Health-related quality of life in adolescents with objectively-diagnosed allergies to cow’s milk, hen’s egg and/or wheat: a cross-sectional study

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Aims: Despite the ubiquity of the staple foods – cow’s milk, hen’s egg, and wheat – in a typical western diet, the impact of staple food allergy on health-related quality of life (HRQL) amongst adolescents is incompletely understood. We aimed to investigate the association between objectively-diagnosed staple food allergy and HRQL, assessed via a disease-specific questionnaire, amongst adolescents.

Methods: In this cross-sectional study, 58 adolescents (n=40 (69%) boys) with objectively-diagnosed staple food allergy and living in Stockholm, Sweden were included. Adolescents completed EuroPrevall’s Food Allergy Quality of Life Questionnaire – Teenager Form, which has a corresponding scale of 1= best HRQL, and 7= worst HRQL. Overall HRQL and domain-specific HRQL were established. Adolescents also reported symptoms, adrenaline autoinjector prescription and presence of other food allergies. History of anaphylaxis was defined among those reporting difficulty breathing, inability to stand/collapse, and/or loss of consciousness. Clinically different HRQL was set at a mean difference of ≥0.5.

Results: Overall mean HRQL was poorer than average (mean: 4.70/7.00 (95%CI 4.30-5.01)). The domain Risk of Accidental Exposure was associated with clinically better HRQL than the domain Allergen Avoidance and Dietary Restrictions (mean difference=0.76; p<0.001). Girls had clinically worse, but not statistically significantly different mean HRQL than boys (mean difference=0.71; p<0.07). HRQL tended to be worse amongst those with allergies to more than three foods or an AAI prescription. The number and types of symptoms, including history of anaphylaxis were not associated with worse HRQL.

Discussion: A food allergy-specific questionnaire designed for adolescents provided insights into associations between food allergy and HRQL that could not be gleaned via a generic questionnaire. Adolescents often base their food choices primarily on enjoyment and secondarily on content, thereby engaging in risk taking behaviours that may potentially lead to severe reactions. Yet, HRQL did not differ by history of anaphylaxis.

Conclusions: As ascertained via a food allergy-specific questionnaire, adolescents with staple food allergy report poorer than average HRQL, specifically in relation to emerging independence and the need for support. Girls have clinically worse HRQL than boys. The number and type of previous symptoms and history of anaphylaxis were not associated with worse HRQL.