PP079
Oral immunotherapy in severe egg allergy – Results for three adult patients

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Aims: Prevalence of egg allergy in childhood has been estimated to be from 0.5% to 2.5% and with a resolution of clinical allergy in most cases. However, some patients have persistent egg allergy. Recently a growing number of studies have reported beneficial results with oral immunotherapy in egg allergy[1]. Usually oral immunotherapy (OIT) in food allergy is studied in children. Oral food immunotherapy is associated more often with side effects and also severe systemic reactions have been reported[2]. However, there is a growing interest in oral immunotherapy treatment in severe food allergy also in adults[3,4].

Methods: The diagnosis of egg white allergy was verified with a positive symptom history, skin prick tests and allergen specific IgE antibodies. In addition, food allergy was verified with an allergen specific double blind challenge test. Simultaneously other allergies were allowed. Intermittent mild asthma, and mild and moderate persistent asthma were tolerated and treatment with inhaled steroids and other asthma medication was also allowed. Quality of life and patient history data was collected by questionnaires. All patients underwent a spirometry with a bronchodilator test, exhaled nitric oxide and a methacholine challenge before and a year after oral immunotherapy. If the test results were diagnostic for asthma, the patients are treated with asthma medication before oral immunotherapy treatment is started. After escalating doses of allergen during the first phase of oral immunotherapy, the treatment is continued with the highest tolerated maintenance dose until one year of therapy.

Results: Three adult patients have received oral immunotherapy because of severe egg allergy. Of these patients, two have continued successfully the therapy. With one patient the oral immunotherapy was discontinued because of exacerbation of atopic eczema after one year of immunotherapy. All the patients were women and their symptom history for egg allergy had persisted already since childhood. The two patients with beneficial immunotherapy results have been 21 and 20 years old, when the one with cessation of therapy was a 40-year-old. The allergen specific IgE results are given in below.

<table>
<thead>
<tr>
<th></th>
<th>Before OIT</th>
<th>After</th>
<th>Before OIT</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>IgE egg wh.</td>
<td>140.0</td>
<td>46.1</td>
<td>162.0</td>
<td>88.0</td>
</tr>
<tr>
<td>IgE ovomuc</td>
<td>28.0</td>
<td>20.7</td>
<td>41.7</td>
<td>53.8</td>
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<tr>
<td>IgE ovalb</td>
<td>68.5</td>
<td>24.5</td>
<td>74.1</td>
<td>31.0</td>
</tr>
</tbody>
</table>

Table 1: Egg allergy desensitization results with three patients, IgE results presented as kU/L

Discussion: In these preliminary results we describe the results of oral food immunotherapy treatment in those patients that have received food desensitization treatment for egg allergy from 12 to 20 months. Adult patients are more reluctant to change their diet and to start OIT. However, in a few selected patients it is possible to increase the threshold for symptoms with OIT.

Conclusion: Oral immunotherapy might be an alternative treatment instead of total avoidance in some selective patients but further experience is needed. Here, oral immunotherapy was discontinued because of aggravation of atopic dermatitis in one patient but two have received OIT successfully.

References:

