

**FEATURES OF THE CLINICAL COURSE AND FREQUENCY OF
OCCURRENCE OF PERIODONTAL DISEASES AND ORAL MUCOSA IN
PATIENTS SUFFERING FROM CHRONIC KIDNEY DISEASE**

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ANNOTATION

The features of the clinical course and frequency of occurrence of periodontal diseases and oral mucosa in patients suffering from chronic kidney disease were studied. 78 middle-aged men (aged 45 to 59 years) who had been suffering from chronic kidney disease (CKD) for three years or more were examined. Among the examined patients suffering from CKD, 42 had chronic pyelonephritis, 36 had chronic glomerulonephritis. It was revealed that individuals suffering from chronic pyelonephritis and chronic glomerulonephritis have differences in the condition of periodontal tissues, compared with practically healthy individuals of the same age group. Such patients equally often suffer from inflammatory and dystrophic diseases of periodontal tissues, as well as diseases of the mucous membrane of the oral cavity, lips.

Thus, the data obtained indicate the need to improve organizational and dental therapeutic and preventive measures aimed at improving the dental health of people suffering from chronic kidney disease.

Key words: chronic pyelonephritis, cytokines, oral fluid, blood, urine.

**ОСОБЕННОСТИ КЛИНИЧЕСКОГО ТЕЧЕНИЯ И ЧАСТОТА
ВСТРЕЧАЕМОСТИ ЗАБОЛЕВАНИЙ ПАРОДОНТА И СЛИЗИСТОЙ**

ОБОЛОЧКИ ПОЛОСТИ РТА У БОЛЬНЫХ, СТРАДАЮЩИХ ХРОНИЧЕСКОЙ БОЛЕЗНЬЮ ПОЧЕК

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АННОТАЦИЯ

Изучено особенности клинического течения и частота встречаемости заболеваний пародонта и слизистой оболочки полости рта у больных, страдающих хронической болезнью почек. Обследованы 78 мужчин среднего возраста (возраст от 45 до 59 лет), которые в течение трёх лет и более страдали хронической болезнью почек (ХБП). Среди обследованных больных, страдающих ХБП 42 были больны хроническим пиелонефритом, 36 - хроническим гломерулонефритом. Выявлено, что у лиц, страдающих хроническим пиелонефритом и хроническим гломерулонефритом имеются различия в состоянии тканей пародонта, по сравнению с практически здоровыми лицами этой же возрастной группы. Такие больные одинаково часто страдают воспалительными и дистрофическими заболеваниями тканей пародонта, а также заболеваниями слизистой оболочки полости рта, губ.

Ключевые слова: хронический пиелонефрит, цитокины, ротовая жидкость, кровь, моча.

**СУРУНКАЛИ БУЙРАК КАСАЛЛИГИ БИЛАН ОҒРИГАН
БЕМОРЛАРДА ПАРОДОНТ ВА ОҒИЗ БЎШЛИҒИ ШИЛЛИҚ ҚАВАТИ
КАСАЛЛИКЛАРИНИНГ КЛИНИК КЎРИНИШИ ВА ТАРҚАЛИШИНИНГ
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АННОТАЦИЯ

Сурункали буйрак касаллиги билан оғриган беморларда пародонт ва оғиз бўшлиғи шиллиқ қавати касалликларининг клиник кечиш хусусиятлари ва тарқалиши ўрганилди. 78 нафар ўрта ёшли (45 ёшдан 59 ёшгача бўлган) сурункали буйрак касаллиги (СБК) билан уч йил ва ундан кўпроқ вақт давомида азоб чекаётган еркаклар текширилди. Текширувдан ўтган беморларнинг 42 нафари сурункали пиелонефрит, 36 нафари сурункали гломерулонефрит билан оғриган. Сурункали пиелонефрит ва сурункали гломерулонефрит билан оғриган беморларда периодонтал тўқималарнинг ҳолати бир хил ёшдаги деярли соғлом одамларга нисбатан фарқ қилиши аниқланди. Бундай беморлар тенг даражада тез тез периодонтал тўқималарнинг яллиғланиш ва дегенератив касалликлари, шунингдек, оғиз бўшлиғи шиллиқ қавати ва лаблар касалликларидан азият чекишади.

Калит сўзлар: сурункали пиелонефрит, цитокинлар, оғиз суюқлиги, қон, сийдик.

