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Title: Occupational asthma and rhinitis caused by brazing agent?

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Body: Background: Aluminium potassium fluoride (KAIF₄) often used in automotive industry as a brazing agent is not currently classified as an allergen. Methods: Between 2007 and 2011, eleven patients with suspected occupational asthma (OA) and/or occupational rhinitis (OR) exposed in their workplace to KAIF₄ were examined. Diagnostic of OA/OR included: methacholine (MCT), specific bronchoprovocation (SBPC) and/or nasal challenges if necessary. Inhaled corticosteroids (ICS) were withdrawn 6 weeks prior to the evaluation. Results: Seven of the 11 patients tested positive. According to final diagnosis patients were divided into 2 groups. Group 1: no occupational disease (OD) diagnosed (4 cases); ICS withdrawn in 100%; average age of subjects was 35; mean exposure time was 50.2 months; subjects were examined 6.5 months after leaving the workplace; no allergic disease before exposure; MCT negative in 50%, mild hyperactivity in 50%; IgE: 21 IU/ml, ECP: 16 ng/ml, eosinophils (eo): 5%. Group 2: OD diagnosed in 7 cases (OA in 4, OR in 3 cases), ICS withdrawn in 25%; average age of subjects was 44.3; mean exposure time was 65.5 months; subjects were examined 2.4 months after leaving the workplace; allergic disease before exposure in 42%; MCT negative in 14%, moderate to severe hyperactivity in 86%; IgE: 42 IU/ml, ECP: 38 ng/ml, eo: 10%. Conclusion: Subjects in group 2 versus patients in group 1 were: a) often tested with ICS b) more likely to be bronchial hyperreactors and atopics c) demonstrated higher levels of eosinophils, IgE and ECP. The small number of patients did not allow proper statistical analysis, however KAIF₄ seems to be hazardous and likely to cause allergic occupational diseases.