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# CLINICAL EFFICIENCY OF THE USE OF LACTOGLOBULIN IN FREQUENCY DISEASING CHILDREN OF EARLY AGE

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**Abstract:**

Against the background of sporadic cases, outbreaks of infectious and toxic-infectious diseases caused by enteropathogenic Escherichia coli occur in children. The difficulties in treating these diseases are largely due to the lack of effective means of treatment and prevention [1,4,5,7,11,17]. Antibiotics often cause adverse reactions and complications, disturbances of the intestinal biocenosis. To date, a wide range of antibodies to various viruses and bacteria, a number of nonspecific protective factors, as well as neutrophils, lymphocytes, macrophages and factors that stimulate the growth of B. Bifida in the intestines of newborns have been found in human colostrum and milk [2,3,9,14,17,22].

**Keywords**: anticoliproteic lactoglobulin, coli infection, frequently ill young children.



## Introduction

**Objective:** to study the effectiveness of the anticoliproteic lactoglobulin drug in the complex therapy of coliform infection in frequently ill young children.

**Relevance:** Numerous data published in recent years by domestic and foreign researchers indicate the important role of mother's milk in preventing the occurrence of acute intestinal infections in young children. Due to the presence of antibodies and nonspecific protective factors in milk, the intestinal mucous membranes are protected from the effects of pathogenic microorganisms already in the immediate postnatal period [4,6,10,12,24,29].

As is known, in the first 2-3 days after birth, the composition of the intestinal microflora in children is mixed and includes, in addition to normal obligate microorganisms, a number of opportunistic bacteria. However, by 7-9 days, the large intestine of healthy full-term newborns who have received breast milk is 80-95% populated with bifidobacteria that are harmless to the body and have low proteolytic activity, and the relative number of E. coli and lactic acid coli, streptococci, enterococci, staphylococci and others microorganisms does not exceed 10-15%. Within 3-6 months, in children fed on mother's milk, Proteus bacteria, fungi of the genus Candida, clostridia, hemolyzing forms of Escherichia coli and other opportunistic microorganisms are usually found in the stool [13,19,24,28,33,38,40]. When newborns are attached to the mother's breast 1-2 hours after birth on the 2nd day, bifidobacteria are found in feces 12 times more often than in children with later dates of attachment to the breast, and the

frequency of IgA and IgG findings in coprofiltrates is significantly higher, than in children with late initiation of breastfeeding. The increase in immunoglobulins in the intestines of children does not prevent the development of bifid flora, since lactic acid bacteria do not contain antigens related to bacteria of the intestinal group and is O antigens of erythrocytes, and do not cause the formation of antibodies in the mother's body that are passed on with milk [11,14,17,41,44,46]. Weaning, early transfer to artificial or mixed feeding, as well as feeding with boiled donor milk cause significant changes in the composition of the intestinal microflora: a decrease in the number of bifidobacteria and lactobacilli, an increase in the content of E. coli and bacteroides, staphylococci and yeast-like fungi, Proteus bacteria, as well as the appearance enterobacteria of the genus Citrobakter, Enterobacter, Escherichia with reduced enzymatic properties. Severe premorbid background, viral infections, and the use of antibiotics to treat diseases in formula-fed children are common causes of intestinal dysbiosis and the development of diarrhea. Dysbiotic changes in the intestines, combined with staphylococcal infection, take on a particularly profound character. Numerous follow-up observations indicate that of the total number of children born who are bottle-fed, 42.8% of children suffer from respiratory viral infections, purulent otitis and gastrointestinal disorders 3 times more often than children with natural feeding. Newborns with reduced content IgA in saliva, but those who are breastfed are less likely to suffer from acute respiratory diseases compared to "artificially fed" [22,25,31,33,38,40].

**Material and research methods:** A study of the effectiveness of the drug lactoglobulin in the complex therapy of coli infection was carried out in 267 frequently ill children aged 15 to 24 months, divided into two main groups. According to the parents, all children had from 4 to 7 cases of acute respiratory infections per year.

Group 1 - children who took lactoglobulin, antibiotics (ampicillin, etc.), enzyme preparations (95 people) and symptomatic drugs, a total of 139 people.

Group 2 (control) - children who took placebo, antibiotics (ampicillin, etc.), enzyme preparations (88 people) and symptomatic drugs - 40 people, a total of 128 people.