Relevance

In the last decade, a large number of scientific papers have been published in domestic and foreign literature, which present data on the existing significant relationship and features of the clinical course of major dental diseases with concomitant somatic pathology (M.V. Avdeeva, V.B. Voitenkov, I.G. Samoilova, 2013, F.I. Komarov, A.K. Iordanishvili, 2015; O.A.Belskikh, 2016; J.A. Bastos, C.G. Diniz, M.G. Bastos, 2011; V. Ariyamuthu, K. Nolph, 2013). It should be noted that there are

only a few publications that address the prevalence and features of the clinical course of major dental diseases in kidney diseases (I.K.Lavrov, 2010, V.Ariyamuthu, K.Nolph, B.Ringdahl, 2013). Chronic kidney diseases significantly disrupt homeostasis, which affects the morpho-functional state of the tissues of the oral cavity. Information about the dental status of persons suffering from CKD is presented only in isolated studies (I.K. Lavrov, 2010; L.Y. Orekhova, M.V. Osipova, 2010; O.A.Belskikh, 2016; S. Jain, A. Singla et al., 2014; E. Ioannidou, H. Swede et al., 2014; J. Limeres, J.F. Garcez et al., 2016), and data on the incidence of major dental diseases in such patients in available publications vary significantly. Therefore, it seems important to investigate in a comparative aspect the features of the clinical course and frequency of occurrence of the main dental diseases of the periodontal and oral mucosa in persons suffering from CKD. Many researchers have not fully disclosed the features of the clinical course and frequency of dental diseases in people suffering from CKD.

As many dentists point out, when carrying out dental therapeutic and preventive measures in patients suffering from chronic kidney disease (CKD), it is important not only to ensure the effectiveness of the therapy due to the presence of somatic pathology, but also to prevent complications caused by chronic foci of odontogenic infection (B.G. Alikhanov, I.B. Salmanov et al., 2015; F.I. Komarov et al., 2015; R.G. Craig, P. Kotanko, 2009; F. Fang, B. Wu, 2015).Based on the above, the purpose of this study was to study the features of the clinical course and frequency of occurrence of periodontal diseases and oral mucosa in patients suffering from chronic kidney disease.

Material and methods of research

To conduct this study, 78 middle-aged men (aged 45 to 59 years) who had suffered from chronic kidney disease (CKD) for three years or more were examined. Among the examined patients suffering from CKD, 42 had chronic pyelonephritis, 36 had chronic glomerulonephritis. The control group consisted of 18 practically healthy men.

The examined patients had an oral cavity examination using a dental mirror and a probe. The intensity of dental caries was calculated by the CPI index, the incidence of

caries, non-carious lesions, chronic periapical foci of odontogenic infection, as well as the need for dental treatment and dental prosthetics were expressed as a percentage. To identify chronic periapical foci of odontogenic infection, the conclusions of radiologists were studied, which they established based on the study of orthopantomograms. The frequency of occurrence of periodontal pathology and oral mucosa was expressed as a percentage. The intensity of inflammatory processes in the gum was determined using the iodine number of S. Svrakov, the intensity of the course of periodontal diseases was determined by the KPI index (P.A. Leus, 1976; Yu.V. Chizhov, 2008; T.S. Martyanova, 2009), the hygienic condition of the oral cavity was assessed using the generally accepted index of Yu.A. Fedorov-V.V. Volodkina (L.Yu. Orekhova, M.V. Osipova, 2010; P.V. Lionenko, G.P. Leonenko, 2014).

To study the indicator of secretory immunity of saliva, a laboratory study of oral fluid was performed in patients suffering from CKD. Saliva was taken in the morning from 9.00 to 10.00, according to the following method: the patient rinsed the oral cavity with 100 ml of a warm, pale pink solution of potassium permanganate, then for the next 10-15 minutes the patient collected saliva in a dry test tube - about 7 ml. The content of secretory immunoglobulin A (sIgA) in saliva was determined by enzyme immunoassay using Vector Best kits (Russia). Statistical processing was carried out using the program Statistica for Windows version 7.0. The difference was recognized as reliable with a reliability criterion (t) of at least 2, which corresponds to an error-free forecast of 95.5% and an error probability of no more than 0.05.

Research results and their discussion

During the clinical study, the features of the clinical course and the frequency of dental diseases in patients suffering from chronic kidney disease were studied, and their need for dental treatment and prosthetics was clarified, taking into account the level of dental care provided to them.

