

Improving asthma control and oral immunotherapy protocols

Increasing the dose of inhaled corticosteroids (ICS) may bring asthma under control during an exacerbation. Zhang et al have undertaken a systematic review and meta-analysis to compare increased with stable doses of ICS.¹ They used a standard approach searching three databases to 02 August 2018 and included only parallel group randomized clinical trials. They found a total of 8 trials (N = 3866). Quality was mixed with only four judged to be at low risk of bias. Increasing the dose of ICS was associated with a significantly reduced risk of needing systemic corticosteroids compared with a stable dose (odds ratio 0.82, 95% confidence interval 0.70–0.97). But when looking at subgroups, it was only effective for adults and when ICS was quadrupled.

Extra-fine particle formulations of ICS have better lung delivery characteristics than fine particle formulations. Kuo et al have looked to see whether or not they improve clinical asthma outcomes.² A total of 24 adult patients were changed to extra-fine particle hydrofluoroalkane beclomethasone dipropionate (mean dose 355 µg). Compared with previously, asthma control questionnaire and asthma quality of life questionnaire scores improved at 8 weeks (−0.53, 95% confidence interval −0.83, −0.23 and 0.69, 0.35, 1.04, respectively) (Figure 1). There were also significant reductions in symptoms and reliever use. None of the lung function, FeNO nor blood eosinophils changed. With this clinically significant improvement in patient outcomes, a randomized controlled trial should be undertaken to evaluate the effectiveness of extra-fine particle ICS in clinical practice.

Peanut oral immunotherapy (OIT) has been demonstrated to be effective but it is associated with severe adverse reactions. Brandström et al have assessed whether combining omalizumab

therapy with peanut OIT can improve the safety of this approach.^{3,4} A total of 23 adolescents with peanut allergy were included. Omalizumab was commenced, and then, the OIT dose was increased from 280 to 2800 mg peanut protein over 8 weeks. Finally, omalizumab was withdrawn on the basis of clinical symptoms and basophil activation test results. All the participants reached the 2800 mg maintenance peanut dose. There were hardly any adverse reactions on full-dose omalizumab (Figure 2). These were though seen off omalizumab and only half of the participants continued with OIT after omalizumab was stopped, so not quite the panacea we were hoping for.

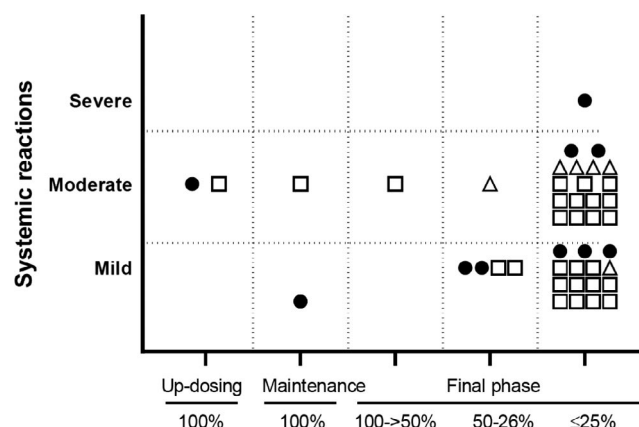
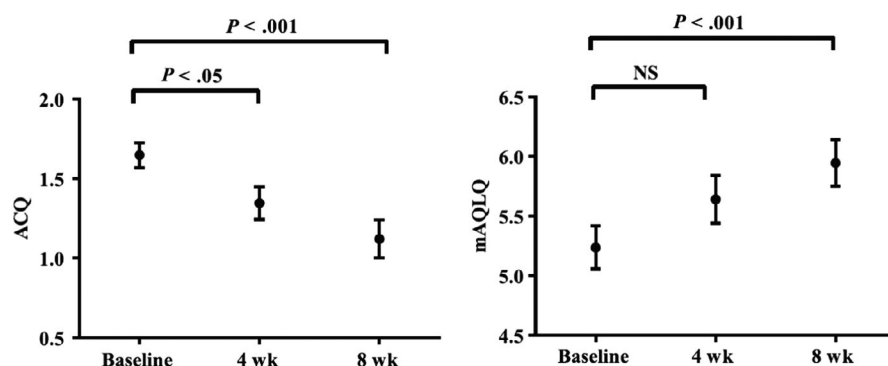


FIGURE 2 Systemic allergic reactions during the peanut OIT study. Up-dosing, maintenance and final phase relate to OIT. Percentages related to omalizumab dose. ● Treatment success, □ Treatment failure, Δ Dropout. For more details, see figure 2, Brandström et al (pages 1328 to 1341)

FIGURE 1 Effect of switching from fine to extra-fine particle ICS on asthma control questionnaire (ACQ) and mini-asthma quality of life questionnaire (AQLQ). Data are shown as means and standard error mean. For more details, see figure 3, Kuo et al (pages 1321 to 1327)



Caption to cover illustration: The cover image is based on the Original Article *Genome-wide interaction study of early-life smoking exposure on time-to-asthma onset in childhood* by Bouzigon et al, DOI: 10.1111/cea.13476.

EE This logo highlights the Editor-in-Chief Editorial articles on the cover and the first page of each of the articles.

G Roberts^{1,2,3}

¹*Clinical and Experimental Sciences and Human Development and Health, Faculty of Medicine, University of Southampton, Southampton, UK*

²*NIHR Southampton Biomedical Research Centre, University Hospital Southampton NHS Foundation Trust, Southampton, UK*

³*The David Hide Asthma and Allergy Research Centre, St Mary's Hospital, Isle of Wight, UK*

Correspondence

G. Roberts, Paediatric Allergy and Respiratory Medicine (MP803), Clinical & Experimental Sciences & Human Development in Health Academic Units University of Southampton, Faculty of Medicine, University Hospital Southampton, Southampton SO16 6YD, UK.
Email: g.c.roberts@soton.ac.uk

REFERENCES

1. Zhang YU, He J, Yuan Y, Faramand A, Fang F, Ji H. Increased versus stable dose of inhaled corticosteroids for asthma exacerbations: a systematic review and meta-analysis. *Clin Exp Allergy*. 2019;49(10):1283-1290.
2. Kuo CR, Jabbal S, Anderson W, Lipworth BJ. Pragmatic evaluation of inhaled corticosteroid particle size formulations on asthma control. *Clin Exp Allergy*. 2019;49(10):1321-1327.
3. Brandström J, Vetander M, Sundqvist A-C, et al. Individually dosed omalizumab facilitates peanut oral immunotherapy in peanut allergic adolescents. *Clin Exp Allergy*. 2019;49(10):1328-1341.
4. Dantzer JA, Wood RA. The use of omalizumab in allergen immunotherapy. *Clin Exp Allergy*. 2018;48(3):232-240.

How to cite this article: Roberts G. Improving asthma control and oral immunotherapy protocols. *Clin Exp Allergy*. 2019;49:1272-1273. <https://doi.org/10.1111/cea.13499>