

# Clinical Experience with Monteleukast in the Treatment of Allergic Rhinitis

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**Background:** To evaluate the role of Monteleukast in combination with antihistamines and/or intranasal corticosteroids in the treatment of Allergic Rhinitis (AR).

**Type of study:** A cross-sectional observational study.

**Methods:** 30 diagnosed cases of AR were treated with a combination of Monteleukast and Antihistamines and/or Intranasal Corticosteroids and followed up for seven days.

**Results:** 22 patients reported for follow-up and were included in this study. The average age of these patients was 28 years. There were 9 males and 13 females. Nasal itching was the most common symptom followed by nasal congestion, sneezing and rhinorrhoea seen in 21, 20, 20 and 17 patients respectively. Relief in symptoms was seen in 95% cases of nasal itching, sneezing and nasal congestion and 94% cases of rhinorrhoea. 2 patients reported with complications.

**Conclusion:** Monteleukast in combination with antihistamines and or intranasal corticosteroids is an effective method of treatment of AR.

**Key Words:** Monteleukast, Allergic Rhinitis, antihistamines.

## Introduction

Allergic Rhinitis (AR) is one of the commonest disorders seen in clinical practice in ENT. In one study 10-30% of adults and 40% of children suffer from Allergic Rhinitis.<sup>1</sup>

AR is characterized by a complex response of nasal mucosa to exposure to allergens. The mast cells in nasal mucosa on exposure to an allergen and through cross-linkage of IgE produce an early phase response due to release of histamine, leukotrienes, prostaglandins and many other chemicals. This results in sneezing, pruritis, congestion and rhinorrhoea. 4-6 hours later a late phase response occurs due to cytokines and infiltration of inflammatory cells like basophils, eosinophils, mononuclear cells and mast cells.<sup>2</sup>

Avoidance of allergens is the cornerstone of treatment of AR especially in children.<sup>3,4</sup> Pharmacotherapy includes antihistamines (AH), intranasal corticosteroids (ICS), decongestants, Cromolyn Sodium and Leukotriene receptor antagonists.<sup>5</sup> Monteleukast has been shown to be an effective treatment for Chronic Asthma<sup>6</sup> almost comparable to inhaled steroids.<sup>7</sup> The aim of this study is to evaluate the role of Monteleukast in combination with AH and/or ICS in the treatment of AR.

## Materials and Methods

The study was carried out from August to October 2006 at ENT Outpatient Department of a private hospital in Lahore. A total of 30 patients were evaluated by a questionnaire specifically prepared for this study.

After recording the baseline clinical symptoms on the first visit, the patients were prescribed a combination of Monteleukast, AH and/or ICS and were advised to follow-up after 7 days.

Patients with upper respiratory tract infections (URTI), pregnant and lactating women and patients with concomitant medical illnesses were excluded from the study. Only those patients were included in the study that followed up after 7 days. By using the SPSS (Statistical Package for Social Sciences), descriptive and inferential statistics was calculated.

## Results

Out of 30 patients enrolled for the study, 22 patients followed up after 7 days. The results of these 22 patients are as follows. Age range of the patients was 13-54 years with the average age being 28 years. There were 9 males and 13 females (59%). Monteleukast and AH were given in 18 patients and Monteleukast with AH and ICS in 4 patients.

Table 1 shows the common symptoms at initial visit and the effect of treatment on first follow-up after 7 days. 3 patients (13.6%) developed complications. 2 patients com-

**Table 1: Results of Treatment**

Symptoms on 1 <sup>st</sup> visit	No. of Patients	Improvement in symptoms on 1 <sup>st</sup> follow-up	Percentage	P-value
Nasal Itching	21	20	95%	0.001
Sneezing	20	19	95%	0.000
Nasal Congestion	20	19	95%	0.000
Rhinorrhoea	17	16	94%	0.000

plained of headache and one patient developed URTI.

### Discussion

The treatment of AR is a very challenging task, the reason being the high number of environmental allergens and our inability to measure precisely the allergic response to different allergens. The prevention of AR has been found to yield good results in children but not very consistent results in adults.<sup>8,9</sup>

Pharmacotherapy includes second generation antihistamines for mild to moderate cases and ICS for moderate to severe cases,<sup>10</sup> mast cell stabilizers for prevention of AR attack and intranasal anticholinergic sprays to reduce rhinorrhoea.

Over the past few years interest has developed in a new class of drugs called Leukotriene Receptor Antagonists (LTRA) to which Monteleukast belongs.

Monteleukast alone has been shown to have quality of life benefits for patients with seasonal AR if given alone in mild cases and in combination with AH in moderate cases.<sup>5</sup> Patel et al<sup>11</sup> have shown statistically significant improvement in perennial rhinitis after 6 weeks treatment with Monteleukast alone.

The combination therapy in our study also confirms the efficacy of Monteleukast in AR with 95% improvement in most of the symptoms.

Headache is reported to be a common side effect seen in less than 2% of cases in some studies.<sup>12</sup> Our study showed an incidence of headache to be 9% which is quite significant and may force the patient to discontinue the medication.

### Conclusion

Combination therapy of Monteleukast with AH and/or ICS is an effective treatment for AR with relief of symptoms of nasal itching, sneezing, congestion and rhinorrhoea. Headache is a significant side effect of this treatment regimen.

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