

**EFFECTIVENESS OF USE OF MONTELUKAST SODIUM IN  
OBSTRUCTIVE BRONCHITIS IN CHILDREN**

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**Abstract:** Obstructive bronchitis is a disease manifested by reversible obstruction of the bronchi, the pathogenetic basis of which is allergic inflammation of the respiratory tract and, in most cases, bronchial hyperreactivity [1,2,3]. Early adequate treatment with anti-inflammatory drugs helps to reduce inflammatory changes, reduce the severity of the disease and the risk of exacerbations, and improve the quality of life of children. The aim of the study: to study the efficacy of montelukast sodium in obstructive bronchitis in children. Materials and methods of the study. In the children's department of the Republican Scientific Center for Emergency Medical Care and the pulmonology department of the regional children's multidisciplinary center, 48 sick children with obstructive bronchitis were treated. The diagnosis was established on the basis of anamnestic data, clinical data, instrumental and laboratory data. There were 30 boys, 18 girls. The children's age ranged from 3 to 14 years. The sick children were divided into two groups: the first group - 24 children who received montelukast. The second group - 24 children who received inhaled glucocorticosteroids. The use of Montelukast indicates its effectiveness as a drug for long-term control of obstructive bronchitis in children. Montelukast reduces symptoms of obstruction, improves lung function, and reduces the risk of exacerbation. Montelukast is well tolerated and is an easy-to-use drug for basic therapy of obstructive bronchitis.

**Key words:** obstructive bronchitis, montelukast sodium, children

**Relevance.** Recently, the prevalence of allergic diseases in children, and obstructive bronchitis in particular, has increased worldwide. In this regard, the study of development mechanisms, diagnostic principles and rational treatment methods, and knowledge of the principles of emergency care are of particular importance and relevance. [12,14,16]. An attack of obstructive bronchitis can pose an immediate threat to the child's life, so a doctor of any specialty must be able to provide emergency care in these cases. [5,8,9,11,20]. Obstructive bronchitis that occurs in childhood can lead to disability of the child. Therefore, knowledge of the methods of prevention and

rehabilitation of this disease is of great social importance. Obstructive respiratory diseases are often severe and can lead to acute respiratory failure [6,12,13,17]. In this regard, knowledge of the clinical picture, diagnostics, and emergency treatment of acute respiratory failure is necessary for a doctor of any specialty. The problem of rational treatment is one of the most pressing issues in pediatrics [4,7,10,15,19]

In pediatric practice, the main route of administration of drugs should be oral, as it is the least traumatic.

**The purpose of the study:** to study the effectiveness of montelukast sodium in obstructive bronchitis in children.

**Materials and methods of research.** In the children's department of the Republican Scientific Center for Emergency Medical Care and the pulmonology department of the regional children's multidisciplinary center, 48 children with obstructive bronchitis were treated. The diagnosis was established on the basis of anamnestic data, clinical data, instrumental and laboratory data. There were 30 boys and 18 girls. The age of the children ranged from 3 to 14 years. The sick children were divided into two groups: the first group - 24 children who received montelukast. The second group - 24 children who received inhaled glucocorticosteroids. Analysis of the anamnestic data in the examined children showed that pathology of the perinatal period and childbirth was observed in 40.5% of patients. 54.5% of the children were on early artificial feeding. A burdened family history of allergic pathology was revealed in 61.8% of patients: 64% on the maternal side, 36% on the paternal side. Patients also had relatives suffering from obstructive bronchitis. Among the concomitant diseases, frequent ENT diseases were recorded in sick children: adenoiditis in 40% of children, chronic tonsillitis in 16%, which led to frequent ARIs in 75% of children. Children in the main groups received sodium montelukast orally as a chewable tablet once a day at night at a dose of 4 mg for children aged 3 to 6 years and 5 mg for children aged 6 to 14 years. The comparison groups were treated with inhaled glucocorticosteroids. The duration of the therapy course was 6 months.

**Results and discussions.** The treatment results showed positive dynamics of obstructive bronchitis manifestations in all children, which was manifested by a decrease in the frequency of asthma attacks and the need for short-acting bronchodilators, and an improvement in well-being.

Against the background of montelukast therapy, positive dynamics of clinical manifestations were noted already in the first week of treatment in 30 (62.5%) patients, and were more pronounced by the end of the first month of therapy with the drug.

A significant decrease in the number of asthma attacks occurred in the 4-5th week of therapy. The average frequency of asthma attacks before treatment was 2.8, and after four weeks of therapy, these symptoms were not observed.

The number of asthma episodes against the background of treatment with the drug decreased by 2.3 times, night symptoms of the disease; the need for bronchodilators decreased by 6 times, the number of asymptomatic days increased by 1.4 times. In sick

children treated with montelukast in the third month of therapy, there were practically no attacks of suffocation, and in children receiving inhaled glucocorticosteroids, night episodes of the disease occurred rarely.

