



Editorial

Oral immunotherapy vs food avoidance

The answer is maybe



Food allergies have a tremendous financial effect on families and society in general, with 8% of families reporting food allergy with a direct medical cost of \$4.3 billion.¹ Food allergies are also the major risk factor for recurrent emergency department visits for anaphylaxis.² Therefore, treatment of food allergy and preventing severe reactions are major goals in the allergy community for physicians, patients, and families. One of the major questions in the treatment of food allergy is whether to prescribe oral immunotherapy (OIT). The 2 sides of the argument are weighed in elegant fashion by Bird³ and Caubet and Camille.⁴ It is important to examine the 2 sides to understand the key issues because OIT is becoming more mainstream and AR101 is undergoing review by the US Food and Drug Administration. OIT is also being performed in allergy practices, as highlighted by physicians in the Food Allergy Support Team group, with more than 2000 patients treated with food OIT from 32 practices.⁵

From the patient's perspective, it is important to understand personal goals. Is the patient's goal to avoid severe allergic reactions and dine out with less stress or is the goal ad libitum consumption of the food? It is also important to weight the risks of OIT compared with the reduction in food allergic reactions. Shared decision making with the patient and family is needed to find the answers to these questions. Qualitative research can begin to answer these questions⁶ and suggests that most patients are interested in avoidance of severe reaction not ad libitum consumption of the food.

The argument in favor of starting OIT stems from its large success, as indicated by randomized, double-blind, placebo-controlled trials that have reported benefit and success in 60% to 80% of patients who have reached 300 to 600 mg of peanut protein consumption compared with a natural history of approximately 8%.^{4,7} However, this is a dose to prevent an allergic reaction to eating a true serving size in more than 90% of commercially available foods.⁸ However, the rate of success for a full serving size is less and varies with other foods, with lower rates with wheat. The other argument in favor of OIT is an increased rate of sustained unresponsiveness in 30% vs 8% of patients.⁴ The other major factor favoring OIT is the large demand and potential improvement in quality of life.³

The main argument in favor of avoidance of OIT is fewer reactions. The rate of reactions is more than 50% in the patients receiving OIT compared with 10% in those receiving placebo and 0% in an avoidance group.⁴ In a large phase 3 clinical trial for peanuts, the rate of systemic allergic reaction (ie, anaphylaxis by the National

Table 1

Factors in the Oral Immunotherapy (OIT) vs Avoidance Decision

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| 1. Family and patient preference |
| 2. Rate of reactions from avoidance vs OIT (severe reaction, mild reactions, emergency department visits) |
| 3. Convenience of dosing and reactions after dosing |
| 4. Fear of eating food and concern of an allergic reaction (quality of life) |

Institutes of Health criteria) was 14.2%, with serious or severe reactions from OIT in 5.6%.⁷ As reviewed by Caubet and Camille,⁴ the rate of epinephrine use is higher in OIT than avoidance by a relative risk ratio of 5.8. The rate of allergic reactions needs to be compared with the rates seen in with food avoidance only. In a prospective study of 512 children, the rate of allergic reactions was 0.81 reactions per year.⁹ This rate is consistent with the rate of 0.5% of emergency department visits for food allergy in a general pediatric population.¹⁰ Eosinophilic esophagitis is also detected in approximately 5% patients, and 10% to 20% of patients have gastrointestinal symptoms, leading to discontinuation of OIT.¹¹ In addition, OIT is a temporary fix because when patients stop OIT, most regain the reactivity.^{3,4} The other key argument against OIT is the burden of prescribing OIT with resting for 2 hours after dose and abstinence from any activity that will raise the body temperature, such as exercise or a hot shower, and frequent physician visits.^{3,4}

In conclusion, whether to prescribed OIT is a shared decision among the patient, family, and physician and all the risks and benefits should be reviewed. The therapy has benefits, such as improvement in 70% of patients, but it also has significant risks, with a higher rate of allergic reaction than avoidance (Table 1). However, OIT may improve the general quality of life in some patients. In the future, personalized medicine may be able to identify which patients will benefit the most and experience minimal adverse events.

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