The study of the dental status of patients with chronic kidney diseases made it possible to establish the features of the clinical course of the pathology of the hard tissues of the teeth, to assess the level of dental care provided to such patients, as well as to clarify information about the frequency of caries, non-carious lesions of the teeth, the

need for treatment and prosthetics of teeth. In order to improve the accuracy and reliability of the clinical study conducted to study the features of the clinical course of diseases of the hard tissues of the teeth and oral mucosa, the frequency of their occurrence in CKD, at the same time, the dental status of practically healthy individuals (of the same age group and gender) was studied.

Dental examination of middle-aged men included in the control group of the study showed that their incidence of gingivitis and periodontitis was, respectively, 19.8% and 64.9%, with an indicator of the intensity of the course of periodontal diseases (KPI index) of 1.98 ± 0.14 cont. units. In the control group of men, 76.1% of patients needed removal of tartar deposits, and diseases of the mucous membrane of the oral cavity, lips and tongue (SOPRG) they met in 6.4% of cases. The value of the indicators of the Svrakov iodine number was 2.29 ± 0.16 units, the hygiene index was 1.88 ± 0.15 units.

The periodontal status of people suffering from chronic pyelonephritis and chronic glomerulonephritis differed from that of the control group. Thus, a dental examination of middle-aged men suffering from chronic pyelonephritis (CP) showed that their incidence of gingivitis and periodontitis was, respectively, 31.3 and 79.5%, with an indicator of the intensity of the course of periodontal diseases (KPI index) of 2.34 ± 0.15 cont. units. In this group of patients, 92.7% of patients needed removal of tartar deposits, and diseases of the mucous membrane of the oral cavity, lips and tongue (SOPRGiA) were diagnosed in 7.8% of cases. The value of the indicators of the iodine number of Svrakov in persons suffering from CP was 2.28 ± 0.17 units, the hygiene index was 1.94 ± 0.14 units. The frequency of dystrophic lesions of periodontal tissues (periodontal disease) was 4.2%.

People suffering from chronic glomerulonephritis (HCG) have the following indicators of periodontal status. Their incidence of gingivitis and periodontitis was 36.8% and 81.5%, respectively. The indicator of the intensity of the course of periodontal diseases (KPI index) was equal to 2.46 ± 0.17 conl. units. In the group of patients suffering from HCG, 95.1% of patients needed to remove tartar deposits, and diseases of the joint were diagnosed in 9.1% of cases.

The value of the indicators of the iodine number of Svrakov in persons suffering from HCG was 2.34 ± 0.14 conl. units, the hygiene index was 1.91 ± 0.17 conl. units. The frequency of dystrophic lesions of periodontal tissues (periodontal disease) was 4.6%.

Thus, a clinical study of patients suffering from various chronic kidney diseases for more than three years allowed us to establish the features of the periodontal status, as well as the course of periodontal pathology, depending on the nosological form of chronic kidney disease. Thus, in individuals suffering from chronic pyelonephritis and chronic glomerulonephritis, there were differences in the condition of periodontal tissues, compared with practically healthy individuals of the same age group. Such patients equally often suffered from inflammatory and dystrophic diseases of periodontal tissues, as well as diseases of the oral mucosa, lips, where complications were more pronounced in patients.

During the study, it was found that in healthy middle-aged men (control group), the incidence of caries and non-carious lesions of the teeth was 68.2% and 29.8%, respectively. Each examined patient from the control group had 0.74 ± 0.07 teeth with chronic periapical foci of odontogenic infection. The intensity of the course of the carious process according to the CPU index (K - the number of carious teeth, P- filled teeth, Y - removed teeth) in the control group was 13.7 ± 0.89 (K- 2.1 ± 0.44 ; P - 7.4 ± 0.61 ; Y - 2.8 ± 0.31). 64.1% of men in the control group needed dental treatment, 51.3% needed dental prosthetics. The level of dental care in the control group was satisfactory (USP index=51.04%).

