

# Badania nad etiopatogenezą polipów nosa

## Etiology of nasal polyps: an update

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### Summary

Nasal polyps are the results of chronic inflammation of nasal mucosa. Etiopathology of nasal polyposis is still unclear and investigated. The main aim of this study was the assessment of interleukin 2 (IL-2), 4 (IL-4) and 13 (IL-13) and interferon gamma (IFN-gamma) expressions in two groups of patients with nasal polyps: non-allergic and allergic to dust. Twelve patients with nasal polyposis were selected, six of them allergic and six non-allergic. Patients with allergy were distinguished from those without allergy on the basis of positive allergy skin tests to dust and serum levels of IgE. Blood sample was obtained from patients and examined for the expression of Interleukin 2, 4, and 13 and IFN-gamma by intracellular staining procedure after stimulation with PMA/ionomycin (phorbol 12-myristate 13-acetate) and allergen (*D. pteronyssimus*, Allergopharma). Negative correlation was found between expression of Interleukin 2, 4, 13 after PMA/ionomycin and allergen stimulation ( $p > 0,05$ ) into two groups. Although mean expression of IFN-gamma and IL-2 were lower in allergic patients with nasal polyps. Mean value of IL-4 and IL-13 were higher in allergic patients in comparison to non-allergic, but the correlations were not significant. We did not find correlations between expression of investigated interleukins and bronchial asthma and ASA-intolerance existed in patients ( $p > 0,05$ ). We found that expression of IFN-gamma was significantly lower in patients with polyps recurrences followed by polypectomies ( $p = 0,05$ ). In patients who used intranasal local steroid before treatment we observed significant decrease of IL-2 and IL-13 levels after allergen stimulation ( $p = 0,034$ ,  $p = 0,023$ ). No specific differences of expression of investigated cytokines between allergic versus non-allergic patients suggests that the allergic mechanism may not play an fundamental role in the aetiology and formation of nasal polyps. Furthermore local steroids seem to be used in every patient after polypectomy because of their anti-inflammatory stimulation.