All children noted the simplicity and convenience of using montelukast compared to inhaled glucocorticosteroids, the children liked the taste of the drug. As can be seen from the results of the examination and treatment of obstructive bronchitis in children, the use of montelukast was accompanied by rapid positive dynamics, attacks of suffocation in sick children decreased already in the first week of treatment, and were more pronounced by the end of the first month of therapy with the drug.

During the study period, adverse reactions against the background of montelukast therapy were not observed. Children tolerated montelukast well.

**Conclusions.** The use of Montelukast indicates its effectiveness as a drug for long-term control of obstructive bronchitis in children. Montelukast reduces symptoms of obstruction, improves lung function, and reduces the risk of exacerbation. Montelukast is well tolerated and is an easy-to-use drug for basic therapy of obstructive bronchitis.

#### **Bibliography.**

1. Fedorovna, I. M., & Ravshanovna, E. M. (2024). Optimization of treatment of atypical pneumonia due to hypoxic-ischemic encephalopathy in newborns. *Research Focus*, 3(1), 220-223.
2. Kovalchuk, L. V. Clinical immunology and allergology with the basics of general immunology: textbook / L. V. Kovalchuk, L. V. Gankovskaya, R. Ya. Meshkova. - Moscow: GEOTAR-Media, 2012. - 640
3. Ибрагимова, М. Ф. (2022). Применение препарата пектолван ц при лечении атипичной пневмонии у детей. *Биология*, 3, 136.
4. Kurbonov, O. N., Urozaliyev, O. S., & Ibragimova, M. F. (2023). Prevalence of bronchitis among school children.
5. Мухаммадиев И. С., Рахмонов Р. Н., Ибрагимова М. Ф. Эффективность применения кларитромицина при пневмонии с атипичной этиологией у детей //Golden Brain. – 2024. – Т. 2. – №. 3. – С. 110-115.
6. The many faces of bronchial asthma, diagnosis, treatment and prevention: a guide, ed. G.B. Fedoseeva, V.I. Trofimova, M.A. Petrova. - St. Petersburg: Nordmedizdat, 2011- 344 p.
7. Practical pulmonology: a guide for doctors /ed.: V.V. Salukhov, M.A. Kharitonov. – Moscow: GEOTAR – Media, 2017.-416 p.
8. Шавази, Н. М., Турсункулова, Д. А., & Ибрагимова, М. Ф. (2023). Улучшение лечебных методов обструктивного бронхита у детей на фоне гипоксикоишемической энцефалопатии. *Journal of cardiorespiratory research*, 1(2), 81-83.
9. Турсунова, В., Урунова, М., & Ибрагимова, М. (2023). Changes in the state of immunity at the cellular level in patients with bronchiolitis. *Международный журнал научной педиатрии*, 2(12), 428-430.

10. Shavkatova, Z. S. K., & Ibragimova, M. F. (2024). Changes in the Cytokine Profile in Mycoplasma Pneumonia in Children. *American Journal of Pediatric Medicine and Health Sciences*, 2(8), 99-101.
11. Рустамов М., Мамаризаев И. Особенности состояния сердечно-сосудистой и дыхательной системы у детей при внебольничной пневмонии с миокардитами //Международный журнал научной педиатрии. – 2023. – Т. 2. – №. 10. – С. 353-356.
12. Хусаинова Ш.К., Мухамадиева Л.А., Умарова С.С. Современные представления об рецидивирующем бронхите у детей. биология ва тиббиёт муаммолари (<https://elibrary.ru/contents.asp?id=44799584>) ISSN: 2181-5674
13. Шавази, Н., Ибрагимова, М., & Эсанова, М. (2023). Состояние клеточного иммунитета у больных с обструктивным бронхитом. *Международный журнал научной педиатрии*, 2(9), 330-332.
14. Шавази, Н., & Ибрагимова, М. (2023). Эффективность применения джозамицина при атипичных пневмониях у детей раннего возраста. *Международный журнал научной педиатрии*, 2(2), 44-46.
15. Ибрагимова, М. Ф., кизи Шавкатова, З. Ш., & Каюмова, А. Т. (2024). Совершенствование лечения микоплазменной пневмонии у детей на фоне миокардита. *SCHOLAR*, 2(4), 68-72.
16. Шавази, Н. М., & Ибрагимова, М. Ф. (2023). Состояние цитокинового профиля у часто болеющих детей при обструктивном бронхит. *Журнал гепато-гастроэнтерологических исследований*, 4(3).
17. Shavazi, N., & Ibragimova, M. (2023). Применение препарата полиоксидоний при лечении обструктивного бронхита у детей. *International Journal of Scientific Pediatrics*, (1), 26-28.
18. Fedorovna, I. M., & Shodiyorovna, G. D. (2023). Improved diagnosis and treatment of atypical pneumonia in children. *Thematics Journal of Applied Sciences*, 7(1).
19. Fedorovna, I. M., & Mamedovich, S. N. (2022). Improving Treatment in Children with Community-Acquired Pneumonia with Atypical Etiology. *Telematique*, 4644-4648
20. Fedorovna, I. M., & Kizi, S. Z. S. (2023). State of humoral immunity in patients with atypical pneumonia in frequently ill children. *Research Focus*, 2(10), 125-128.