The study of dental morbidity in persons suffering from chronic pyelonephritis (CP) and chronic glomerulonephritis(HC) showed that its indicators differed significantly from those obtained during the examination of control group individuals. Thus, the incidence of caries and non-carious dental lesions in individuals suffering from CP and HCG was 81.7% and 90.5%, respectively. At the same time, with CP and HCG, people were more likely to suffer from non-carious lesions of the hard tissues of the teeth (wedge-shaped defects, increased tooth erasure, dental hyperesthesia), respectively, in 31.4% and 34.5% of cases. It was also revealed that for each examined

person suffering from CP and HCG, there were, respectively, 0.67 ± 0.05 and 0.59 ± 0.04 teeth with chronic periapical foci of odontogenic infection. So, with CP, the CP index was 12.8 ± 1.11 (K - 3.7 ± 1.83 ; P - 5.3 ± 0.47 ; Y - 3.2 ± 1.43), and with CP - 13.1 ± 0.91 (K - 3.1 ± 0.24 ; P - 6.8 ± 0.53 ; Y - 2.7 ± 0.15). Patients suffering from CP and HC needed dental treatment and prosthetics, respectively, in 71.3% and 54.6% of cases and 74.5% and 57.8% of cases. The index of the USP index for patients suffering from CP and HCG was, respectively, 51.2% and 57.6%.

In general, the study of the dental status of patients suffering from chronic kidney disease showed that the presence of somatic pathology affects both the incidence of pathology of hard tissues of teeth and the clinical picture of the course of major dental diseases. With CP and HCG, with a satisfactory level of dental care, the incidence of non-carious lesions increases, and the need for treatment of pathology of hard tissues and prosthetics of teeth differs from the needs of healthy people of the same age group in dental care. In persons suffering from CP and HCG, the intensity of the course of the carious process increases sharply to 16.4 - 19.3 affected teeth in the direction of increasing the number of carious and removed teeth.

One of the main indicators of the immunity of the mucous membranes is the content of secretory immunoglobulins. It should be noted that the ratio of immunoglobulins in the oral cavity is different than in the blood serum. Secretory antibodies of the oral fluid are immunoglobulins of the IgA and IgM classes and are of local origin. They are produced by plasma cells located under the basement membrane in the connective tissue layer of the mucous membrane — in its own lamina (lamina propria). The main role of IgA class antibodies is to prevent the attachment of bacteria and microbial toxins to the epithelium, the absorption of harmful xenobiotics. sIgA are an important element of the first line of defense against pathogens. Saliva contains much more sIgA than other immunoglobulins: for example, in saliva secreted by the parotid glands, the ratio of IgA/ IgG is 400 times higher than that in blood serum. The data obtained by us indicate a decrease in local immunity of the mucous membranes of the oral cavity, manifested in a decrease in the level of secretory immunoglobulin A in saliva to 0.44 ± 0.02 g/l versus 0.61 ± 0.06 g/l in healthy individuals in patients with CP.

Indicators of secretory immunoglobulin A in saliva in patients with HCG significantly differed from those of healthy individuals and on average was equal to 0.35 ± 0.03 g/l. It is known that the sIgA level reflects the status of local immunity aimed at the formation of mechanisms of adaptation to stress, to changes in external conditions. A decrease in the level of sIgA, as was noted in patients with CP and HCG in saliva, leads to an increase in the likelihood of pathogenic and conditionally pathogenic microflora in the oral cavity and a decrease in the protective groups of microflora in the oral cavity and, thus, leads to an increase in the activity of inflammatory processes in both periodontal and SOPR.

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СОДЕРЖАНИЯ ФТОРА В НЕ СТИМУЛИРОВАННОЙ СЛЮНЕ ДЕТЕЙ, ПРОЖИВАЮЩИХ В ТАШКЕНТСКОЙ ОБЛАСТИ

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АННОТАЦИЯ

Цели: Цель настоящего исследования изучения физико- химических свойств не стимулированной смещенной слюны детей, проживающих в Ташкентской области

Материалы и методы: Обследованы 118 детей дошкольного возраста (от 4 до 6 лет), проживающих в 4 районах Ташкентской области, не употребляющие фтор. Концентрацию фтора в слюне оценивали с помощью комбинированного иона специфический фторидного электрода (Элис 131F). pH слюны определяли прямой потенциометрическим активности ионов водорода (pH) с помощью иономера (Иономер лабораторный И-160МИ (ГОСТ 22261-94))

Результаты. Полученные результаты показывают, что pH слюны у детей Аккурганского (6,64±0,06) и Янгиюльского (6,45±0,09) районов достоверно ниже показателей pH слюны Ташкентского района (6,98±0,08). (P>0,05), сравнительный