

PANCREAS CONDITION IN CHILDREN WITH BRONCHIAL ASTHMA BASED ON CLINICAL STUDIES

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Background. Bronchial asthma in children remains one of the most common chronic respiratory diseases, characterized by a progressive course, a high incidence of comorbid conditions, and a significant impact on patients' quality of life. In recent years, increasing attention has been paid to the systemic nature of bronchial asthma, in which the pathological process extends beyond the respiratory system and affects the gastrointestinal tract, including the pancreas.

The pancreas plays a key role in digestion and metabolic regulation, and its functional impairment in children can lead to maldigestion syndrome, decreased nutritional status, and exacerbation of the underlying disease. In children with bronchial asthma, functional changes in the pancreas can be caused by chronic inflammation, immune mechanisms, hypoxic conditions, and long-term use of disease-modifying anti-asthma therapy.

Despite the existence of individual studies devoted to gastrointestinal damage in bronchial asthma, data on the condition of the pancreas in children remains limited and often contradictory. In clinical practice, functional

disorders of the pancreas often occur latently, complicating their timely diagnosis and treatment.

Therefore, studying the pancreas in children with bronchial asthma using clinical trials is a relevant and valid approach that allows for a broader understanding of comorbid pathology, optimized diagnostic approaches, and improved comprehensive management of this patient population.

The aim of this study is to study the pancreas in children with bronchial asthma and identify its functional impairments during the course of the disease.

Materials and Methods. The study included 47 children with bronchial asthma aged 11 to 15 years. Boys predominated among the subjects, accounting for 61.7%, while girls accounted for 38.3%. Gastrointestinal complaints were identified in 27 patients, accounting for 57.4% of observations. The remaining children had no clinical manifestations of gastrointestinal disorders.

All patients underwent a comprehensive clinical examination, including assessment of complaints, medical history, and physical examination. Pancreatic function was assessed based on clinical and laboratory parameters, as well as instrumental examination data. The results were statistically analyzed using standard variation statistics; differences were considered statistically significant at $p < 0.05$.

Results and Discussion. During the study, functional pancreatic disorders were identified in 29 of the 47 children with bronchial asthma examined, accounting for 61.7% of cases. Moreover, pathological changes were recorded significantly more frequently in patients with gastrointestinal complaints—81.5%, while among children without gastrointestinal complaints, functional pancreatic disorders were detected in only 35.0% of cases.

The most common clinical manifestations observed in the children examined were dyspeptic syndrome, including intermittent epigastric pain and

decreased appetite, which were recorded in 55.3% of patients. Laboratory signs of functional pancreatic insufficiency were detected in 48.9% of children and manifested as a moderate decrease in enzymatic activity. According to instrumental studies, changes in the functional state of the pancreas, such as diffuse functional abnormalities, were detected in 57.4% of patients.

Analysis of the obtained data revealed that the frequency and severity of pancreatic functional disorders increased with longer duration of asthma. Thus, in children with a disease duration of more than 5 years, functional changes were detected in 72.2% of cases, compared with 41.7% in those with a disease duration of less than 3 years. These results indicate the systemic nature of asthma and confirm the involvement of the digestive organs in the pathological process.

Thus, the identified functional changes in the pancreas in children with asthma are clinically significant and can contribute to the severity of the underlying disease, justifying the need for their early diagnosis and consideration in the comprehensive management of this patient population.

The study demonstrated that the majority of children with asthma exhibit functional disorders of the pancreas, which are often latent and remain underestimated in clinical practice. The presence of gastrointestinal complaints is associated with a higher frequency and severity of functional changes in the pancreas. The data obtained confirm the systemic nature of bronchial asthma and indicate the involvement of the digestive organs in the pathological process, which can influence the course and management of the underlying disease. Given the identified characteristics, assessment of the pancreas should be considered an important component of a comprehensive examination of children with bronchial asthma.

Conclusions:

1. In children with bronchial asthma, functional disorders of the pancreas are detected in 61.7% of cases.
2. The presence of gastrointestinal complaints is accompanied by a significantly higher frequency of functional changes in the pancreas.
3. The frequency of functional disorders of the pancreas increases with a longer course of bronchial asthma.
4. The identified changes confirm the systemic nature of bronchial asthma and justify the need for a comprehensive clinical and functional examination of children with this disease.

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