

Improvement in quality of life following peanut oral immunotherapy in a paediatric population at the Cambridge Peanut Allergy Clinic

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Objective: To assess the change in quality of life from baseline to one year following commencing peanut oral immunotherapy .

Background

- Peanut allergy is common, usually persistent, and a significant burden to patient, families and healthcare
- Quality of life is reduced in patients and families with peanut allergy
- Peanut oral immunotherapy has proven efficacy in reducing reactivity to peanut

- Few studies of peanut immunotherapy have included an assessment of quality of life; factors affecting a change in QoL are unknown
- There is an increase in allergic reactions with treatment with peanut immunotherapy compared to standard avoidance, despite this, quality of life may be improved

Patients and Methods

- 111 notes reviewed from children, aged 7-16y, attending the Cambridge Peanut Allergy Clinic for PNOIT (figure 1 for immunotherapy schedule, and figure 2a for notes review)
- Quality of life scores (using validated Food Allergy Quality of Life Questionnaire (FAQLQ) child and parent form (7-12 years) or teenage form) were completed at baseline, stage 7 (completion of up-dosing) and one year
- 69 patients ((33 teenage forms (TF), 35 child (CF) and 36 parent (PF) (35 with corresponding child forms)) had sufficient data to compare quality of life at baseline and one year
- Significant improvement in Quality of Life (QoL) was observed in all age groups, from baseline to one year
- The mean reduction (improvement) in FAQLQ was 1.6 (CF), 1.2 (PF) and 1.6 (TF) (figure 3)

- Clinical factors were recorded using a data collection proforma (figure 2b)
- Non-parametric Wilcoxon signed rank test was used to compare baseline and one year FAQLQ scores
- Linear regression analysis were used to identify factors associated with change in FAQLQ

Results

- Improvement in quality of life was seen across each domain of FAQLQ, and was associated with baseline FAQLQ
- Improvement was greater than the minimally important difference for FAQLQ (>0.5) and was similar to the improvement seen in a previous open label randomised controlled trial (Anagnostou 2014)
- Magnitude of change in FAQLQ was correlated with baseline FAQLQ score

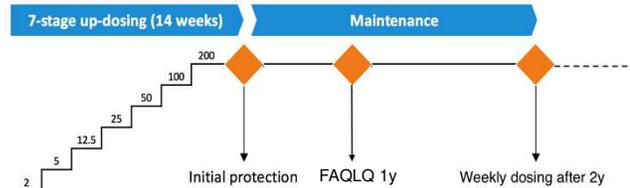


Figure 1. Updosing and maintenance treatment regimen; numbers represent milligrams of peanut protein consumed at each dose stage

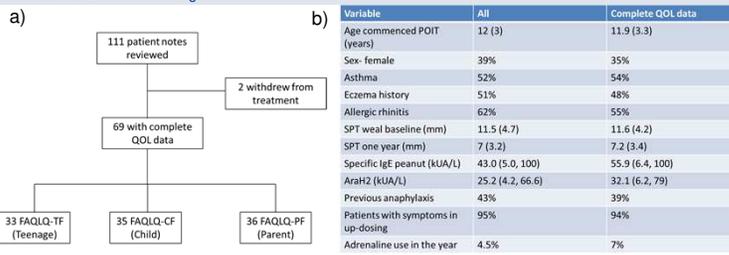


Figure 2: a) Review of patients' notes b) Comparison of clinical notes between all patients and those with complete QoL data

- Peanut oral immunotherapy was associated with an improvement in FAQLQ for children, their parents and teenagers
- Improvement in QoL was seen across all subscales of each FAQLQ form

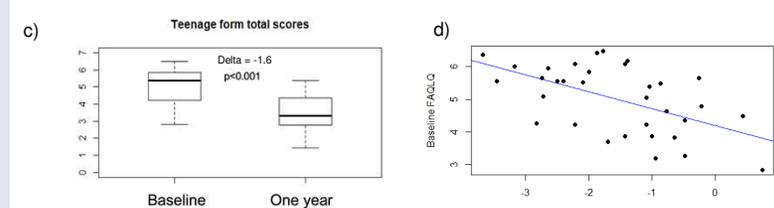
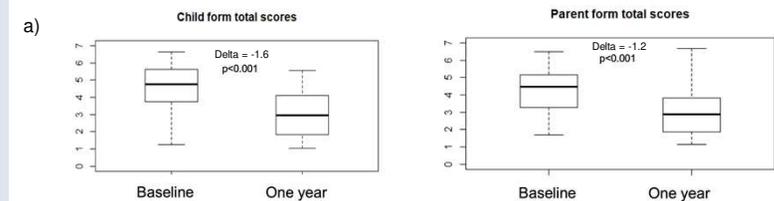


Figure 3 Change in FAQLQ score from baseline to one year for child form (a), parent form (b) and teenage form (c), and regression line between baseline FAQLQ score and change from baseline to one year (d).

Conclusions

- The change in FAQLQ was not associated with sex, age started immunotherapy, previous experience of anaphylaxis, history of asthma or allergic rhinitis, or baseline skin prick test size
- The change in FAQLQ was associated with total baseline FAQLQ score – suggesting the greater the initial impairment in QoL the greater the change in QoL following PNOIT