

**MAIN RISK FACTORS FOR THE DEVELOPMENT OF ORAL CAVITY
LESIONS IN CHILDREN WITH CHRONIC KIDNEY DISEASE**

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ANNOTATION

Chronic kidney disease (CKD) is a significant medical and social problem associated with commonly observed with increased death rates due to terminal renal failure and cardiovascular complications. In pediatric patients, CKD is accompanied by metabolic, immunological, and mineral disorders that adversely affect the condition of the oral cavity. The aim of this study was to identify the main risk factors contributing to the development of oral cavity lesions in children with chronic kidney disease. The study analyzed clinical, laboratory, and dental indicators in children with various stages of CKD. The results demonstrated a high prevalence of gingivitis, periodontitis, enamel hypoplasia, xerostomia, and dental caries. The leading risk factors included uremic intoxication, calcium-phosphorus metabolism disorders, decreased immunity, poor oral hygiene, long –term drug therapy and dietary restrictions. Timely identification of risk factors and comprehensive dental approach are essential for preventing complications and improving the quality of life of pediatric patients with CKD.

Keywords: chronic kidney disease, children, oral cavity, risk factors, gingivitis, caries.

**У ДЕТЕЙ ОСНОВНЫЕ ФАКТОРЫ РИСКА РАЗВИТИЯ ПОВРЕЖДЕНИЙ
ПОЛОСТИ РТА С ХРОНИЧЕСКОЙ БОЛЕЗНЬЮ ПОЧЕК**

ТАШКЕНТСКИЙ ГОСУДАРСТВЕННЫЙ МЕДИЦИНСКИЙ УНИВЕРСИТЕТ

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АННОТАЦИЯ

Хроническая болезнь почек (ХБП) является серьезной медицинской и социальной проблемой, связанной с высокой распространенностью, инвалидностью и повышенной смертностью вследствие терминальной почечной

недостаточности и сердечно-сосудистых осложнений. У педиатрических пациентов ХБП сопровождается метаболическими, иммунологическими и минеральными нарушениями, которые негативно влияют на состояние полости рта. Целью данного исследования было выявление основных факторов риска, способствующих развитию поражений полости рта у детей с хронической болезнью почек. В ходе исследования были проанализированы клинические, лабораторные и стоматологические показатели у детей с различными стадиями ХБП. Результаты продемонстрировали высокую распространенность гингивита, пародонтита, гипоплазии эмали, ксеростомии и кариеса зубов. К основным факторам риска относятся уремическая интоксикация, нарушения кальций-фосфорного обмена, снижение иммунитета, плохая гигиена полости рта, длительная лекарственная терапия и диетические ограничения. Своевременное выявление факторов риска и комплексный стоматологический подход имеют важное значение для профилактики осложнений и улучшения качества жизни педиатрических пациентов с ХБП.

Ключевые слова: хроническая болезнь почек, дети, полость рта, факторы риска, гингивит, кариес.

Surunkali buyrak kasalligiga chalingan bolalarda og'iz bo'shlig'i shikastlanishining asosiy xavf omillari

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ANNOTASIYA

Surunkali buyrak kasalligi (SBK) buyrak yetishmovchiligining oxirgi bosqichi va yurak-qon tomir asoratlari tufayli yuqori tarqalishi, nogironligi va o'limning ko'payishi bilan bog'liq jiddiy tibbiy va ijtimoiy muammodir. Bolalar bemorlarida SBK og'iz bo'shlig'i salomatligiga salbiy ta'sir ko'rsatadigan metabolik, immunologik va mineral nomutanosiblik bilan birga keladi. Ushbu tadqiqotning maqsadi surunkali buyrak kasalligiga chalingan bolalarda og'iz bo'shlig'i shikastlanishlarining rivojlanishiga hissa qo'shadigan asosiy xavf omillarini aniqlash edi. Tadqiqotda SBKning turli

bosqichlarida bo'lgan bolalarda klinik, laboratoriya va stomatologik parametrlar tahlil qilindi. Natijalar gingivit, periodontit, emal gipoplaziyasi, kserostomiya va tish kariesining yuqori tarqalishini ko'rsatdi. Asosiy xavf omillari orasida uremik intoksikatsiya, kaltsiy-fosfor almashinuvining buzilishi, immunitetning pasayishi, og'iz gigienasining yomonligi, uzoq muddatli dori terapiyasi va parhez cheklovlari mavjud. Xavf omillarini o'z vaqtida aniqlash va kompleks stomatologik yondashuv surunkali buyrak kasalligi bilan og'rigan bolalar bemorlarining asoratlarini oldini olish va hayot sifatini yaxshilash uchun juda muhimdir.

