When should we stop oral immunotherapy? And when should it be restarted?

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In all immunotherapy trial safety is of paramount importance. The appearance of adverse reactions during Oral Immunotherapy (OIT) is reported frequently. In some studies 100% of patients experienced adverse reactions during desensitization with cow’s milk (CM); however OIT had to be discontinued in less than 20% of subjects (1-2). For patients allergic to hen’s egg (HE) the rate of appearance of unwanted effects during OIT is quite high (reaching 78%), however on average only 10% of the allergic patients have withdrawn from the studies (3-4).

A large peanut OIT study revealed that the frequency and severity of adverse reactions were greatest on the initial rush induction days and least during the home dosing phase. Approximately 93% of the subjects experienced some symptoms, mostly upper respiratory tract (79%) and abdominal symptoms (68%), during the initial rush induction and four patients (12%) withdrew because of adverse reactions.

During the subsequent build up phase, adverse reactions occurred after 46% of the build-up doses, with 29% of the patients experiencing respiratory symptoms and 24% experiencing skin symptoms. Altogether in peanut OIT studies the frequency and the severity of adverse events as well as the demanding protocols led to drop-out rates as high as 25-30% (5-7). Currently, sublingual route (SLIT) seems safer than OIT (8), especially when the “SLIT spit” method is used by patients (9). Usually, the frequency of serious events and the severity of the reactions with either SLIT or OIT are highest on the initial days and lowest on days and weeks following desensitization when the dose of food(s) intake are large.

Systemic side effects have been reported independently of the schedule(s), and mild reactions such as abdominal pain, itchy throat, hoarseness, gritty eyes, watery eyes, transient erythema and sneezing usually do not require the cessation of desensitization process. In contrast, when rhinitis, dyspnea (shortness of breath), asthma, generalized urticaria and hypotension occur as a single symptom or in combination: OIT should be postponed or stopped. In addition, systemic reactions have occurred with previously tolerated doses during exercise (10), viral illness or in patients with suboptimal controlled asthma (11). Of note, these reactions are usually well controlled by antihistamines, steroids, or epinephrine.

At this point, long term outcomes of OIT are uncertain. Desensitization may confer protection against reactions due to accidental ingestions however this protection can be lost with interruption of treatment.

Nowadays seems that to consume food(s) “ad libitum” to maintain tolerance is not required and a more flexible maintenance regimen is possible at least for children successfully desensitized with CM (12). Therefore, while the ultimate goal is to extend OIT to the general public as a standard medical therapy, so far it could be performed in specialized medical centers because of safety concerns.
References


