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# IMMUNOCORRECTIVE THERAPY IN THE PREVENTION OF FREQUENTLY ILL CHILDREN

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**Annotation**
The problem of chronically ill children is one of the most urgent and unsolved problems in pediatrics. We identified specific abnormalities in certain parts of the immune system and non-specific defense of the organism in FIC, which is the basis for inclusion immunocorrective drugs for the treatment and prevention of diseases. Use as drug immunocorrective Broncho-Munal reduces the incident of disease and improve quality of life of ill children.

**Keywords:** often ill children, immune status, immunostimulant

## The Urgency of the Problem

The problem of frequently ill children is a universal clinical problem, one of the most pressing issues in modern pediatrics and is in the center of attention of physicians of all specialties [5]. The urgency of the problem is explained by a significant increase in the number of patients, an increase in the number of beds in children's hospitals, long-term care for sick children, for which the state has a huge economic loss [4,8]. According to different authors, PICs make up from 20 to 65% of the child population [1,7] and are characterized by a frequency of re-infections from 6 to 12-15 times a year. In this regard, the interest in developing tactics for managing children with repeated infections is understandable.

In the structure of morbidity, respiratory diseases continue to occupy a leading position, followed by diseases of the digestive system, blood and hematopoietic organs, infectious diseases of the skin and subcutaneous tissue, kidneys and urinary system, and others [3,6].

It is known that in the protection of the body from an infectious agent, along with specific factors, nonspecific factors of the body's defense play an important role. These include the content of complement, lysozyme and bactericidal activity of serum, the activity and completeness of phagocytosis and the adsorbing capacity of erythrocytes.

The works devoted to the study of this problem are insignificant and are only substantiated by the result of a few observations [2,9].

Thus, the reduced immune state of the body of young children leads to the formation of a group of frequently ill children. The fact that when the immune system is weakened does not require an explanation, the body is attacked by opportunistic microbes.

The aim of the work was to determine the immunological state of the body in frequently ill children, to establish diagnostic criteria for assessing the immunological status and to identify the results of the use of an immunostimulant, along with traditional methods of treatment.

## Material and Methods of Research

62 children with bronchopulmonary diseases aged from 1 month to 6 years, who are included in the group of frequently ill children, were examined. All children were examined in the city children's hospital No. 1 in Samarkand. Of the total number of boys, there were 34 (54.8%), girls - 28 (45.1%). The distribution of patients by age showed the following results (table No. 1).

**Table 1 Distribution of patients by age**

| Age of children | Control group n =20 | Main group n = 42 | Total n = 62 |
|---|---|---|---|
| 1 мес – 1 года | 5 (25%) | 10 (23,8%) | 15 (24,1%) |
| 1 – 3 лет | 7 (35%) | 14 (33,3%) | 21 (33,8%) |
| 3 – 6 лет | 8 (40%) | 18 (42,8%) | 26 (41,9%) |

An analysis of the premorbid background showed that children often had iron deficiency anemia - 56 (90.3%), rickets - 48 (77.4%), malnutrition - 22 (35.4%), convulsive syndrome - 21 (33.8%), chronic tonsillitis - 17 (27.4%), acute nasopharyngitis - 18 (29%) .

In all children during the clinical examination, frequent diseases were detected, such as acute respiratory viral infections (32.2%), focal pneumonia (29%), acute bronchitis (20.9%), obstructive bronchitis (17.7%).

A general examination of children revealed the following complaints: fever was noted in 62 patients (100%), cough - 57 (91.9%), vomiting - 23 (37%), anxiety - 60 (96.7%), shortness of breath - 18 (29%), convulsions - 21 (33.8%), loss of appetite - 58 (93.5%).

The material for the immunological study was blood. Determination of complement titer, lysozyme and bacteriostatic activity in blood serum was carried out by photonephelometric method.

When determining the bacteriostatic activity of blood serum, a technique was used based on measuring the optical density of the meat-peptone broth during the growth of a culture of staphylococcus in it. When determining the titer of serum lysozyme, the method is based on the high sensitivity of the culture of Micrococcus lisodecticus to the effects of lysozyme. The phagocytic activity of leukocytes, the index and the degree of completion of phagocytosis were studied on the basis of the methodology proposed by E.A. Oleinikova, O.V. Milovidova and L.V. Novikova in 1975. The immunoadherence reaction (RIP) used the method of Pustovalova N.A. (1975). The quantitative determination of the immunoglobulin fraction was carried out by the method of immunodiffusion in agar gel according to Mancini.

