International Journal of Pediatrics and Genetics
Vol. 2 No. 7 (2024)
ISSN: 2995-5483

Pharmacotherapeutic Features of Use of Enterol in Children with Diarrhea

Nuralieva R. M.

Abstract: Diarrhea in children is a pathological condition in which a child has loose stools more than three times a day. Every year, 5 million children die from diarrhea of various etiologies. Diarrhea is especially dangerous during the period from newborn to 3 years.

The causes of diarrhea in children are: various pathogenic bacteria and microbes, as well as viruses; some medications, for example antibiotics, which during treatment kill not only pathogens, but also beneficial microbes that form the intestinal microflora; individual allergic reaction to certain foods; disruption of the stomach, pancreas, liver, insufficient secretion of enzymes in the small intestine.

Key words: dysbacteriosis, diarrhea of various origin, boulardy saccharomyces, intestinal microflora.

Diarrhea in children is a pathological condition in which a child has loose stools more than three times a day. Every year, 5 million children die from diarrhea of various etiologies. Diarrhea is especially dangerous during the period from newborn to 3 years.

The causes of diarrhea in children are: various pathogenic bacteria and microbes, as well as viruses; some medications, for example antibiotics, which during treatment kill not only pathogens, but also beneficial microbes that form the intestinal microflora; individual allergic reaction to certain foods; disruption of the stomach, pancreas, liver, insufficient secretion of enzymes in the small intestine.

Common symptoms are frequent loose stools, nausea, abdominal pain, a feeling of rumbling and deterioration of well-being. In general, the frequency of stool and the nature of bowel movements with diarrhea in children depends on the type of disease. Dysbacteriosis means that the balance of beneficial bacteria in the child's body is disrupted. As soon as the amount of beneficial microflora decreases, pathogenic microorganisms immediately begin to multiply in its place. This can be caused by abrupt weaning of the baby from the breast, frequent changes of formula, or incorrect introduction of complementary foods.

Treatment with antibiotics, especially broad-spectrum antibiotics, can provoke dysbiosis. Unfavorable ecology also inhibits the normal intestinal microflora. Changes in the composition of microflora are only a consequence of some unfavorable events in the body, i.e. Dysbacteriosis is always a secondary condition.

Dysbacteriosis can be caused by: intestinal motility disorders - constipation, diarrhea that occur for various reasons; diseases that cause malabsorption in the intestines; chronic diseases of the stomach and intestines (gastroduodenitis, peptic ulcer, nonspecific ulcerative colitis, etc.); allergic diseases (food allergies, atopic dermatitis); acute infectious diseases (intestinal infections, influenza, etc.); various surgical interventions; use of antibiotics and other drugs.

Symptoms of dysbiosis are not specific and may indicate any other gastrointestinal pathology. But there are symptoms that suggest that the intestinal microflora is disturbed. These are frequent diarrhea or constipation, cramping pain and bloating, mucus and undigested food in the stool, flaky

Vol. 2 No. 7 (2024)
ISSN: 2995-5483

skin. Peeling nails and brittle hair, worsening apatite, bad breath and white coating on the tongue, dark plaque on the teeth, dermatitis.

Goal of the work. To evaluate the effectiveness of enterol in eliminating dysbiosis and diarrhea in children.

Materials and methods. In some children, during and after illness, functional changes in the intestines persist for a long time. This is manifested by alternating diarrhea, flatulence and other unpleasant phenomena. After a rotavirus infection, infants in the first year of life with a deficiency of the lactase enzyme, which breaks down milk sugar, may develop lactase deficiency. Very often, after infectious diarrhea, for which antibiotics were prescribed, children developed intestinal dysbiosis. Dysbacteriosis is a violation of microbial balance in the intestines.

Against this background, the gastrointestinal tract is easily colonized by various kinds of pathogenic microbes. Conditionally pathogenic microorganisms cause disease when the defenses are weakened. Typically, intestinal dysbiosis is characterized by improvement in stool after the administration of biological products containing bifidobacteria and lactobacilli and factors that promote their proliferation in the intestine. If these drugs are chosen incorrectly or in an inappropriate dose, the baby's condition worsens within a month after their discontinuation.

