children. Clin Exp Allergy 1992;22:469-74.

Intentional diagnostic insect sting challenges: A medical and ethical issue

To the Editors:

The recent JOURNAL article by van der Linden et al. (J ALLERGY CLIN IMMUNOL 1992;90:110-8) reports the relationship between the clinical severity of anaphylaxis-induced by intentional insect stings and assessment of mast cell activation by measurement of plasma levels of released mediators in a large number of insect-allergic patients. The results are most interesting; they show a correlation between the severity of anaphylaxis and the levels of plasma histamine and tryptase, adding an important contribution to the knowledge of the pathogenesis of anaphylaxis.

Two aspects of this study deserve comment. The first is the medical and ethical issue of intentional diagnostic sting challenges in patients who have had prior sting anaphylaxis and have not received venom immunotherapy. To potentially induce an anaphylactic reaction is fraught with peril, as pointed out many years ago by Smith et al.[1] who described profound life-threatening anaphylaxis after insect sting challenge despite intensive medical therapy in an intensive care unit. In their study, van der Linden et al. described 17 patients who had serious reactions after the sting challenges and required overnight observation in an intensive care unit. The authors defend the use of diagnostic sting challenges to select patients who need venom immunotherapy because other criteria have not been sufficiently specific.[2, 3]

There is clearly significant risk in reexposure to venom in patients who have had prior anaphylaxis. The likelihood of a severe reaction is related to the severity of the initial reaction; that is, patients who have had an initial severe reaction are likely to have a similar severe reaction when rechallenged. The incidence of such severe reactions appears to be greater in adults (65%) than in children (46%).[4] In their study, van der Linden et al. found an approximate 40% incidence of severe re-sting reactions primarily in adult patients who had initial severe reactions. In addition, an occasional severe re-sting reaction will occur in patients who have had previous milder reactions.[4] The basic question then is whether the value of intentional challenges in selecting patients for immunotherapy is worth the risk of inducing a severe reaction. It is my opinion that patients at high risk, such as adults who have had prior severe anaphylactic sting reactions, should not be intentionally rechallenged and should be given immunotherapy on the basis of their history and skin test reactivity, recognizing that some of these patients may not need therapy.

Individuals with milder anaphylactic sting reactions might even be treated without immunotherapy and probably do not require intentional challenge. Thus I believe that in light of our current state of knowledge, the risks of serious potential reactions to intentional sting challenges in untreated patients cannot be justified.

As an accompanying issue, the failure to react to one sting challenge suggests the likelihood of continued lack of reactions to further stings; however, there are a minority of patients who do have subsequent allergic reactions.[4]

The second serious medical issue in the report by van der Linden et al., which needs to be addressed is the authors' use of an intravenously administered antihistamine as the initial treatment of acute anaphylaxis, reserving epinephrine until symptoms become very severe. Epinephrine is considered the drug of choice for anaphylaxis and should be administered as early as possible, preferably before symptoms become severe. Barnard[5] pointed out years ago that the administration of epinephrine may have been an important factor in differentiating the outcomes of fatal and serious nonfatal sting anaphylaxis. The appropriate treatment of anaphylaxis deserves emphasis.

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REFERENCES

1. Smith PL, Kagey-Sobotka A, Bleecker ER, et al. Physiologic manifestations of human anaphylaxis. J Clin Invest 1980;66:1072-80.
2. Parker JL, Santrach PJ, Dahlberg MJE, Yunginger JW. Evaluation of Hymenoptera-sting sensitivity with deliberate sting challenges: inadequacy of present diagnostic methods. J ALLERGY CLIN IMMUNOL 1982;69:200-7.
3. Blaauw PK, Smithuis LOMJ. The evaluation of the common diagnostic methods of hypersensitivity for bee and yellow jacket venoms by means of an in-hospital sting. J ALLERGY CLIN IMMUNOL 1985;75:566-72.
4. Reisman RE. Natural history of insect sting allergy: relationship of severity of symptoms of initial sting anaphylaxis to re-sting reaction. J ALLERGY CLIN IMMUNOL 1992;90: 335-9.
5. Barnard JH. Studies of 400 Hymenoptera sting deaths in the United States. J ALLERGY CLIN IMMUNOL 1973;52:259-64.

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