The composition of the intestinal microflora of sick children was studied using a complex technique, including the isolation of pathogenic Escherichia, as well as determination of the quantitative content of Proteus bacteria, bifidumbacteria, lactobacilli, yeast-like fungi and staphylococci in the feces. A clinical analysis of the blood and urine of sick children was carried out before the start of lactoglobulin use, as well as on days 2, 7, and 14. Bacteriological studies of stool were carried out at the same time and on 21 days from the start of lactoglobulin therapy. The examination of children in both groups was carried out with a complex of clinical and laboratory tests, including, in addition to general clinical tests, counting the total number of leukocytes and blood counts, a general urine test and determining individual tolerance to cow's milk. The formation of the main and control groups of children was carried out using random sampling; the drugs were given under codes. Calcium gluconate was used as a placebo; normal lactoglobulin was obtained from the colostrum of non-immunized cows using a technology similar to the production of immune anti-coliprotein lactoglobulin. Lactoglobulin preparations were diluted with sterile distilled water and administered orally in an amount of

10-20 ml of a 5% protein solution 20-30 minutes before feeding 2-3 times a day, depending on the age of the child and the severity of the disease. Lactoglobulin and placebo were used from 3-5 days of illness, immediately after receiving a positive response from the laboratory about the isolation of the corresponding serotype of pathogenic Escherichia coli. Children of the main group at the age of 15 months with a mild course of the disease were given 10 ml of the drug 1-2 times a day for no more than 7 days, with a moderate course - 10 ml 2 times for 10-14 days, with a severe course of the disease - according to 10 ml 2-3 times a day from 14 to 21 days. For children of the same group aged more than 20 months, with a mild infection, the drug was used 20 ml 1-2 times for 7 days, with a moderate infection - 20 ml 2 times a day, with a severe infection - 20 ml 3 times a day within a period of 14 to 21 days. Children in the control groups who received placebo and normal lactoglobulin were administered the drug according to a similar regimen, depending on age and severity of the disease; the 2nd group of children (control) received placebo and normal lactoglobulin according to a similar regimen. The main and control groups were homogeneous in age, severity of the disease and concomitant diseases. Of the total number, more than 50% were children in the first 15 months of life; the majority of children in all groups were bottle-fed (Table 1)

**Table 1 Characteristics of patients with coli infection by age and type of feeding**

| Groups of children | Age months. | | | Feeding pattern | | | Total children |
|---|---|---|---|---|---|---|---|
| | 15-18 | 19-21 | 22-24 | Natural | Mixed | Artificial | |
| Main | 35 | 48 | 56 | 25 | 24 | 90 | 139 |
| Control | 32 | 41 | 55 | 28 | 26 | 74 | 128 |

Severe coli infection was observed in 87.1% of children in the main group and in 84.3% of children in the control group. In 66.1% of children in the main and 48.4% of children in the control groups, coli-infection occurred against the background of concomitant diseases: pneumonia, acute respiratory infections, otitis media and pyelonephritis

**Table 2 Characteristics of patients according to the severity of coli infection and concomitant diseases**

| Groups of children | Severity of the disease | | | Comorbidities | | | | Total children |
|---|---|---|---|---|---|---|---|---|
| | Light | Moderate Heavy | Heavy | pneumonia | Acute respiratory diseases | Inflammation of the middle ear | Pyelonephritis | |
| Main | 18 | 95 | 26 | 41 | 78 | 10 | 10 | 139 |
| Control | 20 | 87 | 21 | 13 | 46 | 2 | 1 | 128 |

**Discussion of results**:

As a result of studying clinical materials on the use of anti-coliprotein lactoglobulin, it was found that the drug has a beneficial effect on the course of coli infection and the general condition of patients. In children treated with immune lactogloulin, there is a significantly faster relief of the symptoms of toxicosis and exicosis: lethargy, adynamia, and symptoms of meningism in severe and moderate infection disappear compared to patients in the control groups.

**Table 3 Normalization of the general clinical course of coliform infection in children during treatment with the immune preparation lactoglobulin**

| Clinical symptoms | Moderate course | | | Severe course | | |
|---|---|---|---|---|---|---|
| | Experienced group | placebo | Normal lactoglobulin | Experienced group | placebo | Normal lactoglobulin |
| Normalization of stool | 7,0± 0,4 | 12,2± 0,5 | 10,3 ±0,8 | 9,0 ±0,9 | 19,8± 2,3 | 19,7 ±5,4 |
| | P <0,01 | | | P< 0,001 | | |
| Number of children examined | 95 | 84 | 11 | 26 | 18 | 3 |

Under the influence of the immune drug, intestinal function normalizes faster, the number of bowel movements decreases, diarrhea decreases, and stool consistency improves.

