# CHRONIC PANCREATITIS AT CHILDREN OF THE REPUBLIC OF SAKHA (YAKUTIA)

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Introduction: the relevance of the problem of pathology of the gastrointestinal tract in children is determined by a number of circumstances. In the structure of General morbidity in children one of the first places pathologies of the gastrointestinal tract [1]. Chronic pancreatitis in the structure of diseases of the digestive system in children is, in the opinion of various scholars, from 5% to 25% of patients with gastroenterological diseases and 0.1 to 0.5% of the total number of children enrolled in the children's surgical Department [1, 2]. The study of patterns and risk factors for the formation, diagnosis and tactics of treatment of pancreatic diseases in children in the far North appears to be relevant because of the high prevalence of this disease, as well as the dietary habits of children in the far North. [1,2]. The purpose of the study: the Study of the immune and cytokine system in children with chronic pancreatitis, living in different regions of the Republic of Sakha (Yakutia). Materials and methods: the study included 100 children with reactive pancreatitis aged 7 to 14 years, and 2000 healthy children control group. The standards developed by the staff of Immunological laboratory Diagnostic center of the Ministry of health of RS (I) together with the Institute of health of the RS (I) (PL. 1 shows the ages of the children from 7 to 14 years). All studies were conducted in the period of low temperatures (winter). Determination of subpopulations of T - and b-lymphocytes was performed by ELISA using monoclonal antibodies.

Determination of immunoglobulins was carried out turbidimetrically method by measuring the rate of light scattering in the formation of immune complexes in the kinetic measurement at multiscale. Level FNO, IFN in serum were determined using ELISA method, according to the instructions supplied with the kits antibodies. Kits for the determination of interleukins by

ELISA kits reagents "Pro Con IL-1", "Pro Con IF gamma" (LLC "Protein contour" St. Petersburg). Principles of solid-phase ELISA based on the fact that the enzyme horseradish peroxidase, covalently attached to antibodies, while maintaining the biological activity (the ability to interact with the substrate by binding with immobilized immune complex formed on "sensitized" wells, which were incubated your samples and standard reagents. Statistical calculations made on the basis of applied programs "SAS" and "SPSS" In the analysis of contingency tables (estimates of the correlation of the characteristic and evaluation of significance of differences between groups) used the criterion 2 (Pearson and likelihood ratio and Fisher's exact test. Comparison of mean values was performed univariate analysis of variance using T-student criterion for assessing the equality of mean F-Fisher test to assess equality of variance.

The results of the study: the results of the analysis for the last 5 years there has been an increase in pathology of the gastrointestinal tract. Gastrointestinal diseases take the second place in the structure of infant pathology.

In children of school age there has been an increase of diseases of the pancreas, diseases of gallbladder, biliary tract, functional disorders of the stomach, gastritis and gastroduodenitis. Revealed a high prevalence of diseases of the gastrointestinal tract in children of the Republic of Sakha (Yakutia). In the analysis of changes of immune status in children with chronic pancreatitis in comparison with the group of healthy children revealed the greatest decline in T-cell-mediated (CD3+, CD4+, CD16+), components of complement C3 and C4, the decline In-cell link CD22+. These changes show antigenic stimulation and decreased immune resistance in children with chronic pancreatitis. According to the literature, during exacerbation of chronic pancreatitis, the content of T-lymphocytes decreases(table), in remission of their value increases [1]. Currently there is no consensus about the pathogenetic role of b lymphocytes in chronic pancreatitis. Thus, some researchers point to the increase in the number of b-lymphocytes[2], some researchers indicated the decrease in the content of b-lymphocytes in reactive pancreatitis [1], which coincides with the results of this study. The complementary reduction of activity by a number of authors due to the presence antibodies[1,2] and their involvement in immune responses to consumption of complement. The results of this study coincide with the literature data[1,2], these changes are explained by the formation of immune complexes with identified antibodies to trypsin, insulin.

In children with chronic pancreatitis significantly elevated the level of the CEC and reduced the

content of IFN-γ FNO-α in comparison with the group of healthy children . The changes indicate a decrease in antiviral defense in children with chronic pancreatitis. Table 1

Indicators of immune status in children of Sakha (Yakutia) with pancreatitis.

| Indicators | The performance Standards indicators of Sakha (Yakutia) for children(n = 300), M ± M | Children with pancreatitis(n = 100), M ± M |
|---|---|---|
| CD3+ | 52,6 ± 1,7 | 20,1 ± 1,02* |
| CD4+ | 26,3 ± 0,7 | 11,2 ± 0,7* |
| CD8+ | 22,5 ± 0,23 | 16,2 ± 1,0 |
| CD16+ | 23,2 ± 0,54 | 4,6 ± 1,1* |
| IRI | 1,18 ± 0,64 | 0,7 ± 0,02 |
| IgA | 2,34 ± 0,69 | 1,3 ± 0,3* |
| IgG | 13,3 ± 0,16 | 9,2 ± 0,7 |
| IgM | 1,6 ± 0,03 | 0,9 ± 0,09 |
| CD22+ | 19,8 ± 0,16 | 9,9 ± 1,9 |
| C3 | 0,67 ± 0,12 | 0,20 ± 0,02* |
| C4 | 0,34 ± 0,05 | 0,11 ± 0,02* |
| ЦИК | 96,8 ± 0,132 | 194,2 ± 1,5* |

$p < 0.05$ between the standards and indicators obtained in each group.

The results of the study indicate a need for further study with the aim of developing effective schemes of immunomodulation.

Conclusions:

1. The high incidence of gastrointestinal tract in children of the far North associated with living in an extreme climate and geographical conditions, the changing nature of supply and the reduction of socio-economic standard of living of the population, which requires the introduction of programs of disease prevention and health improvement of the children's population of the Northern districts [3,4].

2. In children with chronic pancreatitis reduced cellular immunity (BG3+, CD4+, CD8+, CD+, DM 22+), the decrease in T-cell level and components of complement.

LITERATURE

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