## Results and Discussions

In FIC (frequently ill children), the premorbid background has a wide range. Among which chronic tonsillitis, nasopharyngitis, rickets of the I degree, malnutrition of the I degree and anemia of the I-II degree are very common. Diarrhea occupies a special place among the accompanying syndromes. In EBD (episodic ill children), malnutrition and signs of rickets were not recorded in any case (Table No. 2).

Table 2 Clinical diagnosis, premorbid background, concomitant syndromes in FIC and EBD

| Number of examined children | Among them clinical diagnosis | Premorbid background and concomitant syndromes |
|---|---|---|
| 42<br>FIC | SARS<br>14-33,4% | Chronic tonsillitis. Acute nasopharyngitis. Convulsive syndrome. Rickets of the 1st degree. Anemia 1-2 tbsp. Diarrhea |
| | Acute focal pneumonia<br>6-14,3% | Convulsive syndrome. Rickets of the 1st degree. obstructive syndrome. Anemia 1-2 tbsp. Hypotrophy 1 st. Diarrhea. |
| | Acute bronchitis<br>15-35,8% | Acute nasopharyngitis. Anemia 1-2 tbsp. Hypotorphy 1 tbsp. Diarrhea. |
| | Obstructive bronchitis<br>7-16,6% | asthmatic syndrome. Chronic tonsillitis. Rickets 1 st. Anemia stage 1 Hypotrophy 1 tbsp. Diarrhea. |
| 20<br>EBD | SARS<br>10-50% | Chronic tonsillitis. Anemia 1 tbsp. |
| | Acute bronchitis<br>10-50% | Chronic tonsillitis. Anemia 1 tbsp. |

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To study the immunological status, a set of methods was used that reflects the state of immunity (the amount of immunoglobulins A, M, G in the blood serum) and non-specific factors of body defense (complement content, lysozyme and bacteriostatic activity of serum, activity, index and completeness of phagocytosis and adsorbing ability of erythrocytes). The normative data obtained at the Institute of Immunology of the Academy of Sciences of the Republic of Uzbekistan were used.

High IgG values compared to the norm in FIC prove that the disease of the upper respiratory tract is caused by gram-positive microorganisms. During the disease, their accumulation in the blood serum increases, protection appears. High levels of IgM are noted, which is 136.+7.4% compared to the norm - 97.5+4.2%. IgA in FIC was noted in smaller amounts (112.0+10.1 in FIC, 156.8+12.0 in EBD, 151.0+11.0 is normal in healthy children), which may suggest the development of a pathological process in the gastrointestinal tract .

In protecting the body of young children from an infectious agent, nonspecific protective factors play an important role. The results of the study of cellular factors of body defense in healthy children, in EBD and FIC show an immunodeficiency state in FIC. The phagocytic activity of leukocytes is normally 49.8+2.7% in healthy children, 52.8+3.8% in EBD and 58.8+2.9% in FID. High AF values show that the body mobilizes all its forces against pathogenic microbes and the number of active leukocytes increases. But their digestive capacity - the index of phagocytosis drops sharply. If normally in children from one month to 7 years of age, the IF is 5.1 + 0.7, then in FBI it is 1.6 + 0.6%. Each active leukocyte can absorb only 1 microbial cell. Accordingly, the ST (norm -4-6 points, EBD - 4-6 points, for FBD - 7-8 points).

In our observations, it was noted that the quantitative change in erythrocytes in FIC does not occur compared to the norm. However, their adsorption capacity is sharply reduced. Normally, the adhesive ability of erythrocytes, microbial cells is 18-20%, in FBI - 12-13%, which shows that under the influence of prolonged intoxication, erythrocytes lose their receptors. In EBD, the RIP indicators do not change. The low rates of RIP in PSC compared with healthy ones once again indicate that this phenomenon is one of the factors of natural immunity and actively participates with all links of immunity in a single fight against infection.

Thus, RIP - the adsorption capacity of erythrocytes of pathogenic staphylococcus can be used as a test that determines the immune state of FIC.

Similar data were obtained in the study of humoral factors. Complement levels in FBI were 50% low compared to normal. The norm is -0.62 - 0.76 units, for EBD - 0.58 - 0.70 units, for FBD - 0.32 - 0.38 units.

The bacteriostatic activity of serum (BAS) in relation to the culture of staphylococcus was detected in healthy people in dilutions of 1:10-1:640, in EBD 1:10-1:160 and in FBI - 1:10 - 1:80. The content of lysozyme is 1:10 - 1:160, 1:10 - 1:80 and 1:10 - 1:20, respectively.

