

Prevalence, Demographic and environmental factors of allergic fungal sinusitis among chronic sinusitis patients with nasal polyps in western Saudi Arabia

Objectives: To detect the prevalence of allergic fungal sinusitis (AFRS), the demographic and environmental risk factors for AFRS and to predict AFRS among chronic sinusitis with nasal polyps (CRSwNP) patients.

Patients and Methods: A multicenter retrospective case-control study was conducted from March 2010 to October 2018 on 262 CRSwNP patients. Assessment of patients was conducted using nasal endoscopy, Computed Tomography (CT) of paranasal sinuses and Immunoglobulin E (IgE). All patients were operated under general anesthesia and underwent endoscopic sinus surgery with histopathology. Patients were assigned into two groups: AFRS (118 patients) and non-fungal CRSwNP (144 patients). All demographic and environmental factors of both groups were compared.

Results: The mean age of patients in the AFRS and non-fungal CRSwNP groups were 22.5 and 41.2 years respectively. Statistically significant differences were detected in most of the demographic and environmental factors compared between both groups.

Conclusions: The prevalence of AFRS is 45% of patients with nasal polyps in the western area of Saudi Arabia. Patients with nasal polyps who have the following characteristics; of being young adult, having low socioeconomic growth, having low education level, having been exposed to birds, exposed to dust from infrequent air conditioning (AC) filter cleaning at home, having carpet at home, residents in old or over crowded house, living in hot humid areas or being passive smoker are more likely to had AFRS.

Keywords: Sinusitis, nasal polyp, allergic, fungal, prevalence, demographic factors, environmental.