An important place among the drugs used is occupied by the drug Enterol. The therapeutic effects of Enterol are due to the action of the microorganisms Saccharomyces boulardii. According to the WHO definition, these are living organisms, used in adequate quantities, that have a healing effect on the human body.

The effect of the drug is due to the antagonistic effect against pathogenic and opportunistic microorganisms: Clostridium difficile, Klebsiella pneumoniae, Pseudomonas aeruginosa, Salmonella typhimurium, Yersinia enterocolitica, Escherichia coli, Shigella dysenteria, Staphylococcus aureus, Candida albicans, Candida kruesei, Candida pseudotropicalis, and Entham oeba hystolitica , Lamblia. It has an antitoxic effect, especially against bacterial cyto- and enterotoxins.

Improves intestinal enzymatic function. The Saccharomyces boulardii cell wall component mannitol is a substrate for pathogenic strains of Escherichia coli and Salmonella typhimurium, which determines their adhesion to the surface of Saccharomyces boulardii and subsequent elimination from the body. Saccharomyces boulardii is naturally resistant to antibiotics.

Saccharomyces boulardii is not eubiotic, i.e. not part of the microflora healthy human body, respectively, after taking the drug Saccharomyces boulardii pass through the digestive tract unchanged without colonization and are completely eliminated from the body within 2-5 days after stopping use.

We observed 2 groups (37 children) of patients aged 2-9 years with dysbacteriosis and diarrhea of various origins who received treatment for dysbiosis and diarrhea of various etiologies. Group 1 included 20 patients who were admitted to the emergency pediatrics department of the SFRNCEMP for the period 2021-2022. With diseases occurring with symptoms of either diarrhea or dysbacteriosis. Data patients received traditional therapy: oral rehydration therapy special ready-made preparations containing glucose and electrolytes (sodium, potassium, chlorides), antibiotic therapy and probiotics. Group 2 included 17 children with a similar pathology who received therapy with enterol.

Results. Enterol is an immunobiological drug that often recommended for various digestive system disorders. He simultaneously belongs to several pharmacological groups, such as: antidiarrheals; agents that normalize intestinal microflora; antimicrobial and antiparasitic agents. Beneficial yeast has a protective biological effect against natural intestinal microflora and thereby eliminate diarrhea caused pathogenic or opportunistic flora. The antimicrobial effect of the drug is due to the direct antagonism of Saccharomyces boulardii and pathogenic microorganisms.

Yeast-like organisms stop the reproduction and growth of pathogenic fungi and microbes in the intestinal lumen, which alter the normal biocenosis. The destructive effect of Saccharomyces boulardii on the following groups of microorganisms has been established: Pseudomonas aeruginosa; Clostridium difficile and pneumonia; Staphylococcus aureus; Salmonella typhi and enteritidis; Candida krusei, pseudotropicalis and albicans; Escherichia coli; Shigella disenteriae and flexneri; Proteus; Lambliae; Klebsiella; Enthamoeba hystolitica; Vibrio cholera; Enterovirus; Rotavirus The antitoxic effect is due to the production of proteases by Saccharomyces - special enzymes that break down toxins and release mucosal cell receptors that bind the toxic substance.

The immunostimulating effect is due to the acceleration of the formation of specific IgA and parts of other immunoglobulins. IgA is specific to mucous membranes and leads to the destruction of pathogenic flora before it enters the bloodstream. The enzymatic action leads to increased activity of specific enzymes (sucrase, lactase and maltase), which break down food components containing carbohydrates.

Available in capsule and powder form. Capsules are taken orally, 1 hour before meals, with a sufficient amount of liquid. Children 1-3 years: 1 capsule. twice a day. within 5 days. Children over 3 years old, adults: 1-2 caps. twice a day. within 7-10 days. The powder can be used by children up to one year old, starting from birth. Take 1 hour before meals, dissolved in water, juice or warm milk at the rate of 1 sachet per 100 ml of liquid.

Treatment of diarrhea is carried out within 3-5 days, and dysbiosis – 10-14 days. Children from birth to 12 months: half a sachet of 250 mg twice a day or a whole sachet of 100 mg twice a day. Children 1-6 years old: 1 sachet of 250 mg or 2 sachets of 100 mg twice a day. Children 6-10 years old, adults: 1-2 sachets of 250 mg or 2-4 sachets of 100 mg twice or thrice a day.