**Conclusion:**

From the above it follows that in the control group of children who took normal lactoglobulin, stool normalization occurred on average somewhat faster than in children who received calcium gluconate, apparently due to the nonspecific effect of colostrum immunoglobulins. However, the effectiveness of using normal lactoglobulin, as can be seen from the table, is one and a half to two times lower than that of immune lactoglobulin.

**ЛИТЕРАТУРЫ:**

1. Агаджанова С. Н. Закаливание организма дошкольника; Детство-Пресс - Москва, 2011.

2. Аскарова Н. К., Рахимова Д. Ж. ЭФФЕКТИВНОСТЬ СПЕЦИФИЧЕСКОГО ЛЕЧЕНИЯ МЕТАБОЛИЧЕСКИХ НАРУШЕНИЙ ОБУСЛОВЛИВАЮЩИХ СУДОРОГИ В ПЕРИОД НОВОРОЖДЕННОСТИ //НАУЧНЫЕ ИССЛЕДОВАНИЯ. – С. 68.

3. Белопольский Ю. А. Массаж, гимнастика и закаливание с мамой. От рождения до года; Эксмо-Москва, 2010.

4. Буров М. Закаляйся, как сталь. Правильное закаливание и моржевание; Феникс-Москва, 2006.

5. Бурцев Николай Правильное закаливание детей от рождения до школы; Феникс-Москва, 2013.
6. Голубева Л. Г., Прилепина И. А. Закаливание дошкольника; Просвещение - Москва, 2007.
7. Земляникина-Огнева Марина. Если ребенок часто болеет. Лечение, профилактика, питание, закаливание, гимнастика; Центрполиграф - Москва, 2008.-128с.
8. Мазнев Н. И. Все о здоровье ребенка. Оздоровление, закаливание лечение; Рипол Классик - Москва, 2007.
9. Баранова С.В. Укрепление организма / С.В.Баранова. - М.: ЦПФС «Единение», 2007. - 164 с.
10. Голубева Л.Г. Закаливание малыша. Пособие для родителей / Л.Г. Голубева, И.А. Прилепина; под ред. В.А. Доскина. - М.: Просвещение, 2007. - 30 с.
11.Александрова Е.Ю. Оздоровительная работа в дошкольных образовательных Учреждениях по программе «Остров здоровья»Волгоград: Учитель, 2012 -98с
12. Праздников В.П. Закаливание детей дошкольного возраста / В.П.Праздников. - Л.: Медицина, 1989. - 128 с.
13. Савельева Н.Ю. Организация оздоровительной работы в дошкольных образовательных учреждениях / Н.Ю.Савельева. - Ростов н.Д: Феникс, 2005. - 464 с.
14. Степаненкова Э.Я. Физическое воспитание в детском саду. Программа и методические рекомендации / Э.Я. Степаненкова. - М.: Мозаика-Синтез, 2006. - 96 с
15. Зуйкова М.Б. Режим – путь к здоровью. / Управление ДОУ. – 2006. – №1. – С.60-71.
16. Корепанова Г.Д. Организационные основы формирования здорового образа жизни в условиях ДОУ [Текст]. /Педагогический вестник. – 2000. – №9. –С.59-61.
17. Кудрявцев В.Т., Егоров Б.Б. «Ослабленный ребенок: воспитание и развитие». – М.: ИДОСВ РАО, 2003
18. Кучма А.А. Гигиена детей и подростков. / Учебник. М.2010. С.110-120.
19. Левчук Л.В. Оздоровительно-развивающая работа с дошкольниками [Текст]. / Управление ДОУ. – 2006. – №1. – С.107-111.
20. Лукина Л.И. Путь к здоровью ребенка лежит через семью. / Управление ДОУ. – 2006. – №7. – С.84-95.
21. Методологические и организационные подходы к формированию здоровье сберегающей среды в системе дошкольного образования. – Кемерово: Кузбасс вуз издат. – 2002. – 270с.
22.Николаева Л. Остеопатическая гимнастика.. /Обруч. – 2007. – №1. – С. 40-43
23. Организация воспитательной и оздоровительной работы в ДОУ – М.: ТЦ Сфера, 2006.
24. Л.Г.Голубева И.А. Прилепина Закаливание дошкольника под редакцией В.А. Доскина Москва Просвещение 2007.
25. Л.П.Банникова Программа Оздоровления детей в ДОУ методическое пособие Москва 2008.
26. Ирина Киркина Здоровье – Стиль жизни Современные оздоровительные процедуры в детском саду. Образовательные проекты; М: НИИ школьных технологий , 2008.

