

## ABSTRACT

### ADDITIONAL HYPERTONIC NASAL SALINE IRRIGATION EFFECTIVITY IN REDUCING MUCOCILIARY TRANSPORT TIME AND TOTAL NASAL SYMPTOMS SCORE IN ALLERGIC RHINITIS PATIENTS RECEIVED LORATADINE

Woro Safitri

**Objective :** Allergic rhinitis (AR) is an inflammatory disease of the nasal mucosa mediated by immunoglobulin E (IgE) after exposure to allergens in the nasal mucosa. Loratadine as the regimen sometime does not give optimal result. The addition of hypertonic nasal saline irrigation can reduce mucociliary transport time in AR patients. The symptoms severity of AR can be assessed by measuring the mucociliary transport time rate, while objectively based on the total nasal symptom score (TNSS). **Study design :** experimental study with a non blinding randomized clinical trial (RCT). **Methods :** The study was conducted from July until the time of presentation at the Allergy Immunology division of ORL-HNS OPD Dr. Soetomo General Hospital Surabaya. The study was randomized controlled clinical trials in the second group with the control group design of clinical trials. Wilcoxon test was used as the correlation test.

**Result :** The mean of decreasing mucociliary transport time in loratadine group was -2.30 (SD2,77) and loratadine with hypertonic nasal saline was -6.27 (SD 3.91). Statistical test of reducing mucociliary transport time paired t test showed significant difference ( $p = 0.001$ ). The mean of decreasing TNNS in loratadine group was -2.48 (SD 1.72) and loratadine with hypertonic nasal saline was -4.38 (SD 1.20). A significant difference of decreasing TNNS was obtained using paired t test( $p = 0.001$ )

**Conclusion :** The addition of hypertonic saline nasal irrigation was more effective compared to monotherapy of loratadine in reducing mucociliary transport and TNSS in AR patients.

**Keywords:** Loratadine, hypertonic saline nasal irrigation, mucociliary transport, total nasal symptom score, allergic rhinitis.