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New Technologies in the Correction of Intestinal Dysbacteriosis in Children with Recurrent Bronchitis

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Summary. The last decades are characterized by an increase in the number of children with recurrent and chronic respiratory diseases. These phenomena are observed against the background of a general increase in the level of allergization of the child population and the number of drug complications. It should be considered a characteristic feature of the current course of the pathology of the respiratory system in patients of childhood, torpidity and duration of the course of the pathological process with the formation of atrophic and subatrophic changes in the mucous membrane of the respiratory tract. Increasingly, the transformation of recurrent respiratory diseases into chronic and severe forms is recorded. Therefore, it is necessary to further develop individualized approaches to the diagnosis, treatment and rehabilitation of sick children, with the aim of early detection of pathology and timely implementation of adequate therapeutic measures. The problem of treatment of recurrent and allergic respiratory diseases in children against the backdrop of an unfavorable current environmental situation and the development of hypoimmune conditions has become particularly relevant at the present time.

Key words: Recurrent bronchitis, respiratory pathology, Intestinal dysbacteriosis, treatment

Recurrent bronchitis is one of the most common forms of respiratory pathology in childhood. They affect 50-100 out of 1000 children under the age of 6, and in ecologically unfavorable areas the incidence reaches up to 250 per 1000 children. Considering that most of the territory of Uzbekistan belongs to the zone of "environmental disaster", one can imagine how relevant this problem is for our region.

Violation of the intestinal microbiocenosis is no less urgent problem of modern pediatrics and childhood infectious diseases. Intestinal dysbacteriosis in the modern definition of the Industry Standard (2003) is presented as a clinical and laboratory syndrome that occurs in a number of diseases and clinical situations, which is characterized by a change in the qualitative and / or quantitative composition of the normoflora, metabolic and immunological disorders [1.3]. On the ther hand, the search for the causes of deterioration in children's health and the study of the mechanisms of disease development have revealed a number of factors that increase the risk of developing many pathological conditions. Among the risk factors, changes in the composition of the intestinal microbiota occupy one of the first places, i.e. dysbiosis is not only a consequence of various diseases, but also contributes to the development of the pathological process in the body and later becomes one of the factors that determine the severity and duration of their course.[5.7]

The study of the intestinal microflora of preschool children living in ecologically unfavorable regions made it possible to establish the presence of intestinal dysbacteriosis and susceptibility to bronchopulmonary pathology in the vast majority of children. When analyzing the prevalence of immunopathological syndromes in children with colon dysbacteriosis, it was found that in the structure of these syndromes, the leading place is infectious (57.1%), then allergic (47.8%), and in 37% of cases - mixed. The infectious syndrome was manifested by the recurrent nature of the course of acute and chronic infectious and inflammatory diseases of various etiology and localization. No less important in this regard are the reasons associated with changes in the body's immune response [2.9].

Obviously, the violation of the normoflora, the state of the immune status and the manifestation of the disease should be considered in unity, and the role of the trigger in each case may belong to any of these components of the triad: dysbacteriosis, immune status and the pathological process. In some cases, dysbacteriosis gives impetus to the development of the pathological process directly, in other cases - through the development of immunodeficiency, in the third - causes these interrelated processes [2.8].

In recent years, numerous data have appeared indicating that under physiological conditions, the intestinal microflora plays a regulatory role, ensures the maturation of the immune system and its balanced functioning in later life. In a situation of instability of the biocenosis of the gastrointestinal tract, prerequisites are created for the intensity of the processes of the immune response, overcoming the threshold of tolerance, and the formation of immune dysfunction.[1.4.6]

In response to changes in the intestinal microbiocenosis in children of the first years of life, an unfavorable premorbid background is formed, which, under the influence of various provoking factors, can be transformed into a pathological process. Any diseases that occur with intestinal dysbacteriosis, starting in early childhood, can take a protracted, chronic, relapsing course, selectively affecting the respiratory, digestive, urinary and other systems, often leading to serious consequences.

New approaches to the treatment of recurrent bronchitis.

