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ASSESSMENT OF THE COMPOSITION OF THE MICROFLORA OF THE OROPHARYNX AND INTESTINES IN CHILDREN WITH BRONCHOPULMONARY PATHOLOGY

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Background : Gut microbiota is known to influence local immune homeostasis in the gut and shape the developing immune system towards pathogen elimination and tolerance to self-antigens. Although the lungs have long been considered sterile, recent evidence using next-generation sequencing techniques has confirmed that the lower respiratory tract possesses its own local microbiota. Since then, there has been growing evidence that local respiratory and gut microbiota play a role in acute and chronic lung diseases in children. The concept of the so-called gut-lung axis was created, which describes the mutual influence of the local microbiota on distal immune mechanisms.

The purpose of this study was to study the clinical characteristics of the composition of the microflora of the oropharynx and intestines in children with bronchopulmonary pathology

Materials and methods of research : the study was conducted at the clinic of the Tashkent Pediatric Medical Institute, from September to December 2022, during periods of maximum seasonal rise in the incidence of acute respiratory diseases. A total of 82 patients were examined. All children who were repeatedly ill with acute respiratory infections included in the study were registered with a pediatrician for frequent acute respiratory infections that occurred against the background of chronic pathology of the ENT organs in 24.1% of cases.

Results: An assessment of clinical health indicators was carried out in 63 children aged 7-11 years who frequently suffer from acute respiratory infections; the comparison group included children aged 7-11 years who occasionally suffer from acute respiratory infections (n=19). Clinical examination revealed that active complaints due to the presence of chronic pathology were found in more than half of the patients (63.4 and 51.7%, respectively). Including gastroenterological complaints (pain and discomfort in the abdomen, aggravated after eating or not dependent on food intake, belching, nausea, loss of appetite, stool disturbances (constipation) were detected in 46.2% of patients in group 1 and 32.3% of patients 2 groups, vegetative-vascular complaints (general weakness, headaches, dizziness) in 22.3% of patients in group 1 and 19.7% of patients in group 2.

It should be noted that repeatedly ill children were characterized by more pronounced deviations in their somatic status; in addition, in this group there was a tendency ($p = 0.1$) to more frequent CGEP and reduced resistance ($p \leq 0.05$) in comparison with occasionally ill children . Significant impairments in the health of children caused by combined dysfunction of several organs and systems are undoubtedly an additional factor that has a negative impact on the child's overall anti-infectious reactivity and the effectiveness of health-improving measures.

The microflora of the oropharynx of those who were occasionally ill was characterized by less pronounced disturbances than that of those who were repeatedly ill: the absence of lactobacilli was detected in 80% of children, saprophytic Neisseria - 10%. A feature of those who were occasionally ill was the detection of additional microflora (40%), represented in half of the cases by *Staphylococcus aureus* and significantly less frequent detection of representatives of the transient group than in children repeatedly suffering from acute respiratory infections ($p = 0.05$). Disturbances of the intestinal microflora were manifested by a decrease in obligate representatives: a deficiency of 1-2 orders of magnitude of bifidobacteria (71.2% of repeatedly ill and 70% of episodic ill children), a decrease in the growth of lactobacilli (53.2% and 55%) and full-fledged E. coli (91.4 % and 80%); increase in lactose-negative (18.1% - in children who are repeatedly ill with acute respiratory infections) and hemolyzing Escherichia (36.2% of repeatedly ill and 25% of episodically ill children). In children who are repeatedly ill with acute respiratory infections, fungi of the genus *Candida* were detected significantly more often ($p = 0.047$) than in episodic patients. Only in the group of children repeatedly suffering from acute respiratory infections,

microorganisms were found in 12.9% of cases, indicating the depth of intestinal dysbiosis (*Klebsiella spp , Proteus spp , Citrobacter).*

Conclusions: thus, we can assume that changes in the qualitative, quantitative and functional nature of the intestinal microflora in children who are repeatedly ill were more pronounced than in those who are occasionally ill, which is apparently due to the inability of the microflora to complete independent recovery against the background of pathophysiological mechanisms that arise during and after a respiratory illness.