Kalit so'zlar: surunkali buyrak kasalligi, bolalar, og'iz bo'shlig'i, xavf omillari, gingivit, tish kariesi.

INTRODUCTION

Chronic kidney disease in children is a progressive pathological condition characterized by a gradual decline in renal function and systemic metabolic disturbances. In recent years, increasing attention has been paid to the relationship between systemic diseases and oral health. Numerous studies indicate that renal dysfunction leads to significant changes in the mineral composition of saliva, immune status, and microcirculation, which create favorable conditions for the development of oral pathology.

The oral cavity in children with CKD often becomes a target organ affected by uremic intoxication, fluid and electrolyte imbalances, and long-term medication use. However, the spectrum of risk factors and their contribution to the formation of oral lesions in pediatric patients remains insufficiently studied.

MATERIALS AND METHODS

The study included children aged 6–15 years diagnosed with chronic kidney disease at different stages. Clinical dental examination was performed with assessment of the condition of the oral mucosa, periodontal tissues, and hard dental tissues. The level of oral hygiene was evaluated using standard indices. Laboratory data, including biochemical blood parameters and mineral metabolism indicators, were analyzed. Statistical analysis was carried out using conventional methods.

RESULTS

Clinical examination revealed a high prevalence of inflammatory periodontal diseases, manifested by gingival bleeding, edema, and hyperemia. Dental caries and enamel

hypoplasia were frequently detected. Xerostomia and halitosis were common complaints among patients.

The main risk factors identified included:

- prolonged uremic intoxication;
- calcium-phosphorus metabolism disorders;
- decreased salivation;
- immunological disorders;
- inadequate oral hygiene;
- prolonged use of medications.

DISCUSSION

The obtained data confirm the significant role of systemic metabolic and immunological disorders in the development of oral pathology in children with CKD. Uremic toxins and electrolyte imbalance adversely affect periodontal tissues and the mineralization of enamel. The reduction in salivary flow and changes in its composition contribute to the progression of caries and mucosal lesions.

These findings indicate the necessity of interdisciplinary cooperation between pediatric nephrologists and dentists to ensure early diagnosis and prevention of oral complications.

CONCLUSION

Children with chronic kidney disease belong to a high-risk group for the development of oral cavity lesions. The leading risk factors include metabolic disorders, immune deficiency, long-term drug therapy, and poor oral hygiene. Early identification of risk factors and implementation of preventive dental programs are essential for improving oral health and overall quality of life in pediatric patients with CKD.

REFERENCES

1. Warady B.A., Chadha V. Chronic kidney disease in children: the global perspective. *Pediatric Nephrology*, 2007, Vol. 22, No. 12, pp. 1999–2009.

2. Nakhjavani Y.B., Bayramy A., et al. Oral manifestations in patients with chronic renal failure. *Iranian Journal of Kidney Diseases*, 2009, Vol. 3, No. 1, pp. 19–23.
3. Proctor R., Kumar N., Stein A., Moles D., Porter S. Oral and dental aspects of chronic renal failure. *Journal of Dental Research*, 2005, Vol. 84, No. 3, pp. 199–208.
4. Davidovich E., Davidovich M., Peretz B., Shapira J. The correlation between dental calculus and serum calcium, phosphate and urea levels in children with chronic renal failure. *Pediatric Nephrology*, 2005, Vol. 20, No. 4, pp. 544–548.
5. Lucas V.S., Roberts G.J. Oro-dental health in children with chronic renal failure and after renal transplantation. *International Journal of Pediatric Dentistry*, 2005, Vol. 15, No. 1, pp. 21–30.
6. Khouly I., Braun R.S., Ordway M., et al. Salivary changes and oral health status in pediatric patients with chronic kidney disease. *Clinical Oral Investigations*, 2018, Vol. 22, No. 2, pp. 933–940.
7. Bots C.P., Poorterman J.H., Brand H.S., et al. The oral health status of dentate patients with chronic renal failure undergoing dialysis therapy. *Oral Diseases*, 2006, Vol. 12, No. 2, pp. 176–180.
8. Bayraktar G., Kazancioglu R., et al. Oral health and inflammation in patients with end-stage renal failure. *Journal of Periodontology*, 2009, Vol. 80, No. 5, pp. 777–786.
9. Sharma R., Dogra S., et al. Oral manifestations of chronic kidney disease in children. *Journal of Clinical Pediatric Dentistry*, 2014, Vol. 38, No. 4, pp. 307–311.
10. KDIGO Clinical Practice Guideline for the Evaluation and Management of Chronic Kidney Disease. *Kidney International Supplements*, 2013, Vol. 3, No. 1, pp. 1–150.