

Study toward resolving the controversy over the definition of allergic fungal rhinosinusitis.

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Abstract

Dysbiosis of the microbiome on the airway mucosa leads to the development of chronic inflammatory and allergic disorders. The aim of this study was to consider the potential diagnostic criteria for allergic fungal rhinosinusitis (AFRS) and nonallergic fungal rhinosinusitis (FRS), and the role of fungal presence in an environment for the development of AFRS. In this study, 136 patients were divided into two groups: patients with positive specific immunoglobulin E (sIgE) and fungal finding (AFRS group), and patients with negative sIgE and positive fungal finding (FRS group). The study design included: anamnesis data, sIgE, eosinophil count and skin-prick test, rhinology and computerized tomography (CT) observation and mycological finding. Our results showed: (i) the prevalence in Serbia is: AFRS 1.3%, FRS 2.8%; (ii) 30.4% patients with sIgE+ had more often severe and recurrent chronic rhinosinusitis (CRS) ($P = .005$) and the presence of polyps ($P = .025$); (iii) 46.4% patients with sIgE+ had positive fungi on the sinonasal mucosa and were considered as AFRS; (iv) patients with AFRS had more frequent asthma ($P = .024$) and chronicity of CRS >10 years ($P = .000$). The persistent fungal presence and prolonged duration of CRS could

be a silent threat for the progression of inflammation and development of FRS. Lavage with hypertonic-NaCl should be included in the everyday hygiene routine in an effort to decrease fungal load and antigenic exposure. The presence of allergological parameters and better response to corticosteroid therapy in AFRS patients should be considered as crucial diagnostic criteria for AFRS.

Involved units

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