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GASTROENTERITIS CAUSED BY CONDITIONALLY PATHOGENIC MICROFLORA IN YOUNG CHILDREN

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Abstract: About a billion episodes of diarrhea occur in young children every year. Symptoms accompanying acute gastroenteritis include malaise, abdominal pain and cramps, nausea, vomiting and diarrhea, which usually last from 1 to 5 days, but sometimes up to 14 days. Diarrhea caused by opportunistic microflora in children can be associated with various causes. Opportunistic pathogens are usually present in the human body, but under certain conditions they can become pathogenic and cause disease. Here are several possible causes of diarrhea in children associated with conditionally pathogenic microflora. In this case, an imbalance of microorganisms in the intestine occurs, when conditionally pathogenic bacteria begin to predominate over beneficial ones. This pathology is caused by the use of antibiotics, which can upset the balance of microorganisms in the intestine and contribute to the development of diarrhea.

Keywords: microbial cells, colonization, opportunistic, children.

The total biomass of microbial cells in the gastrointestinal tract (GIT) of an adult is on average 3–4 kg. The gastrointestinal tract is home to about 450 species of microorganisms, and the total number of cells reaches 1014, which exceeds the number of cells of the macroorganism.

The intestinal microflora is divided into protective, saprophytic and opportunistic. The protective microflora that forms the basis of the intestinal microflora is represented by anaerobes - bifidobacteria (108-1010) and lactobacilli (106-108), which form a protective biofilm on the surface of the mucous membrane, and aerobes - Escherichia coli (E. coli) with normal enzymatic properties (107-108). 108).

These microorganisms provide colonization resistance - the stability of normal microflora and the prevention of colonization of the host organism by foreign microorganisms. Saprophytic microflora is represented by epidermal and saprophytic staphylococcus, enterococci, yeast, neisseria and other microorganisms that, under certain conditions, can exhibit their pathogenic properties.

Methods: The nutrient medium for saprophytes are the end products of the macroorganism's vital activity. Conditionally pathogenic (opportunistic) microorganisms under normal conditions are

normal inhabitants of the human gastrointestinal tract, skin, and respiratory tract, but under certain conditions they can cause a pathological process. Currently, there is an increase in the number of diseases caused by opportunistic microorganisms.

This group of microorganisms includes β-hemolytic streptococcus, spore-bearing anaerobes, Staphylococcus aureus (S. aureus), fungi of the genus Candida, gram-negative enterobacteria (Proteus, Klebsiella, Escherichia coli with altered properties, etc.), Acinetobacter, Citrobacter. In some children, opportunistic microorganisms in an amount of no more than 102–103 can be normally detected in the stool. The composition of microflora in different parts of the intestine varies. In general, the largest number of different microorganisms is determined in the large intestine.

Results: In order to identify the causes of dyspeptic disorders in children, 668 bacteriological cultures of feces were analyzed for the period from May 1, 2022 to May 1, 2023 in the bacteriological laboratory of the Fergana Medical Institute of Public Health. Standard bacteriological examinations of stool were carried out to determine sensitivity to antibiotics using the diffusion-disk method.

Thus, more than 85% of those studied were children under 1 year of age. At the same time, Staphylococcus aureus (Staph.aureus 10-4 – 10-5) was found in 485 people studied, Staph. epidermidis, while many patients lacked normal intestinal microflora (E.coli), Klebsiella10-6 was found in 45 patients, in the remaining cases: Ps.vulgaris, St. pneumoniae, Candida.

The following antibacterial drugs turned out to be the most sensitive: gentamicin, levomak, polymyxin, ceftriaxone, and the least sensitive were oxamp and roxibel.

Based on the above, it should be noted that currently there is an increase in opportunistic intestinal flora.

Discussion: Unlike older children and adults, in whom dysbiosis is always secondary and its main causes are antibacterial therapy and chronic diseases of the gastrointestinal tract, in newborns and infants the development of dysbiosis can be primary and is caused by factors such as intestinal dysbiosis, bacterial vaginosis in pregnant and nursing mothers, late breastfeeding, early artificial or mixed feeding, perinatal pathology, species microbial landscape and the degree of environmental contamination.

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