


15. EFFICACY OF INTRANASAL FLUTICASONE NASAL SPRAY ALONE VERSUS INTRANASAL FLUTICASONE COMBINED WITH ORAL MONTELUKAST AND LEVOCETIRIZINE IN TREATMENT OF ALLERGIC RHINITIS—A RANDOMIZED CONTROL TRIAL

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 <https://www.youtube.com/live/fSpXH-3Xy5w?t=11885s>

BACKGROUND: Allergic Rhinitis (AR) is characterized by an immunological response facilitated by IgE antibodies inside the nasal mucosa, which is initiated upon exposure to allergens present in the air. The illness under consideration is characterized by symptoms including the presence of watery nasal discharge, nasal congestion, sneezing, and nasal itching. It affects between 10 and 40 per cent of the global population, which affecting the quality of life of many persons. Hence, the requirement of a treatment targeted at delivering maximum symptom control and has minimum to nil adverse effects. AR symptoms impair cognitive function, which can be further exacerbated by the use of widely available first-generation antihistamines. **OBJECTIVES:** To assess the improvement of nasal symptoms in both Fluticasone alone group and Fluticasone with Montelukast and levocetirizine group at the end of 1st month and 2nd month. **METHODS:** Ethical approval was obtained from the Institutional Ethics Committee (IEC). A Randomized control study was done on 40 patients, aged above 15years who had Allergic rhinitis. Sample size estimation was done using OpenEpiSoftwareVersion2.3.1. Diagnosis was made based on Allergic Rhinitis and its Impact on Asthma (ARIA) criteria. Patients were randomized by simple randomization into two groups of 20 each. After proper history and physical examination of both nostril along with Absolute Eosinophil count was done. Group 1 received 2 puffs of Fluticasone furoate nasal spray (27.5mcg) in each nostril twice daily for 1 month, whereas Group 2 received both Fluticasone furoate nasal spray twice daily with oral montelukast and levocetirizine for 1 month. Patients were assessed by Daily Rhinitis Diary Card. The symptoms

were assessed during treatment, post treatment at 1st month and 2nd month. Statistical analysis was done using SPSS 19 software and appropriate statistical tests were applied. Inclusion Criteria: Patients aged between 18-60 years of age with Allergic rhinitis symptoms. Exclusion Criteria: Smokers, patients on oral steroids, patients with recent nasal surgeries, patients with nasal polyposis. **RESULTS:** In this study, the results showed significant improvement in Day time symptom scores for both group after 1 month. Better symptom relief seen in fluticasone with montelukast group. The combination group showed better symptom free interval after stopping the treatment. In case of night time symptom score, there were difference but it was found to be statistically insignificant ($p > 0.001$). **CONCLUSION:** As per the study, Fluticasone combined with montelukast and levocetirizine was effective in reducing daytime and night time symptoms as compared to fluticasone alone. **Table.** Day and night symptoms of G1 and G2: M from table 1 shows that, significance of Day and Night symptoms of G1 & G2 during Pre-treatment, The mean scores of G1 and G2 in day symptoms were 7.05 ± 1.36 ; 7.30 ± 1.22 (F critical value 4.26, $p < 0.01$). In case of night time symptoms, the mean of G1 was 1.35 ± 0.11 and G2 was 1.47 ± 0.87 . Hypothetically tested by ANOVA it was found to be statistically insignificant.

Table: Daytime and Nighttime Symptom Scores for G1 (Fluticasone Alone) and G2 (Fluticasone with Montelukast and Levocetirizine) During Pre-Treatment and Follow-Up.

Pre treatment follow up	Day symptoms			Night symptoms		
	Mean±SD	ANOVA F- critical Value	P-value	Mean±SD	ANOVA F- critical Value	P-value
G1	7.05±1.36	4.26**	<0.001	1.35±0.11	1.87 ^{ns}	>0.01 ^{ns}
G2	7.30±1.22			1.47±0.87		

Legend: **, significant at 1% level ($p < 0.01$), ns –non-significant.

Key Words: Rhinitis, Allergic, Fluticasone, Montelukast.