Traditionally, the drugs of choice for the basic therapy of recurrent bronchitis are antibacterial and anti-inflammatory drugs. However, in recent years, there has been a clear increase in the resistance of pathogens of community-acquired and nosocomial infections to antibacterial drugs all over the world. According to experts, one of the reasons for this is the unreasonable prescription of antibiotics, which, along with the suppression of pathogen microbes, can cause negative side effects in the form of dysbacteriosis, sensitization.[1.2]

In addition, the effect of most antibiotics on the immune system can cause a decrease in the intensity of the specific immune response and phagocytosis, and sometimes cause a paradoxical effect - prolonged inflammation, its recurrence or chronic course. Increasing the effectiveness of the treatment of children with recurrent respiratory diseases is one of the urgent problems in pediatrics. Currently, new approaches are being developed to solve this problem, the main directions of which are:

1. Rational use of antibiotic therapy:

•the presence of clear indications for the appointment of antibacterial drugs;

•identification of microorganisms with the determination of the sensitivity of microbes to drugs;

•selection of optimal treatment regimens;
•the use of various combinations of antibacterial drugs;
•determination of an adequate dose and optimal ways of administering drugs, the duration of antibiotic therapy courses.
2. The preferred use of local antimicrobial agents (bioparox, miramistin, octinesept, hexalysis, sebidin, pharyngosept, septolete, neoangin, antiangin, strepsils, polyvalent and specific bacteriophages, gelatin films with antibiotics, antiseptics, phytoextracts).
3. Widespread use in clinical practice of homeopathic medicines (homeopathic chelators with anti-inflammatory, desensitizing and immunotropic effects).
4. Inclusion in the scheme of treatment of infectious diseases of the respiratory tract of pathogenetic agents that accelerate the relief of the inflammation process (enzyme therapy, vascular preparations, mucoregulators, membrane stabilizers, etc.)
5. The use of physical methods of influencing the focus of inflammation (electrotherapy, ultrasound therapy, ozone therapy, magnetotherapy, various options for laser treatment, reflexology).
6. Application of immunotropic drugs in the complex treatment of inflammatory diseases of the respiratory tract.
•preparations of microbial origin;
•thymus preparations and their synthetic analogues;
•bone marrow preparations;
•"chemically pure" preparations.
Peculiarities of the child's body and changes in the etiological structure of diseases in modern environmental conditions oblige us to look for new approaches to the most adequate choice of therapy. Of great importance is the inclusion of herbal preparations and homeopathic remedies in the complex of treatment. With the help of these medicines, it is possible to provide safe and effective treatment and prevention of respiratory tract diseases in children. The final result of treatment depends on the correct choice of drugs. It must be remembered that monotherapy can not always provide a sufficient clinical effect, while the use of complex treatment leads to greater success.

The possibility of using, along with allopathic medicines, safe complex homeopathy, which allows you to get a quick therapeutic effect, has significantly expanded its use in pediatric practice. Therapy of all respiratory diseases is aimed primarily at activating nonspecific immunity and obtaining a detoxification effect. This action is clearly expressed in drugs such as Galium-Hel, Engystol, Echinacea. Viburkol and aflubin also have detoxifying and antimicrobial effects. The antipyretic effect is exerted by viburkol, influcid, agri-children.

Bronchalis-hel, Gustel, Influcid, Tartefedrell, Umckalor, Edas-103, 104 exhibit antitussive and expectorant effects. Viburcol and Spascuprel also have sedative and anticonvulsant effects. Viburkol, pharyngomed have an analgesic effect. The exudative component of inflammation is reduced by traumeel C, lymphomyosot, cinnabsin, bronchialis. In such drugs as lymphomyosot, euphorbium and tartefedrel, an antiallergic effect is also pronounced. The regenerative processes of the respiratory tract are enhanced by euphorbium, mucosa, influcid, Edas-801 oil.

The choice of homeopathic remedies for the treatment of certain forms of respiratory pathology depends not only on the pharmacological action, but also on the localization and course of the pathological process.

In order to prevent acute respiratory diseases of the upper respiratory tract, "cold" diseases, rectal suppositories viburkol, flu-hel tablets, aflubin drops, influcid tablets and drops, agri-children's granules have found wide application.

For the treatment of acute respiratory diseases, including viral infections, accompanied by intoxication, fever or complications, use viburkol, flu-hel, influcid, aflubin, agri-children (homeopathic antigrippin for children). They eliminate the symptoms of febrile "cold" diseases, prevent the development of complications. With a pronounced exudative component of inflammation, edema, tablets or drops of traumeel C are connected.

Severe respiratory infections, chronic and sluggish diseases of the respiratory system and other internal organs are the basis for prescribing Galium-Hel drops, Engystol tablets, Echinacea parenteral solutions, which have an immunostimulating and detoxifying effect.

