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Introduction

- Food allergy can have a significant negative effect on the quality of life of patients and their caregivers.
- Oral Immunotherapy (OIT) has shown promising results in food-allergic patients, but its perceived benefit and improvement in quality of life remain uncertain.
- To better understand outcomes and patient perceptions after OIT, we designed and distributed a Long-Term Follow Up Survey to patients who previously participated in OIT through a trial at our center.

Methods

- The Long-Term Follow Up survey included questions about ongoing dosing of the OIT food and epinephrine use.
- The survey also included the Food Allergy Quality of Life Questionnaire (FAQLQ-CF, TF or AF depending on patient age at enrollment) and the Food Allergy Quality of Life - Parental Burden Questionnaire (FAQL-PB; if patient < 18 at time of enrollment), and respondents were asked to fill it out both retrospectively to before OIT started and currently post OIT.
- Mean quality of life scores were calculated pre-OIT and post-OIT with a lower score representing better quality of life. P value for difference was based on the Wilcoxon signed-rank test.
- The minimal clinically important difference (MCID) in quality of life score for the surveys used has been estimated to be 0.5.
- Burden of Treatment was measured with a 1 (extremely positive) to 7 (extremely negative) scale previously used in assessments of OIT and epipen use (Blumchen 2019; Oude Elberink 2006; Saleh-Langenberg 2016).

Results

- A total of 83 participants returned all or part of the survey.
- The majority of patients underwent OIT for peanut with or without other foods (81%).
- For patients enrolled between ages 0-12 with completed pre- and post-OIT questionnaires, there was statistically significant improvement in quality of life (QoL; pre-OIT mean 3.4 ± 1.3, post-OIT mean 2.0 ± 1.3, p < 0.0001, N=26) and parental burden (PB; pre-OIT 3.5 ± 1.5, post-OIT 1.6 ± 1.6, p < 0.0001, N = 30).
- In addition, 87% of all respondents felt “extremely positive” or “positive” when asked to rank the burden of treatment of OIT dosing (N=83).

Table 1. Patient characteristics
*at time of enrollment

Characteristics	N (%)
Age group*	
0-12	66 (80%)
13-17	11 (13%)
≥18	6 (7%)
OIT food	
Almond	9 (11%)
Cashew	30 (36%)
Egg	18 (22%)
Peanut	67 (81%)
Walnut	21 (25%)
Epi use in the past year related to OIT food	5 (6%)**
If Epi use related to OIT food in past year, how many times?	
1	3 (3.6%)
2	2 (2.4%)

** not included is one response of yes to epi use but number of times was 0

Table 2. Mean Quality of Life scores pre-OIT and post-OIT.

Forms	N	Pre-OIT	Post-OIT	P value
FAQLQ-CF (age 0-12)	26	3.4 ± 1.3	2.0 ± 1.3	<0.0001
FAQL-PB	30	3.5 ± 1.5	1.6 ± 1.6	<0.0001

Results cont.

Table 3. OIT Burden of Treatment

	N=83	Burden of Treatment Scores		
		1	2	3-7
		33 (40%)	37 (47%)	13 (13%)
By Age group				
0-12	66	29 (44%)	30 (45%)	7 (11%)
≥13	17	4 (24%)	7 (41%)	6 (35%)

Please choose one option to describe the burden of treatment you feel with OIT dosing:

- Extremely positive: The treatment has clear advantages and no important disadvantages.
- Positive: The treatment has more advantages than disadvantages
- Slightly positive: The treatment has somewhat more advantages than disadvantages.
- Neutral: Advantages and disadvantages of the treatment are equal.
- Slightly negative: The treatment has somewhat more disadvantages than advantages.
- Negative: The treatment has more disadvantages than advantages
- Extremely negative: The treatment has clear disadvantages and no important advantages

Conclusions/ Future Directions

- Our data suggest that after OIT, most patients and caregivers had a positive perception of the burden or treatment of OIT, and QoL and parental burden were significantly improved.
- It will be important for ongoing and future trials with OIT to include prospective survey of quality of life at multiple time points to better understand this potentially beneficial effect of OIT.

Limitations

- This study was limited by being observational and retrospective in design.
- Data are potentially biased to more responses from those with a higher opinion of OIT and/or those with better outcomes after OIT.

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