

البحث الرابع
(بحث مشترك غير مشتق من رسالة)
عنوان البحث باللغة الانجليزية:

Role of fungi as aeroallergens in allergic rhinitis

Abstract

Introduction and Aim: Inhalation of fungal spores is shown to participate in the development of allergic rhinitis symptoms. The aim of this study is to evaluate the relation between presence of fungi in the human nasal cavity and allergic rhinitis.

Patients and Methods: The study was conducted on 40 patients with allergic rhinitis as study group and 20 healthy persons without allergic rhinitis, considered as control. High IgE and normal sinus radiography were among inclusion criteria of patient group to confirm its allergic etiology and exclude associated sinusitis consequently. Direct microscopy and culture of nasal secretions were performed to detect the fungi in both groups. Polymerase chain reaction (PCR) was done for those with positive fungal culture in both groups to identify the fungus type. Skin prick tests using three types of fungal extract allergens (*Candida albicans*, *Aspergillus fumi-gatus*, *Alternaria tenuis*) were done to all patient group.

Results: Results showed positive fungal culture of nasal secretions in 12 patients (30%) of case group and 2 cases (10%) in control group. *Aspergillus* and *Candida* were identified by PCR as the fungi present. Positive skin tests to one or more of the used fungal allergens were detected in 14 cases of patient sample, reporting an incidence of 35% for cases with fungal sensitization among patient group. Ten cases out of the 14 showed fungal elements in nasal secretions (25%) associated with positive skin tests to its type, and 4 cases (10%) did not show any fungi in culture but was associated with positive skin tests to one or more of the used fungal allergens suggesting free air fungal spores as the provoking allergens. Cases with negative fungal sensitization included 2 cases (5%) with positive fungal culture and 24 cases (60%) with sterile fungal culture. High blood eosinophilia and IgE in such 14 cases with fungal sensitization, confirm the role of type 1 hypersensitivity reactions to fungal allergens. Other allergens triggered the disease in the remaining cases (2 cases with positive fungal cultures and negative skin tests and 24 cases free from fungi in their nasal secretion cultures).

Conclusion: Fungal sensitization in nasal allergy is high especially when patients show fungal nasal colonization. Still those with free cultures may be provoked with free air fungalspores. Fungal skin prick tests should be done to all cases with nasal allergy especially for those who showed positive nasal fungal culture. This will help to consider patient desensitization therapy with fungal extracts especially in resistant cases to antihistaminics and corticosteroids.