It is not recommended to combine the medicine with antifungal agents, since the latter reduce the effectiveness of Enterol. As side effects, when taking Enterol, mild gastrointestinal disorders may occur that do not require discontinuation of treatment.

Conclusions. Enterol is a drug of biological origin, providing pronounced antidiarrheal and antagonistic antimicrobial action against intestinal microflora (opportunistic and pathogenic). Regulates the composition of intestinal microflora.

Has an immunobiological effect, strengthening local immunity of the intestinal mucosa and accelerating the production of immunoglobulin. Neutralizes intestinal and cellular toxins, which, accumulating in the intestinal lumen, cause intoxication and diarrhea. Saccharomyces boulardii is resistant to antibiotics, so Enterol can be used simultaneously with strong antibacterial agents to protect and quickly restore beneficial intestinal microflora.

Reference:

1. Kurbonalievich, A. S., Mardonovich, N. R., Muxammadievich, X. M., Anvarovich, O. R., Negmatovich, T. H., & Usmonovna, B. M. (2021). Experience of the Combination of Tiflox and Immunomax in the Treatment of Trichomoniasis Combined with a Bacterial Process. Annals of the Romanian Society for Cell Biology, 2376-2380.
2. Зиядуллаев, Ш. Х., Хайдаров, М. М., & Нуралиева, Р. М. (2014). Иммунный статус здорового населения подростков и юношей. Академический журнал Западной Сибири, 10(3), 80-80.
3. Зиядуллаев, Ш. Х., Турдибеков, Х. И., Хайдаров, М. М., Исмоилов, Ж. А., & Пулатов, У. С. (2014). Генетические маркеры гиперреактивности бронхов при бронхиальной астме. Академический журнал Западной Сибири, 10(3), 19-19.
4. Мурадова, Р. Р., Хайдаров, М. М., & Бегнаева, М. У. (2021). Современные клинико-фармакологические аспекты применения нефротоксичных антибиотиков. Достижения науки и образования, (3 (75)), 98-100.