Analyzing the data obtained, it can be concluded that humoral protective factors in occasionally and frequently ill children are suppressed. Identified specific violations in various parts of the immune system and non-specific protective factors is the basis for the inclusion of immunocorrective drugs in the treatment and prevention of diseases in FIC.

To confirm the above, a group of FBI was examined. They were treated with the traditional method (32 children), the traditional method and Broncho-Munal (10 children). Immunological parameters were determined before and after treatment. The results obtained indicate the effectiveness of the use of Broncho-Munal along with traditional methods of treatment, which is expressed by an increase in immunity and the rapid disappearance of clinical symptoms of the disease. The level of immunoglobulin A with the traditional method is 112.0+10.1 mg/l, the traditional method + Broncho-Munal increases from 112.0+10.1 - 125.0+10.1 mg/l. Similar indicators of immunoglobulins M and G.

Under the influence of Broncho-Munal, the levels of non-specific protective factors also increased in frequently ill children. AF from 58.8+2.9 to 67.5+3.1%, IF from 1.6+0.6 to 5.2+0.7, AF from 7-8 points to 4-6 points. RIP 12 - 13% to 19 - 20%. Complement 0.32 -0.37 units. up to 0.65 - 0.72 units, BAS from 1:10 - 1:80 to 1:10 - 1:640, LAS from 1:10 - 1:20 to 1:10 - 160.

The clinical effectiveness of the use of immunocorrective drugs was manifested in the disappearance of clinical symptoms and relapses of the disease. So, if during the treatment with the traditional method, cough, shortness of breath, convulsive symptoms, high temperature disappeared on the 6th-7th day after the application of the treatment, then during the treatment with the traditional method and with the use of Broncho-Munal on the 4th-5th day. Repeated relapses of 32 patients who were treated by traditional methods were observed after 1.5 - 2 months in 15 children. Of the 10 patients who used the traditional method and Broncho-Munal, 2 times applied for diseases of the upper respiratory tract after 4-5 months. The first group with a relapse was hospitalized, the second group received outpatient treatment.

Thus, we have identified specific disorders in certain parts of the immune system and non-specific factors of body defense in FIC, which is the basis for the inclusion of immunocorrective drugs for the treatment and prevention of the disease in FIC.

**Conclusions**

Thus, the treatment and prevention of diseases in FIC can be successfully carried out along with the traditional method, in the complex of immunocorrective drugs Broncho-Munal.

**Literature**

1. Альбицкий В.Ю., Баранов А.А. Часто болеющие дети. Н.Новгород: НГМА, 2003, стр.180.
2. Балева Л.С.. Баянская Г.Л., БлистиноваЗ.А. и др. Современные подходы к лечению и реабилитации часто болеющих детей. Медицинская технология. М., 2006, стр.48.
3. Булгакова В.А., Балоболкин И.И., Сенцово Т.Б. Острые респираторные инфекции у часто болеющих детей. Журнал «Медицинский совет». 2007,№ 3, стр. 34.
4. Даукш И.А., Муратходжаева А.В. Эффективность применения некоторых иммуномодуляторов у часто болеющих детей дошкольного возраста. Педиатрия. 2009, № 1-2, стр. 114.
5. Ирбутаева Л.Т. Иммунокоррегирующая терапия в оптимизации процесса лечения и профилактики заболеваний у часто болеющих детей. Международный научный журнал «Молодой ученый», №7 (297), Россия 2020г., стр.296-297
6. Ирбутаева Л. Т., Ахмедова М. М., Расулова Н. А. ИЗУЧЕНИЕ ПОКАЗАТЕЛЕЙ НЕСПЕЦИФИЧЕСКИХ ФАКТОРОВ ЗАЩИТЫ ОРГАНИЗМА У ЧАСТО БОЛЕЮЩИХ ДЕТЕЙ С РАЗЛИЧНЫМИ ЗАБОЛЕВАНИЯМИ //НЕДЕЛЯ НАУКИ-2020. – 2020. – С. 296-299.
7. Маркова Т.П., Чувиров Д.Г. Длительно и часто болеющие дети. РМЖ. 2002, т.10, № 3, стр.125.
8. Chambaz H.Etude Clinique d'une immunotherapy polyvalente dans le traitement des parodontopathies. Chir Dent France, 2004, 44: 209: p. 41.
9. Rudely C.H., Fruhwirth V., Wick G., Wolf H. Immunol., Immune response in the lungs following oral immunization with bacterial lysates of respiratory pathogens. Clin. Diagn. Lab 2004, 3. P.51.