27. Апарин В., Крылов В. О пользе хождения босиком // Наука и жизнь. – 2001. – №3 – с.40-43
28. Артюхов Ю.А. Как закалить свой организм. - Минск: Харвест, 1999. – 224с.
29. Белопольский Ю.В., Оленич В.Б. Педиатрия. – М.: Эксмо, 2008. – 512 с.
30. Воронцова И.М., Беленький Л.А. Закаливание детей с применением интенсивных методов. Метод. рекомендации. - С.-Петербург: Медицина, 2003. – 324с.
31. Колгушкин А.Н., Короткова Л.И. Лекарства от простуды // Физкультура и спорт. – 2001. – № 2. – С.95-168.
32. Концепция физического образования детей и подростков// Физическая культура: воспитание, образование, тренировка, 2003 – №1. – С. 5-10.
33. Малахов Г.П. Закаливание и водолечение. – М.: Сталкер, 2007. – 105с.
34. Методические рекомендации по закаливанию детей в дошкольных учреждениях. – М.,1999. – 45с.
35. Онучин Н.А. Закаливание. Массаж. Гимнастика / Н.А. Онучин. – М.: АСТ, 2005. – 158 с.
36. Праздников В.П. Закаливание детей дошкольного возраста - М.: Медицина, 2002. – 220с.
37. Рахимова Д. Д., Шайхова Г. И. 7-17 YOSHLI MAKTAB OQUVCHILARINING JISMONIY RIVOJLANISHINI BAHOLASH //журнал репродуктивного здоровья и уро-нефрологических исследований. – 2022. – Т. 3. – №. 4.
38. Трешутин В.А., Щепин В.О. Региональная система мониторинга здоровья населения и эффективность здравоохранения / Под ред. академика РАМН О.П. Щепина. М.,2001. – 256с.
39. Шайхова Г.И.,Хусанова Н.Ф. Гигиеническая оценка функциональной готовности дошкольников к систематическому обучению. // Методические новости. – Белоруссия,2019, №6.-С71-74.
40.Шайхова Г.И., Сайдалиев С.С., Хусанова Н.Ф. Состояние здоровья детей подготовительных групп детских дошкольных учреждений г.Ташкента // -Санкт-Петербург, 2012. С.97-101.
41. Jurakulovna R. D. Analysis Of Distribution Of Vitamins, Macro And Micro Elements Deficiency Among Children And Adolescents In Samarkand Region, According To Clinical Symptoms //Eurasian Research Bulletin. – 2023. – Т. 17. – С. 229-235.
42. Islamovna S. G., Jurakulovna R. D., Gulistan K. Current state of the problem of rationalization of schoolchildren's nutrition. – 2022.
43. Nurmamatovich F. P., Jurakulovna R. D. The importance of the international hassp system in the production of quality and safe confectionery products //ACADEMICIA: An International Multidisciplinary Research Journal. – 2021. – Т. 11. – №. 10. – С. 1184-1186.
44. Raximova D. J., Naimova Z. S., Halimova S. A. 7 YOSHDAN 14 YOSHGACHA BO ‘LGAN BOLALARDA OZIQLANISH MUAMMOLARI VA ULARNI OLDINI OLISHDA VITAMIN VA MINERALLARNING O ‘RNI //Oriental renaissance: Innovative, educational, natural and social sciences. – 2022. – Т. 2. – №. 4. – С. 380-385.

45. Zhurakulovna R. D., Abdurakhmanovna U. N. Current State of the Problem of Rationalization of Schoolchildren's Nutrition //Eurasian Medical Research Periodical. – 2023. – T. 19. – C. 81-89.
46. Zhurakulovna R. D. ASSESSMENT OF THE ACTUAL NUTRITION OF CHILDREN AND ADOLESCENTS TAKING INTO ACCOUNT REGIONAL PECULIARITIES //E Conference Zone. – 2022. – C. 41-44.
47. Zhurakulovna R. D. NUTRITION OF CHILDREN AS A FACTOR DETERMINING THE HEALTH OF FUTURE GENERATIONS //Conferencea. – 2022. – C. 41-42.
48. Zhurakulovna R. D., Shomuratovna B. R., Narmuminovna G. G. HYGIENIC RECOMMENDATIONS FOR THE PREVENTION OF SCHOOL MYOPIA AND OTHER VISUAL IMPAIRMENTS IN CHILDREN OF PRIMARY SCHOOL AGE //American Journal of Interdisciplinary Research and Development. – 2022. – T. 6. – C. 29-38.

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