# INTESTINAL MICROFLORA IN THE GENESIS OF IMMUNE DEFICIENCY IN CHILDREN WITH RECURRENT BRONCHITIS

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In recent years, accumulating evidence has demonstrated that, under physiological conditions, the intestinal microflora plays a crucial regulatory role, promoting the maturation of the immune system and maintaining its balanced functioning throughout life. Despite numerous studies on the etiology, epidemiology, and diagnosis of intestinal dysbiosis, many pathogenetic mechanisms remain insufficiently understood. The interdependence between the immune and microecological systems in the child's body underscores the scientific and clinical relevance of investigating immune function in children with recurrent bronchitis in the context of intestinal dysbiosis.

**Objective.** To examine the role of intestinal microflora in the development of secondary immunodeficiency in children with recurrent bronchitis.

**Materials and methods.** A total of 93 children aged 1 to 7 years with recurrent bronchitis during the exacerbation phase (Group 1: 62 boys and 31 girls) and 30 patients in remission (Group 2: 17 boys and 13 girls) were enrolled in the study. The control group included 20 children with episodic acute respiratory viral infections (ARVI). Patient histories and medical records were analyzed, and current somatic status was assessed. Laboratory evaluations included complete blood counts, stool analyses, and determination of dysbiosis severity based on fecal microflora profiles. The immune system was assessed quantitatively by measuring serum concentrations of immunoglobulins G, A, and M, as well as the relative proportions of T lymphocytes and their regulatory subpopulations (T-helper and T-suppressor cells), B lymphocytes, and CD4, CD8, and CD16 markers. The immunoregulatory index (IRI) was also calculated.

**Results and Discussion.** Bacteriological examination confirmed intestinal dysbiosis in 100% of patients during exacerbation and in 56.7% during remission. In the exacerbation phase, dysbiotic disturbances of grades II–III severity predominated, whereas grades I–II were more typical during remission. Assessment of the immune status in children with recurrent bronchitis complicated by intestinal dysbiosis revealed deficiencies in both cellular and humoral immunity. The immunoregulatory index, reduced to 1.01 during exacerbation, remained below normal levels even during remission. These alterations in immune function, as an integrated reflection of adverse cumulative factors, may explain the high frequency of disease recurrence observed in this cohort.

**Conclusions.** A clear relationship and interdependence were established between disturbances in intestinal microbiocenosis, immune dysfunction, and bronchitis exacerbations. These findings highlight the need for a comprehensive, microbiota-oriented approach to the management of children with recurrent bronchitis.