

**A COMPARATIVE ANALYSIS ON THE EFFECTIVENESS OF
PROBIOTICS VERSUS ANTIHISTAMINES IN ALLERGIC
RHINITIS**

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ABSTRACT

Background: Allergic rhinitis (AR) is a prevalent IgE-mediated inflammatory disorder of the nasal mucosa that significantly affects quality of life and productivity. Although antihistamines remain the standard symptomatic therapy, concerns regarding long-term use and adverse effects have encouraged exploration of safer immunomodulatory alternatives such as probiotics.

Aim: To compare the effectiveness of probiotics and antihistamines (Drug A) in relieving symptoms of allergic rhinitis and to evaluate patient satisfaction.

Methods: A comparative study was conducted among 88 participants diagnosed with allergic rhinitis, equally divided into Drug A (n=44) and Probiotics (n=44) groups. Symptom severity was assessed using the NOSE (Nasal Obstruction Symptom Evaluation) score and TNSS (Total Nasal Symptom Score) at baseline, 2 weeks, 4 weeks, and 6 weeks. Independent t-tests, ANOVA, and Pearson correlation were applied for statistical analysis.

Results: Baseline NOSE scores were comparable between groups ($p=0.644$). At 2 weeks, Drug A showed significantly lower NOSE (8.25 ± 1.29 vs 12.14 ± 1.09) and TNSS (6.50 ± 1.02 vs 10.00 ± 0.81) scores compared to probiotics ($p<0.001$). Similar significant differences persisted at 4 and 6 weeks ($p<0.001$). Drug A demonstrated rapid symptom improvement, which plateaued after 2 weeks. Significant positive correlations were observed between NOSE score reduction and patient satisfaction ($r=0.678$, $p<0.001$), and TNSS reduction and satisfaction ($r=0.715$, $p<0.001$).

Conclusion: Antihistamine therapy provided superior short-term symptom relief compared to probiotics. However, probiotics remain a potential adjunctive option due to their immunomodulatory properties and favorable safety profile.

Keywords: Allergic rhinitis, Probiotics, Antihistamines, NOSE score, TNSS.