

WORLD SCIENCE ISSN 2413-1032 **ANTILEUKOTRIENE  
DRUGS IN THE TREATMENT OF  
ALLERGIC RHINITIS**

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**ABSTRACT**

Assessment of nasal symptoms was performed using TOTAL NASAL SYMPTOM SCORE at the beginning of the study, 10 and 30 days later.

More significant reduction in the severity of nasal congestion was found among patients who received both Levocetirisinum and Montelukastum. Also the use of montelukastum as an additional drug in symptomatic therapy of chronic allergic rhinitis reduces the need for intranasal topical glucocorticosteroids compared to patients who received only

antihistamines per os.

Allergic rhinitis is the most common atopic disorder affecting millions

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people annually all over the world.

The choice of the

of allergic rhinitis depends on different factors and conditions. The best option is avoidance of imp always possible and most of patients using symptomatic drugs. We compared 2 groups of patients taking just Levocetirisinum 5 mg daily. And patients of the second group except Levocetirisinum 5

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By the 10th day of treatment, there was a marked decrease in the severity of nasal symptoms in both groups.

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**Introduction.** Allergic rhinitis (AR) is the most common atopic disease characterized by such symptoms as rhinorrhea, sneezing, and nasal congestion [4]. These symptoms reduce the quality of patient's life, affect on daily activities, and also reduce the quality of sleep and productivity. At the same time, economic losses because of the AR, for example, in the US annually accounts for 2.4-4.6 billion dollars [3]. According to the European Community Respiratory Health Survey, which included 140,000 volunteers from 22 countries, the prevalence of AR is about 21 % (Janson C. et al., 2001). And the proportion of patients with undiagnosed AR ranges from 25-60% (Bauchau V., Durham S. R., 2004). According to these authors, specific IgE is detected in 83 % of patients with diagnosed AR. The most common allergens are pollen grasses (52 %), house dust (49 %), pollen of trees (33 %), pollen of weeds (27 %), skin and animal hair (26 %), spores of mold fungi (10 %) [5].

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It should be noted that inadequate control of AR, in addition to sleep disorders, increase a decrease in overall cognitive functioning, can lead to the development of pathologic sinusitis, otitis media, sleep apnea and exacerbation of existing diseases [5].

One of the methods of treating allergic diseases, along with the elimination of allergen pharmacotherapy to control the symptoms of the disease. Leukotriene receptor antagonists [7]. The mechanism of action of these drugs is

based on blocking the action of leukotrienes, one of the proinflammatory mediators, a

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level. In our days the ability of montelukastum to reduce bronchial obstruction is well known. But

there is a question about the systemic anti-inflammatory effect of this drug and the possibility of its

use in the complex therapy of allergic rhinitis [1, 2].

to assess the effectiveness of montelukastum in the treatment of chronic

Purpose of the study:

allergic rhinitis

**Materials and methods.** The study included patients with established diagnosis of chronic allergic rhinitis, the stage of exacerbation. The average age is  $34.6 \pm 7.7$  years. Male 17, female 33. The duration of the disease for the whole group was  $7.2 \pm 2.15$  years. Patients were randomly divided into 2 groups. The first group (n = 20) - patients who received Levocetirisinum 5 mg (Levocetirizin-astropharm, Asrapharm, Ukraine) in the morning as a therapy. The second group (n = 30) - the patients who received Montelukastum 10 mg for the night (Drug "Montular", Kusum Pharm, Ukraine) and Levocetirisinum 5 mg (Levocetirizin-astropharm, Asrapharm, Ukraine) in the morning as a therapy. The duration of the observation was 30 days. Assessment of nasal symptoms was performed using *Total Nasal Symptom Score* at the beginning of the study, 10 and 30 days later.

For the processing of the initial statistical information, the programs Statistica and Excel were applied.

### Research results.

Table 1. Dynamic of the total nasal symptom score

Table 1. DYNAMIC OF THE TOTAL NASAL SYMPTOM SCORE		
	First group	Second group

At the beginning of the study	3,9 ± 0,52*	3,93 ± 0,51*
In 10 days	2,14 ± 0,44	1,98 ± 0,5
In 30 days	1,29 ± 0,32*	1,19 ± 0,49*

(\* p<0,01 the reliability of the differences for 30 days from the start of therapy in each group)

When analyzing each indicator of the *Total Nasal Symptom Score*, a significant reduction in the severity of nasal congestion among patients of both groups was found, but a more pronounced decrease of this indicator was observed among patients who received combination therapy: an antihistamine receptor blocker and an antileukotriene drug. The nasal congestion index significantly decreased among patients of the first group by 78.3 %, the second - by 88.57 % (p <0.05) (Table 2).

	First group		Second group		p
	At the beginning of the study	In 30 days	At the beginning of the study	In 30 days	
Nasal congestion	4,8 ± 0,67	1,04 ± 0,33	4,9 ± 0,64	0,56 ± 0,22	p<0,05
Runny nose	3,94 ± 0,69	1,26 ± 0,43	3,74 ± 0,51	1,35 ± 0,45	p>0,05
Nasal itching	3,6 ± 0,51	1,15 ± 0,43	3,56 ± 0,5	1,2 ± 0,43	p>0,05
Sneezing	3,36 ± 0,49	1,62 ± 0,47	3,75 ± 0,44	1,84 ± 0,65	p>0,05
Difficult sleep	4,02 ± 0,54	1,4 ± 0,39	3,7 ± 0,42	0,98 ± 0,39	p>0,05

Table 2. Dynamics of individual indicators of the total nasal symptom score

In the second group, at the end of the study, 60 % of patients stopped using intranasal topical glucocorticosteroids as adjuvant therapy. Whereas among patients who received only an antihistamine only 25 % of patients could refuse to use this group of drugs.

**Conclusions.** Thus, the use of montelukastum as an additional drug in symptomatic therapy of chronic allergic rhinitis improves the quality of life of patients with allergic rhinitis, significantly reduces the severity of nasal congestion, and also reduces the need for intranasal topical glucocorticosteroids compared to patients who received only antihistamines per os.

By the 10th day of treatment, there was a expected decrease in the severity

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of nasal symptoms in both groups. Both variants of therapy provided a further decrease in the total assessment of the severity of nasal symptoms according to *Total Nasal Symptom Score* by day 30 to

$1.41 \pm 0.32$  and  $0.75 \pm 0.49$ , respectively in each group (Table 1). ***http://ws-conference.com/ No 6(34), Vol.5, June 2018 21***

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