World of Science: Journal on Modern Research Methodologies

Volume 2 Issue 2, Year 2023
ISSN: 2835-3072
https://univerpubl.com/index.php/woscience

Features of the Microflora of the Gastrointestinal Tract in Chronic Inflammatory Diseases of the Upper Digestive Organs in Children

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Article Information

Received: December 26, 2022
Accepted: January 27, 2023
Published: February 28, 2023

Keywords:

ABSTRACT

The relevance of research. In the structure of the pathology of the digestive tract in children, the leading place is occupied by chronic inflammatory diseases of the upper parts of the digestive tract. Diseases are most often diagnosed in adolescence, which is one of the critical periods in ontogeny, when puberty begins, and the child's body, due to the existing functional and psychological instability, is at a higher risk of developing borderline and pathological conditions [6].

In recent years, the leading role of H. pylori in the etiology and pathogenesis of chronic gastroduodenal pathology has been actively discussed [2]. Eradication schemes for this microorganism have been developed and put into practice [7].

Diseases of the digestive system are among the most more common non-infectious pathologygies of childhood, occupying 2 months in frequency then after respiratory diseases [1, 2]. On today is not only missing trendtion to reduce the frequency of gastrointestinal pastology, but its steady growth is also noted. The prevalence of this pathology in recent years has increased from 8 to 12 thousand per 100 thousand children [1]. In modern conditions, the nature of the gastroenterological diseases in children undergoing op redundant changes. This is manifested "omolozhenie" chronic pathology of the food organsrhenium, gradual and imperceptible onset, emphasis recurrent course, which contributes to early disability of the child population [3, 4]. In the structure of the pathology of the digestive path in children the leading place is occupied by lesions of its upper divisions (VOPT) - esophagitis, gastritis, duodenitis, gastric ulcer and duodenum [5–7]. Debut gastroduodenal disorders in children of early age is most often regurgitation syndrome and vomiting [8–10]. Persistent regurgitation and vomiting are the main clinical symptoms inflammatory diseases of OPTO in children at an early age. Often already in newborns, including in preterm infants, with endoscopy diagnosing host inflammatory changes from the side WOPT. In 47.6% of young children with persistent regurgitation and vomiting during endoscopic research reveals changes in various parts of the digestive tract as isolated bathrooms, and combined [11]. Endoscopic French newborn study Chinese scientists, only 26% did not find no signs of mucosal damage loci of OPTO, while esophagitis was found wives in

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20.6% of infants, esophagitis - in 51.8% [12]. In 28% of cases, there was a combination of esophagusgogastritis with duodenitis in newborns and children early age [13].

Considering the high prevalence of inflammatory diseases of the OPTO in children of early age, attempts to find out the mechanism of their formation were quite natural. The study of clinical and pathogenetic aspects of gastroduodenal pathology is currently being carried out from a multifactorial standpoint. Diseases gastrointestinal tract (GIT) are considered polyetiological, and, consequently, the mechanisms leading to their development are complex and multifaceted. Currently, the role of the infectious factor in the development of inflammatory diseases of the gastroduodenal zone is being discussed. As is known, humans and animals are born sterile. However, already from the first moments of their birth, their skin and mucous membranes are seeded with microorganisms, the number and variety of which is determined by the mechanisms of childbirth, the sanitary state of the many regularities in the colonization of humans and animals by microorganisms have been identified [18]. In the first 2-3 weeks of life, the composition of the microflora of the digestive tract is constantly changing. In children who are breastfeeding breastfeeding (HS), prevailing in the composition intestinal microflora (CMF) are bifidobacteria (BB). While in artificially fed children (IV), the composition of CMF is more diverse and contains the same amounts of BB and bacteroids.

Despite the importance of H. pylori in causing inflammatory diseases of the digestive tract in older children and adults [1, 34-36], the etiological significance of this pathogen in newborns and infants is debated. According to French authors [37], H. pylori infection increases from 1.8% of children in the first year of life to 30% at 15 years of age. According to Polish researchers [38], H. pylori is detected in 5.4% of children aged 5 years, 29.2% - 10 years old and 65.4% - 18 years old.

Studies have been conducted to study H. pylori infection among newborns and infants whose mothers suffered from Helicobacter pylori associated forms of gastritis. The obtained data indicated that newborn children have passive immunity to Helicobacter pylori infection caused by transplacental transmission of specific maternal IgG, and Helicobacter pylori infection is not is causally significant in the genesis of stubborn regurgitation and vomiting in newborns [39].

Similar results were obtained by Guerlud M. et al., who found H. pylori in only one out of 20 examined newborns, while all children had signs of superficial catarrhal gastritis. Dynamic monitoring of these patients aged 14 months all showed negative results. The author concludes that despite the high prevalence of H.pylori among mothers, infection of newborns and infants is extremely rare [40]. This confirmed in the studies of Knyazeva I.V., when H. pylori was not detected in the study of biopsy specimens and the urease test in any sick child of early age with inflammatory diseases of the SHPT [10, 41]. Thus, today the features microecology of OPTO in inflammatory diseases of the esophagus, stomach, duodenum 12 in young children have not been studied enough, and the available data are sometimes contradictory.

A long process of adaptation of microbes to existence in certain conditions led to the fact that each section of the human digestive tract has its own relatively constant microflora, which is characterized by a certain qualitative and quantitative specificity, due to the morphological and functional features of the corresponding sections of the gastrointestinal tract [20, 21]. The human gastrointestinal tract is colonized by a huge number of microorganisms, which significantly exceeds the total number of human cells. In different parts of the gastrointestinal tract, the number of bacteria is different. All the microflora of the digestive tract is divided into obligate (main microflora), facultative (opportunistic and saprophytic microflora) and transient (random microorganisms) [22]. In the oral cavity and under acidic conditions, the number of microorganisms is small and ranges from 0 to 103 CFU per 1 ml content. While in the lower divisions Gastrointestinal tract, the number of microorganisms is significant higher. The main environmental factors that limit the reproduction of bacteria in the VOPR are the rapid

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movement of food masses, the secretion of bile, gastric juice and pancreatic juice. The environmental conditions of the large intestine are diametrically opposed, therefore, in this section of the gastrointestinal tract, the number of bacteria reaches 1013 CFU per 1 ml.content [23]. The esophagus and stomach are usually contaminated with microorganisms that enter here with food from the oral cavity. According to the few available information, the microflora of the esophagus is poor.

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