In acute and chronic inflammatory diseases of the respiratory tract, accompanied by broncho-obstructive syndrome, bronchitis, bronchial asthma, the appointment of bronchialis-hel tablets, solutions of mucosa compositum for parenteral administration, which have anti-inflammatory, antispasmodic, antitussive and expectorant, as well as regenerating effects, is indicated. With the progression of the disease, treatment tactics should be changed. It is important not to miss the phase of the disease that can be treated. In severe forms or complicated course of both acute and chronic diseases, herbal and homeopathic preparations can be used as components of an adequate complex therapy.

State of intestinal microbiocenosis in children with recurrent bronchitis.

Despite the large number of studies in the field of etiology, epidemiology, diagnosis of intestinal dysbacteriosis, many of its pathogenetic aspects remain insufficiently covered. The mutual dependence of the immune and microecological systems of the child's body determines the scientific and practical interest in studying the state of the immune system in children with recurrent bronchitis against the background of intestinal dysbacteriosis. Relevant is the search for ways of complex correction of dysbiotic disorders and frequent relapses of the underlying disease.[4.6.7]

The authors of the guidelines studied the state of intestinal microbiocenosis in children with recurrent bronchitis, developed and evaluated the effectiveness of domestic homeopathic preparations in the treatment complex. Under observation were 93 children aged 1 to 7 years with recurrent bronchitis in the acute stage (I group), including 62 boys, 31 girls and 30 patients with the same disease in remission (II group), including 17 boys and 13 girls. The control group consisted of 20 children with episodic ARVI. Studies were conducted in patients in the first days upon admission to the hospital and after the course of treatment, patients of group II were examined in the stage of complete clinical and laboratory remission of the underlying disease. The criterion for selecting children in the survey group was an established diagnosis of recurrent bronchitis (bronchitis, episodes of which were repeated three or more times within 1-2 years and were characterized by the duration of clinical manifestations).

In the process of work, a study of the anamnesis of life, illness, analysis of the medical history, assessment of the present somatic status was carried out; the indicators of the general analysis of blood, feces, the assessment of the severity of dysbiotic changes in terms of fecal microflora were studied. Bacteriological diagnosis

of intestinal dysbacteriosis was established by comparing the obtained data with normal indicators of the composition of the microflora of the large intestine in children. The classification of dysbiotic disorders was carried out according to the "Working Classification of Intestinal Microbiocenosis Disorders in Children" proposed by N.M. Gracheva and G.I. Goncharova (1986). Analysis of the quantitative characteristics of the immune system of the examined children was carried out on the basis of the study of the concentration of immunoglobulins - IgG, IgA, IgM, the relative content of T-lymphocytes, their regulatory subpopulations of T-helpers, T-suppressors, B-lymphocytes, CD4, CD8, CD16 and IS.

An analysis of the anamnestic data of the examined children showed that there is a high prevalence of risk factors for the development of dysbacteriosis in the group of patients with recurrent bronchitis. The most significant were the pathology of the ante- and intranatal periods in 82.8% of children, antibiotic therapy - 91.3%, manifestations of dysbacteriosis in the first year of life - 62.4%, the presence of frequently ill family members - 54.8%. 58.1% of children had frequent colds in the first year of life, various pathologies of the gastrointestinal tract were noted in 39.7%. In the formation of intestinal dysbiosis, the nature of the child's nutrition is of great importance. Among the children examined by us, breastfeeding in the first year of life was 24.7%, mixed - 43.1% and artificial - 32.2%. At the time of the survey, 40.8% received food according to their age. No less significant is the social status: only 19.4% of the examined patients had good living conditions and sufficient material security, 22.6% of fathers and 10.8% of mothers had higher education.

The bacteriological diagnosis of intestinal dysbacteriosis was confirmed in 100% of cases in patients in the acute stage and in 56.7% in the remission stage. Despite the random sampling of patients with recurrent bronchitis, absolutely all in the stage of exacerbation of the disease showed signs of intestinal dysbiosis. This, apparently, is due to the above high prevalence of risk factors for the development of dysbacteriosis in the patients we observed, antibiotic therapy that is not always justified, and the environmental conditions of our region. T.O. Daminova (2001) found that 90% of the population of our region suffer from intestinal dysbacteriosis. From the anamnesis of the patients examined by us, it was found that only 10.7% of children received during the period of exacerbation of the disease and then during the period of remission, drugs that correct intestinal dysbiosis.