5. Мурадова, Р. Р., & Хайдаров, М. М. (2021). КЛИНИКО-ФАРМАКОЛОГИЧЕСКИЕ АСПЕКТЫ ПРИМЕНЕНИЯ ГОРМОНАЛЬНЫХ ПРЕПАРАТОВ В ОФТАЛЬМОЛОГИИ. Достижения науки и образования, (3 (75)), 100-102.
6. Мурадова, Р. Р., Хайдаров, М. М., & Омонов, Э. М. (2021). ОПТИМИЗАЦИЯ ТЕРАПИИ БОЛЬНЫХ С ОТКРЫТОУГОЛЬНОЙ ГЛАУКОМОЙ С УЧЕТОМ ПАРАМЕТРОВ СОСТОЯНИЯ МИКРОЦИРКУЛЯТОРНОГО РУСЛА ЦЕНТРАЛЬНОЙ ЗОНЫ СЕТЧАТКИ. Вопросы науки и образования, (10 (135)), 66-69.
7. Siddikov, O., Daminova, L., Abdurakhmonov, I., Nuralieva, R., & Khaydarov, M. OPTIMIZATION OF THE USE OF ANTIBACTERIAL DRUGS DURING THE EXACERBATION OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE. Turkish Journal of Physiotherapy and Rehabilitation, 32, 2.
8. Азимов, Ш. Т., Шакиров, Б. М., Карабаев, Ж. Ш., Хайдаров, М. М., & Кодиров, В. М. (2008). Ранняя некрэктомия в комплексном лечении детей с глубокими ожогами. Сб. науч. тр. II Съезда комбустиологов России:-М, 159-160.
9. Хайдаров, М. М., Мурадова, Р. Р., & Худойбердиева, Г. С. (2020). Оптимизация премедикации при хирургических вмешательствах в гинекологии. Достижения науки и образования, (5 (59)), 98-102.
10. Muxammadievich, H. M., Uktamovna, M. D., Abdullaevich, S. O., Rustamovna, M. R., & Usmanovna, B. M. (2022). BURN SHOCK IN PEDIATRIC AFTER THERMAL INJURY AND MULTIPLE ORGAN FAILURE SYNDROMES. World Bulletin of Public Health, 8, 140-142.
11. Kurbonalievich, A. S., Fayozjonovich, A. Z., Anvarovich, O. R., Abdullaevich, S. O., & Mukhammadievich, H. M. (2021). Careful Attention To The History Of Chronic Urticaria Is One Of The Important Factors Of Productive Therapy. The American Journal of Medical Sciences and Pharmaceutical Research, 3(02), 55-58.
12. Хакимов, Э. А., Тагаев, К. Р., & Хайдаров, М. М. (2019). Осложнения со стороны желудочно-кишечного тракта у детей с ожоговой травмой. Детская хирургия, 23(1S4), 64-64.
13. Хайдаров, М. М., & Мурадова, Р. Р. (2020). Гепатотоксичность лекарственных средств как одна из проблем современной медицины. Наука через призму времени, (11), 46-49.
14. Мурадова, Р. Р., Хайдаров, М. М., & Тураев, Х. Н. (2022). NEFROTOKSIKLIK-ZAMONAVIY ANTIBIOTIKOTERAPIYANING MUAMMOSI SIFATIDA (ADABIYOTLAR TAHLILI). ЖУРНАЛ РЕПРОДУКТИВНОГО ЗДОРОВЬЯ И УРО-НЕФРОЛОГИЧЕСКИХ ИССЛЕДОВАНИЙ, 3(2).
15. Хайдарова, М. М. (2016). Особенности изменения показателей клеточного иммунитета у детей при бронхолегочной патологии, протекающей с бронхиальной обструкцией. Медицинские новости, (7 (262)), 58-60.
16. Азимбегова, С. Н., Нуралиева, Р. М., Абдурахмонов, И. Р., Хайдаров, М. М., & Тохиров, С. Т. (2022). МОДИФИКАЦИЯ ЛЕЧЕНИЯ САХАРНОГО ДИАБЕТА 1 ТИПА У ДЕТЕЙ И ПРОФИЛАКТИКА ДИАБЕТИЧЕСКОЙ РЕТИНОПАТИИ. In Биотехнология и биомедицинская инженерия (pp. 202-206).
17. Ашурова, Н., Шакиров, Б. М., Мурадова, Р. Р., Хакимов, Э. А., Хайдаров, М. М., Некбаев, Х. С., & Тожиев, З. Ю. (2022). Особенности термоингаляционной травмы у детей. In Скорая медицинская помощь-2022 (pp. 15-16).
18. Ашурова, Н., Шакиров, Б. М., & Хайдаров, М. М. (2021). ОСОБЕННОСТИ ПРОТЕОЛИЗА В РАЗВИТИИ ОСТРОЙ ОЖОГОВОЙ ПНЕВМОНИИ У ДЕТЕЙ.

