ABSTRACT

THE EFFECTIVENESS COMPARATION OF DESLORATADIN AND LORATADIN IN REDUCING TOTAL NASAL SYMPTOM SCORE AND THE LEVELS OF INTERLEUKIN 4 IN THE NASAL SECRETIONS OF ALLERGIC RHINITIS PATIENT

Luh Putu Dhena Purwaningsih

Objective: Allergic rhinitis (AR) is a common inflammation disease mediated by Immunoglobulin E (IgE) after exposure to allergen in the nasal mucosa. Allergic rhinitis symptom severity ratings assessment are determined by total nasal symptom score (TNSS) and clinical manifestations are influenced by interleukin-4 (IL-4). Loratadine is a second generation antihistamine showed less effective at removing all of symptoms. Desloratadine which is a derivative of loratadine are considered to eliminate the overall symptoms of AR and reduce levels of IL-4 nasal secretion. The aim of this study was to assess the effectiveness of desloratadine and loratadine in decreasing TNSS and levels of IL-4 nasal secretions on AR patients.

Study design: experimental study with a double blind randomized clinical trial (RCT).

Methods: Allergic rhinitis patients who meet the inclusion dan exclusion criteria were examined in Allergy Immunology division of ORL-HNS OPD followed with TNSS assessment and levels of nasal secretion by nasal lavage method. Desloratadine or loratadine therapy had been taken for 14 days as the samples. Evaluating patients for TNSS and nasal lavage become a major sampling for measuring IL-4 nasal secretion level on day 15th.

Result: There were 24 samples consist of 12 samples from desloratadine group and 12 samples from loratadine group. Decreasing of TNSS in desloratadine group and loratadine group was 7.67 (SD 1.77) and 2.42 (SD 1.62) with p=0.000. Independent t-test showed that comparison of decreasing of TNSS between two groups was significantly different (p<0.05). Decreasing of IL-4 nasal secretion level on desloratadine group and loratadine group was 22.54 (SD 48.78) pg/ml and 4.68 (SD 13.90) pg/ml with p = 0.236. Independent t-test showed that comparison of decreasing of IL-4 nasal secretion level between desloratadine group and loratadine group was not significantly different (p>0.05).

Conclusion: This study shows that the TNSS was decrease more in desloratadine compared to loratadine, but there is no differences from the levels of IL-4 nasal secretions. Desloratadine is more effective to reduce TNSS compared to loratadine in patients with AR, but the efficacy in both of group are same.

Keywords: Desloratadine, loratadine, total nasal symptom score, nasal secretion interleukin-4 level, allergic rhinitis.