

Asthma, respiratory allergy and cough

IgE reactivity, work related allergic symptoms, asthma severity, and quality of life in bakers with occupational asthma

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Background

Asthma caused by allergy to cereal grain proteins is one of the most common types of occupational asthma (OA). For affected bakers who want to stay in their job, the German Social Accident Insurance offers an interdisciplinary program consisting of technical and organizational flour dust reduction interventions and regular medical follow-up.

Objective

The aim of our study was to correlate health status with IgE reactivity and quality of life in a long term follow-up.

Methods

We analyzed routinely collected data from bakers with OA participating in the follow-up program. Sensitization to wheat and rye flour was measured with ImmunoCAP[®]. We used a questionnaire on work-related allergic complaints (WRAC), the asthma Control Test (ACT), a 10 point scale of asthma severity grade, the EQ-5D-5L (general health related quality of life) and the Mini-AQLQ (asthma specific quality of life).

Results

43 bakers with OA were followed up. 38 reported an improvement of asthma severity after intervention. WRAC were reported by 28/43 (65%) all suffering from rhinitis. 33/43 (77%) had a good asthma control (ACT \geq 20). 35/43 (81%) had regular asthma medication. A reduction of at least one CAP-class was seen in 15/43 (35%) for both wheat and rye flour. Health related quality of life correlated positively with the grade of asthma control.

Conclusions

The observed satisfactory asthma control is probably the result of good medical management and may also be attributed to a reduced allergen exposition in the subgroup of bakers with decreased specific IgE.