19. Мурадова, Р. Р., & Хайдаров, М. М. (2020). ФОТОТОКСИЧЕСКИЕ И ФОТОАЛЛЕРГИЧЕСКИЕ РЕАКЦИИ ПРИ ИСПОЛЬЗОВАНИИ СОВРЕМЕННЫХ ЛЕКАРСТВЕННЫХ СРЕДСТВ И НЕКОТОРЫХ РАСТЕНИЙ. Вопросы науки и образования, (37 (121)), 41-44.
20. Хакимов, Э. А., Тагаев, К. Р., & Хайдаров, М. М. (2019). ГЕМАТОЛОГИЧЕСКИЕ ПОКАЗАТЕЛИ КРОВИ У ДЕТЕЙ С ОЖОГОВОЙ ТРАВМОЙ. Детская хирургия, 23(1S4), 63-63.
21. Rustamovich, A. I., Negmatovich, T. K., & Fazliddinovich, S. D. (2022). БОЛАЛИКДАН БОШ МИЯ ФАЛАЖИ ФОНИДА РИНОСИНУСИТИ БОР БЕМОРЛАРДА БУРУН БЎШЛИҒИ МУКОЦИЛИАР ТРАНСПОРТИ НАЗОРАТИ ТЎҒРИСИДАГИ ЗАМОНАВИЙ ҚАРАШЛАР (адабиётлар шарҳи). JOURNAL OF BIOMEDICINE AND PRACTICE, 7(2).
22. Абдурахмонов, И. Р., & Шамсиев, Д. Ф. (2021). Эффективность применения местной антибиотикотерапии в лечении параназального синусита у детей с церебральным параличем. In НАУКА И ОБРАЗОВАНИЕ: СОХРАНЯЯ ПРОШЛОЕ, СОЗДАЁМ БУДУЩЕЕ (pp. 336-338).
23. Абдураҳмонов, И. Р., & Шамсиев, Д. Ф. (2021). Болаликдан бош мия фалажи билан болалардаги ўткир ва сурункали параназал синуситларни даволашда мукорегуляр дори воситасини самарадорлигини ўрганиш. T [a_XW [i [S US S_S^[ùe YfcS^, 58.
24. Siddikov, O., Daminova, L., Abdurakhmonov, I., Nuralieva, R., & Khaydarov, M. OPTIMIZATION OF THE USE OF ANTIBACTERIAL DRUGS DURING THE EXACERBATION OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE. Turkish Journal of Physiotherapy and Rehabilitation, 32, 2.
25. Тураев, Х. Н. (2021). Абдурахмонов Илхом Рустамович Влияние будесонида на качество жизни пациентов с бронхиальным обструктивным синдромом. Вопросы науки и образования, 7, 132.
26. Farrukh S. ORGANIZATION OF DIGITALIZED MEDICINE AND HEALTH ACADEMY AND ITS SIGNIFICANCE IN MEDICINE //Science and innovation. – 2023. – Т. 2. – №. Special Issue 8. – С. 493-499.
27. Абдурахманов, И., Шамсиев, Д., & Олимжонова, Ф. (2021). Изучение эффективности мукорегулярных препаратов в лечении острого и хронического параназального синусита при детском церебральном параличе. Журнал стоматологии и краниофациальных исследований, 2(2), 18-21.
28. Абдураҳмонов, И. Р., & Шамсиев, Д. Ф. (2023). БОШ МИЯ ФАЛАЖИ ФОНИДАГИ ПАРАНАЗАЛ СИНУСИТЛАРНИ ДАВОЛАШДА ЎЗИГА ХОС ЁНДАШИШ. MedUnion, 2(1), 14-26.
29. Орипов, Р. А., Абдурахмонов, И. Р., Ахмедов, Ш. К., & Тураев, Х. Н. (2021). ОСОБЕННОСТИ ПРИМЕНЕНИЕ АНТИОКСИДАНТНЫХ ПРЕПАРАТОВ В ЛЕЧЕНИИ НЕЙРОДЕРМИТА.
30. Ахмедов, Ш. К., Тураев, Х. Н., Абдурахмонов, И. Р., & Орипов, Р. А. (2021). НЕКОТОРЫЕ ОСОБЕННОСТИ ТАКТИКИ ПРОДУКТИВНОГО ЛЕЧЕНИЯ ХРОНИЧЕСКОЙ КРАПИВНИЦЫ.
31. Абдурахмонов, И. Р. (2021). Исследование мукоцилиарной транспортной функции слизистой оболочки полости носа у больных с параназальным синуситом на фоне детского церебрального паралича. In Актуальные аспекты медицинской деятельности (pp. 256-259).
32. Абдурахмонов, И. Р., & Тураев, Х. Н. (2022). ОПЫТ ПРИМЕНЕНИЯ СИНУПРЕТА С АНТИБАКТЕРИАЛЬНЫМИ ПРЕПАРАТАМИ В КОМПЛЕКСНОЙ ТЕРАПИИ

Vol. 2 No. 7 (2024)
ISSN: 2995-5483

РИНОСИНУСИТОВ У БОЛЬНЫХ ДЕТСКИМ ЦЕРЕБРАЛЬНЫМ ПАРАЛИЧОМ. Достижения науки и образования, (2 (82)), 88-92.

33. Abdurakhmanov, I., & Shernazarov, F. (2023). SPECIFIC ASPECTS OF TREATMENT OF CHRONIC RHINOSINUSITIS IN CHILDREN. Science and innovation, 2(D10), 164-168.