

## Specificity of the Treatment of Caries in Children with Chronic Pyelonephritis

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**Abstract:** In addition to a high indicator in the composition of children's diseases, the pathology of the urinary system attracts attention with the severity of the prognosis. Unspecified diseases and late treatment often lead to the development of a pathological process and the development of chronic kidney failure, which leads to a delay in the growth and development of Children, Disability and a significant decrease in life expectancy.

**Keywords:** Chronic renal failure, pyelonephritis, young child, genitourinary.

The existence of a relationship between dental diseases chronic somatic pathologies in children has been confirmed by many studies. In particular, data on the prevalence of dental caries in children with chronic pyelonephritis are contradictory and, according to various authors, occur between 69.8% and 97%. A large number of studies are devoted to the study of the dental condition in children with chronic kidney failure, which is an unfavorable result of chronic pyelonephritis. According to many literature, the development of measures for the prevention and treatment of dental diseases in children with chronic renal failure is mainly aimed at xerostomia, combating dental hyperesthesia, correcting the content of trace elements and the acid-base condition of the mixed saliva, improving oral hygiene.

However, currently, the data are not systematized in the domestic literature and are presented in the form of a single report about the effect of chronic pyelonephritis on the acid-base balance of the oral cavity and the buffer capacity of the saliva, the violation of which, along with the infectious factor, is a leading link in the pathogenesis of dental caries and periodontal diseases. Foreign literature also contains information on this problem, but they do not fully cover the problem under study and are not included in the system.

The results of the studies conducted are a theoretical base for the development of modern dental approaches aimed at the treatment and Prevention of primary dental diseases, dental caries in children with chronic pyelonephritis. Dental caries is based on the feasibility of using dental treatment-preventive measures, which are given an assessment of the complex treatment and Prevention of diseases, and developed against the background of the treatment of the underlying disease in patients with chronic pyelonephritis. The high efficiency of using an electric toothbrush in oral care in children with chronic pyelonephritis is confirmed by clinical, clinically functional methods. The complex, developed for the treatment and Prevention of major dental diseases, allows to increase the level of Dental Wellness in children and the effectiveness of dental care in children with patients with chronic pyelonephritis.

The scientific and theoretical significance of the studies lies in the scientific justification of the specifics of the identification of clinical symptoms of the main diseases of the oral cavity in children with chronic pyelonephritis. With clinical-functional, biochemical studies, an assessment of the methods of prophylaxis and treatment of dental caries diseases has been made, as well as the positive effect of the proposed complex for the treatment of primary dental diseases and Prevention has been proven.

The practical significance of the work consists in the fact that as a perfect integrated approach to practice and as a warning to exacerbation of the disease, a choice of effective methods of treating and prophylactic diseases of the oral cavity in children with chronic pyelonephritis is proposed.

The practical significance of the work is that in order to apply it to practice, a perfectly integrated approach and an improved algorithm has been proposed to choose effective methods of dental treatment and Prevention, which warn the organs of the oral cavity in children with chronic pyelonephritis from the severe course and recurrence of the disease and prevent it.

In recent decades, there has been a significant increase in chronic pyelonephritis in children, which is associated not only with the introduction of modern diagnostic methods into clinical practice, but also with the growth of unfavorable environmental factors.

Childhood dental caries is a multifactorial disease with many biological risk factors. There are also risk factors such as artificial feeding of the child in infancy, impaired oral microflora, frequent use of easily digestible foods. Carbohydrates, poor oral hygiene, intrauretin and postpartum developmental disorders, malnutrition, and parents' low level of education about diseases are included.

In 1998, the International Institute for Life Sciences (ILSI) published the monograph "caries Preventive Strategies" () on the etiology, pathogenesis and Prevention of dental caries. In this article, the authors identify two groups of factors that should be considered when assessing the risk of caries. The first group includes factors that damage dental tissues - plaque, easily digestible carbohydrates, the composition and functions of saliva. The second group includes features associated with the development of caries, but not directly involved: socio-economic factors, dental diseases and general somatic diseases.

The current theory of caries etiology and pathogenesis recognizes the priority of the chemical-parasitic concept. Many researchers have shown the polyethiological nature of periodontal diseases, and inflammatory reactions triggered by oral microflora play a large role in their development.

Bacterial colonization of tooth surfaces is an important etiological factor in the most common diseases of the oral cavity-dental caries and periodontal disease. There are many studies in foreign literature that show the leading role of *Streptococcus mutans* in the appearance and development of caries in temporary, removable and permanent teeth. Sticky polysaccharides help bacteria find their place in the plaque and ensure their adhesion to the enamel. The contact of the enamel apatite surface with bacterial polysaccharides is provided by hydrogen bonds, SA<sup>2+</sup> ions and adessin proteins. Adessin proteins include glycoprotein with a molecular weight of 200 KDA, released by streptococci.

The development and course of dental caries is largely determined by the ratio of processes of Re- and demineralization of the surface layer of enamel. Remineralization of the teeth is provided by the components of the oral fluid. At the same time, plaque prevents the necessary micro- and Macroelements from entering the enamel from the oral fluid, thereby disrupting the processes of mineralization and remineralization of tooth enamel.

In children, such changes develop faster due to low mineralization of caries hard tooth tissue, the furnace of demineralization becomes a carious cavity faster than in adults. It has been found that children have fewer mineral components in their newly erupted teeth than adults in enamel, characterized by morphological and functional maturity. During the period of complete mineralization of enamel, molars are considered to have the highest sensitivity to caries.

Tooth resistance to caries is also largely determined by the composition and properties of the saliva. Experimentally, it was found that  $RN = 6.2$  is a critical value of the hydrogen index, in which a clear violation of the structural properties of the saliva develops, and its mineralization potential decreases. The shift of PH in the saliva to the acid side leads to a decrease in the level of extreme saturation of the oral fluid with calcium and phosphate ions and an increase in the active concentration of sodium ions. Rinsing the mouth with a 5% glucose solution was found to cause a decrease in  $rn$  within 10-12 minutes after the procedure; it would take more than 1 hour to restore  $rn$ . The dynamics of RN changes in patients vary, allowing this indicator to be used as a specific test to divide people into caries-resistant and caries-sensitive groups.

As a result of the analysis of data from domestic and foreign researchers, a patient with chronic pyelonephritis disrupts calcium-phosphorus metabolism in the body of children, in some cases leads to osteoporosis, which negatively affects the processes of formation, mineralization and remineralization of hard tissues of the teeth. Acidosis events that accompany hyperparathyroidism can alter the acid-base and microbiological balance in the oral cavity. Some information on this problem has been found in foreign literature, but they are incomplete and unsystematic. Data on the possible relationship between the prevalence and severity of periodontal disease in children with chronic pyelonephritis, the stage of the underlying disease, is very low, and the extent of changes in the oral system in children in such a disease has not been determined.

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