Vial Testing

The American Academy of Otolaryngic Allergy (AAOA) supports the use of vial testing on patients prior to the initiation of subcutaneous allergy immunotherapy.

The vial test may improve the safety and comfort of subcutaneous allergy immunotherapy. Vial testing serves as a biologic indicator of tolerance to the mixed antigen vial.[1] A large skin wheal after an intradermal vial test may indicate the antigen concentration is too high for the patient. This may result in pain and discomfort that, if continued, may result in patient noncompliance to therapy. In addition, although there is a paucity of data on this topic, a large local skin reaction may identify those that may be at a higher risk for developing a systemic reaction.

Vial testing is the process of applying a much smaller dose (typically 5-fold less) of the treatment vial intradermally to assess for a skin wheal. Typically, a 4-mm wheal is applied as an intradermal injection. If after 10 minutes, the wheal size is 13 mm or less, then the first subcutaneous injection may be given during this visit. If the size is 13 mm in size, then the injection should be given on the next visit. If the size is greater than 13 mm, then the treatment vial needs to be diluted 5 fold and another vial test performed in a week.[1, 2]

Persistently large wheals may indicate an error in the mixing of the treatment vial or a higher prevalence of the offending antigen in the environment. If large wheals persist after dilution, further dilution or selective retesting may be performed.

1 Krouse, JH, Chadwick, SJ, Gordon, BR, Derebery, MJ. *Allergy and Immunology–An Otolaryngic Approach.* Lippincott 2002.

2 King HC, Mabry RL, Mabry CS, Gordon BR, Marple BF. *Allergy in ENT Practice: The Basic Guide.* Thieme, 2004.