

Allergic rhinitis diagnosis; Skin-prick test versus laboratory diagnostic methods

Abstract:

Aim: is to verify the specificity, sensitivity and accuracy of the skin prick tests in allergic rhinitis compared to blood tests and nasal smears. **Study design:** It is a cohort, prospective, nonrandomized study. **Methods:** 180 patients were enrolled; group A; 135 patients having allergic rhinitis symptoms more than 1 year. Group B; 45 patients, without allergic rhinitis symptoms candidate for septoplasty surgery were served as control. All patients were subjected to detailed history, scoring for allergic rhinitis (SFAR), endoscopic examination, CBC(complete blood count), nasal smear eosinophilia (NSE), and skin prick test (SPT) **Results:** SPT was positive in 94.1% (n=127) of allergic patients and 20% (n=9) of the controls at least for one allergen. Most of cases were allergic to mixed pollens (66.7%), cotton dust (41.5%), house fly particles and house dust mite (28.9%) equally. The absolute eosinophil count (AEC) was positive in 70.4% of allergic patients (n=95) and 33.3% of the control (n=15). NSE was positive in 82.9% (n=112) of allergic patients and 20% (n=9) of the controls. SPT possess high sensitivity and specificity reached 94.1% and 80% respectively and 90.6% accuracy. While AEC showed the lowest results, sensitivity and specificity reached 70.4% and 66.7% respectively and 69.4% accuracy. **Conclusions:** Skin-prick testing is accurate for diagnosing allergic rhinitis possessing high sensitivity and specificity, however adding a nasal swap test will raise the sensitivity, specificity and accuracy of diagnosis.

Key words: Allergic rhinitis, skin prick test, absolute eosinophilic count, nasal smear eosinophilia.