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"MORPHOLOGICAL AND MORPHOMETRIC ANALYSIS OF CYSTIC FIBROSIS IN CHILDREN IN UZBEKISTAN."

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Abstract. Cystic fibrosis or cystic fibrosis or Landsteiner-Fanconi disease is a hereditary systemic autosomal recessive exocrinopathy, characterized by early clinical manifestations of the respiratory tract, gastrointestinal system and other organs. Among all the diseases that occur in newborns, cystic fibrosis occurs in 1 in 2 thousand children.

Key words: cystic fibrosis, intestinal form, immunohistochemistry, newborns, heredity.
Калит сузлар: муковисцидоз, ичак шакли , иммуногистокимёвий, янги тугилган болалар, ирсийланиш.
Ключевые слова: муковисцидоз, кишечная форма , иммуногистохимия, но ворожденные, наследственность.

Relevance of the topic. This genetic disease is hereditary and has a regional distribution. According to statistics, in European countries, the intestinal form of cystic fibrosis is diagnosed in adults and children, 5% of the population of this country is considered a carrier of the gene defect and creates the basis for the development of the disease in newborns. The cause of pathological changes in the human body is the accumulation of secretions produced by the exocrine glands. According to WHO, the prevalence of the disease in newborns is from 1:600 to 1:1200. Every year, 45,000 children are born with cystic fibrosis worldwide. (In Russia, up to 300, in Moscow, up to 10.) The number of adults suffering from this disease is constantly increasing and currently, for example, in Russia, there are 1,600 people under surveillance for cystic fibrosis. In Uzbekistan, the number of patients with cystic fibrosis under control exceeds 200,000. In previous years, patients lived an average of 5 years, but today, due to the effectiveness of early diagnosis and treatment, life expectancy in countries with a developed cystic fibrosis, such as America, Canada, and Great Britain, is up to 40 years, and in Russia it is up to 16 years (23 years in Moscow and St. Petersburg).

The three forms of cystic fibrosis are as follows:

1. Lung form - 15-20% (clinically unknown in other organs)
2. Mixed form - 75-80% (with damage to the lung and other organs)
3. Intestinal form - 5%.

Cystic fibrosis is inherited in an autosomal recessive manner, characterized by a mutation in the CFTR polypeptide gene in the white population and the location of this gene on the long arm of chromosome 7 and the encoding of the cystic fibrosis membrane-associated oxyl. Cystic fibrosis is inherited in an autosomal recessive manner, characterized by a mutation in the CFTR polypeptide gene in the white population and the location of this gene on the long arm of chromosome 7 and the encoding of the cystic fibrosis membrane-associated oxyl. The most common gene form is F508del, which is found in 85% of alleles.

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CFTR is a cyclic adenosine monophosphate (cAMP) channel that controls the movement of chlorides and the passage of chloride, sodium, and bicarbonate across epithelial membranes. The disease occurs only in homozygotes. In severe cases of CFTR gene mutation, functional impairment of the pancreas is observed, which leads to impaired absorption of vitamins and nutrients, which is manifested by stunted growth and physical development, and in adults, diabetes mellitus. At the same time, it is important to study the specific features of genetic and immunological markers in cystic fibrosis. Currently, intensive immunohistochemical studies show that each disease has its own unique immunomorphological features in the development of diseases. In cystic fibrosis, the chronic inflammatory process is maintained due to an imbalance of pro- and anti-inflammatory cytokines. This can be proven on the basis of an examination of children. In other words, in children with cystic fibrosis, there is an imbalance between pro- and anti-inflammatory cytokines: especially in children with pseudomonas aeruginosa infection, IL-1b and FNOs increase against the background of a decrease in IL-10 and IL-4. (na baze NII medical geneticist TNTs SO RAMN, g. Tomsk, immunological observation and sperm hematology, immunology and morphology TsNIL SibGMU.)

Research objective: To develop an algorithm for the assessment and diagnosis of morphological and morphometric characteristics of cystic fibrosis in children in Uzbekistan by age and sex.

Research methods and materials. The material from the Republican Center for Pathological Anatomy was obtained from 75 infants diagnosed with cystic fibrosis and died in Uzbekistan in 2015-2025 and was stained with hematoxylin-eosin, a widely used method in the department.

Results: According to the research source, a total of 2009 deaths were recorded among children in 2015-2025. Of these, 75 infants were diagnosed with cystic fibrosis and died based on a clinical diagnosis. Of these 75 infants, 29 were boys and 46 were girls. Of these, the main analysis among children under 1 year of age revealed a higher mortality rate among children under 5 months of age. When analyzed by region, Tashkent city and Tashkent region showed a higher rate. This was based on the results of infants under 1 year of age who were admitted and died with a definite diagnosis.

Discussion; It can be said that when analyzing the total number of 75 children who died of cystic fibrosis between 2015 and 2025 by gender, the incidence of the disease was higher in girls than in boys, and the percentage of boys was 38.6%, and girls was 61.3%. Of these, the number of children under 1 year old who were diagnosed with cystic fibrosis based on a clinical diagnosis and died was 75. Of these 75 children, 29 were boys and 46 were girls. Of these, the main analysis among children under 1 year old revealed a higher mortality rate among children under 5 months old. When studying by region, it was revealed that Tashkent city and Tashkent region had a higher rate. This was done based on the results of children under 1 year old who were admitted and died after being accurately diagnosed. In the process of work, other tools are also used to widely implement the assessment and diagnosis of immunological status.

Conclusion: In conclusion, all types of cystic fibrosis develop in different proportions depending on the occurrence. In order to diagnose cystic fibrosis in newborns and their immunohistochemical study, autopsies of children of different sexes were performed and diagnosed. According to the results of the diagnosis, it was proven that the most common type of cystic fibrosis among the pulmonary, intestinal and mixed forms of cystic fibrosis is the intestinal form. This indicates that it increases the mortality rate among children and causes the rapid development of the process.

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