

SUMMARY

Rhinitis is the inflammatory disease of the nasal mucosa which is characterized by at least two of these symptoms (nasal congestion, rhinorrhea, nasal itching and sneezing) and rhinitis may be due to allergic and non-allergic conditions. The diagnosis of allergic rhinitis depends on the correlation between the symptoms and the diagnostic tests.

The aim of this study is to research the diagnostic tests used to distinguish allergic and nonallergic rhinitis and to research the impact of rhinitis on quality of life, by this way to help the treatment modalities. The patients between the ages 16 and 65 who had at least two of these symptoms (nasal congestion, rhinorrhea, nasal itching and sneezing) were included to our study in Otorhinolaryngology clinic of Adnan Menderes University Hospital between July 2009 and November 2009. Also a control group containing healthy people who dont have allergic symptoms was included to the study. The patients who had upper respiratory tract infection, nasal polyposis, severe septal deviation, neoplasm, nasal operation(radiofrequency, septoplasty, endoscopic sinus surgery), endocrine disease, pregnancy, diagnosis of rhinitis medicamentosa and patients who used local nasal sprays or systemic antihistaminic, steroid and antidepressant treatment in the last one month period were excluded the study.

All the patients underwent skin prick test and patients who had allergic response to at least one of the allergens were classified as allergic group and patients who didn't have allergic response to any of the allergens were classified as non allergic group. By this way 13 allergic, 13 non allergic patients and 13 healthy controls were included to the study.

The impact of rhinitis on quality of life was evaluated with the form SF-36. The means of physical health component scores were lower in AR and NAR groups when compared with the control group and this result was statistically significant. Although the means of mental health component scores were also lower in AR and NAR groups, this result was not statistically significant.

Nasal smear examples of all the patients were collected to evaluate the nasal cytology. The number of patients who had eosinophilia in nasal smears in allergic rhinitis group was significantly higher when compared with the control group.

Total IgE levels were measured in peripheric blood samples. Total IgE levels in AR group was significantly higher than the NAR and control group.

Nasal airway flow of groups was evaluated by nasal peak flow meter. No significant difference was evaluated between the groups about the means of peak flow meter scores.

Saccharine tests were done to all patients to evaluate the mucociliary clearance time. The mean of mucociliary clearance time of AR group was significantly higher than the control group.

One patient (%8,3) had diagnosis of astma in AR group and two patients (%15,4) had diagnosis of astma in NAR group.

The levels of IgE, IL-5, VIP, substance P, CGRP, Endothelin in nasal lavage fluid of patients were determined and these results were compared with healthy controls.

The mean of IgE levels in nasal lavage fluid of AR group was significantly higher than the control group.

The mean of IL-5 levels in nasal lavage fluid of AR group and NAR group was significantly higher than the control group.

The mean of VIP levels in nasal lavage fluid of AR and NAR group was significantly higher than the control group.

No significant difference was found between groups about the mean of Substance P, Endothelin and CGRP levels when compared with controls.

To measure the cytokines in nasal secretions is the best method to determine the pathogenesis of nasal diseases. There are still many unknown knowledges about the effects of neuropeptids to the nasal mucosa in allergic reactions. Many studies should be done to determine the effects of these neuropeptides and cytokines.

Key words: Allergic rhinitis, nonallergic rhinitis, IgE, IL-5, VIP, substance P, CGRP, Endothelin, nasal lavage