How to Revaccinate Patients With Allergy History

BY DIANA MAHONEY
New England Bureau

Most patients with a history of suspected vaccine allergy can be vaccinated safely against other diseases and some can receive additional doses of the vaccines to which they previously reacted, according to a report.

Careful monitoring and standard precautions are the keys to successful revaccination in patients who might have experienced hypersensitivity reactions after previous vaccines, wrote Dr. Robert Wood, chief of pediatric allergy and immunology at Johns Hopkins Children's Center, Baltimore (Pediatrics, Sept. 2008 122:e771-7).

Dr. Wood and his colleagues in the hypersensitivity working group of the Clinical Immunization Safety Assessment (CISA) network have developed a detailed algorithm for the evaluation and treatment of patients with suspected hypersensitivity.

According to the algorithm, physicians should take a detailed history to determine whether the symptoms of the prior reaction were consistent with an immediate-type reaction, and if so, whether the reaction might be IgE-mediated. Important considerations include the timing of onset of the symptoms, exposure to other allergens, duration of symptoms, vaccine history, history of atopic disease, and the specific vaccine that was administered, the authors wrote.

On an individual patient basis, there is a relatively low risk of true IgE-mediated type-1 hypersensitivity reactions—those that typically occur within minutes of exposure to the allergen and can potentially progress to anaphylaxis—as well as the more benign delayed-type hypersensitivity reactions. In medical settings, however, because vaccines are so widely administered, this is a "relatively common clinical problem," according to the authors.

In the absence of symptoms of a true hypersensitivity reaction, patients can be revaccinated "in appropriate settings, with a waiting period of at least 15 minutes as per the guidelines of the Advisory Committee on Immunization Practices," according to the algorithm.

In an individual with a history of an IgE-mediated reaction, referral for allergy testing is warranted, especially if additional doses of the vaccine are required.

"Both skin testing and testing for specific IgE antibodies in serum have been used for the diagnosis of allergic reactions related to MMR, influenza, DTP, varicella, and pneumococcal polysaccharide vaccines, as well as for the diagnosis of egg and gelatin sensitivity," the authors wrote. Whenever possible, "skin testing should be done by using the specific vaccine, from the same manufacturer, that is suspected of causing the reaction," they added.

Based on a case-by-case risk-benefit analysis per the algorithm, options for revaccination include:

► Withholding further doses of the vaccine in patients at risk for life-threatening complications from the vaccine, as well as in those with serologic evidence of immunity and those who are at low risk for the disease or disease complications.

► Revaccination and physician supervision for patients without evidence of immediate hypersensitivity.

► Revaccination using an alternative form of the vaccine that doesn't contain the offending allergen.

► Revaccination using special precautions, as outlined in the report, in patients with incomplete immunity to the disease who might be at risk for the disease.

"By use of a careful history and appropriate testing, most patients can be safely vaccinated or assured ongoing protection by the assessment of antibody titers," the authors wrote.

Although the algorithm and guidelines are designed as a framework to help providers manage patients with suspected vaccine allergies, "the treatment of patients with suspected vaccine allergy is clearly an area in need of additional study," they stated.

To accurately estimate the true burden of vaccine hypersensitivity reactions, the authors stressed that all suspected immediate and delayed reactions should be reported to the Vaccine Adverse Event Reporting System (www.vaers.hhs.gov).

One of the working group members and report coauthors, Dr. Neal A. Halsey of Johns Hopkins University, and two additional working group members, reported receiving research support from multiple vaccine manufacturers. ■