In the stage of exacerbation of recurrent bronchitis, dysbiotic disorders of the P-III severity were noted, and in children with recurrent bronchitis in remission, dysbacteriosis of I-II severity was detected. Clinical manifestations of intestinal dysbacteriosis in the patients examined by us were general anxiety, irritability in 81.7%, vomiting, regurgitation - 64.5%, constipation - 52.7%, lag in physical development - 54.8%, the presence of pathological impurities in stool - 100%, signs of polyhypovitaminosis - 57%.

State of immunity in children with recurrent bronchitis.

The main purpose of studying the immune status is to identify causal changes, i.e. those changes that lead to the development of an immunodeficiency state. However, the analysis of investigative changes is also of particular interest, since it can be used to evaluate the effectiveness of the treatment and predict the course of the disease.

The data obtained indicate the existing deficiency in the cellular and humoral links of the immune system in children with recurrent bronchitis complicated by intestinal dysbacteriosis. The immunoregulatory index turned out to be reduced to

1.01 in the stage of exacerbation of the disease; it does not normalize during the period of remission of the disease. The detected changes in the immune status, being an integral indicator reflecting the unfavorable total effect of a number of factors on the child's body, made it possible to understand the increase in the number of cases of relapse of the disease.

Recurrent bronchitis and intestinal dysbacteriosis in practical terms is the cause and effect of the development of the immunodeficiency state of the body, on the other hand, the immunodeficiency state supports and enhances the inflammatory process in the bronchi and dysbiotic disorders of the intestine due to the development of autoimmune processes.

Recurrent bronchitis leads to the depletion of the entire reserve protective potential of the body as a whole with the formation of a vicious circle of pathological changes, when the cause and effect periodically change places. In clinical terms, these processes manifest themselves as relapses of the disease with the addition of complications, the development of new foci of chronic inflammation, the presence of polyhypovitaminosis and anemia. All of the above requires an integrated approach to the treatment of this contingent of children.

Conclusion. During the year of follow-up, a longer and more stable remission was achieved, more rare cases of acute respiratory viral infections, episodes of which stopped faster and did not entail exacerbations of the underlying disease. Long-term use of the drug at the outpatient stage led to a prolongation of the remission of the underlying disease, sanitation of the nasopharynx, and increased tolerance to respiratory infections. The frequency of relapses of bronchitis within 6-9 months of observation in 60% of patients decreased by 2 times.

References

1. Baranov A.A., Shilyaev R.R., Koganov B.S. Selected lectures on pediatrics. Moscow 2005, p.87.
2. Zilov VG, Yusupov GA Mutual compatibility of homeopathic preparations. Bulletin of new medical technologies 2004-T.XI, No. 4-pp 91-92.
3. Samsonova E.I., Smirnova T.N., Polyakova V.E. Successful experience of complex homeopathic treatment on an outpatient basis in a child with allergic rhinitis who suffered from neutropenia. Bulletin of Otolaryngology 2006, 2, pp. 57-59.
4. Ursova N.Sh., Rimarchuk G.V., Savitskaya K.I. Features of correction of violations of the microflora of the large intestine in children. Ross. Pediatrician. magazine 2007, No. 1 pp. 35-37.
5. Fazylova A.A., Etkina E.I., Kayumov F.A. Clinical and immunological characteristics of young children with intestinal dysbacteriosis. Ross. Pediatrician. Journal. 2005, No. 5 pp. 45-47.
6. Kostolomova G.A. Clinical and immunological analysis of dysbiotic conditions in children: Abstract of the thesis. diss. cand. honey. Sciences. Tyumen, 2001.
7. Samsygina G.A., Bogomilsky M.R., Kazyukova T.V. Prevention and therapy of respiratory diseases using homeopathic remedies. Pediatrics, 2008; 87(6): 92-96.

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8. Uchaikin V.F. Recurrent respiratory infections in children: the use of immunomodulators for treatment and prevention. Pediatrics 2009, V.87 No. 1 pp. 127-132
9. E.A.Kornienko, O.K.Netrebenko, S.V.Ukraintsev. The role of intestinal microflora and probiotics in the development of immunity in infants. Pediatrics 2009, T87 No. 1 pp. 77-83