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On the influence of technogenic environmental factors on the state of oral hygiene

Generalized periodontitis is the most common periodontal disease. Its treatment presents significant difficulties due to the multitude of possible etiopathogenetic local and general, endogenous and exogenous factors that determine various clinical manifestations and course of the disease.

Among the settlements of the country, 15 cities of Ukraine experience the greatest anthropogenic load. Kryvyi Rih is one of them.

The main local and general risk factors for the development of periodontal diseases in the elderly are the high frequency of extracted teeth, poor individual oral hygiene, the presence of unsubstituted dentition defects, low patient motivation for treatment and high-quality professional oral hygiene, multiple somatic pathology, use of significant the number of pharmacological drugs, the transition to softer foods, long-term bad habits.

All of the above predetermined the expediency of studying the dental status of men of the second half of mature and elderly age, living under conditions of anthropogenic load (1,2,3).

The aim of the study was to study the level of oral hygiene and the state of periodontal tissues in men of the second half of mature and old age.

Materials and methods of research. All patients who took part in the study lived in the city of Krivoy Rog from birth. In clinical studies, 60 men took part in half of the mature and elderly age (55-70 years).

The examination was carried out according to the generally accepted scheme using an objective assessment of oral hygiene and examination of periodontal tissues. Oral hygiene was assessed using the Silness-Loe and Stallard indices. The degree of gingival inflammation was determined using the PMA index modified by Parma (1960). Determined the index of bleeding gums (Mühlemann J., 1971, Cowell I.,

1975), periodontal index PI (Russel A., 1956), the depth of periodontal pockets (PC) using a periodontal probe in mm.

It is known that one of the main factors in the development of periodontal pathology is unsatisfactory oral hygiene. We carried out an index assessment of the quality of oral care in the examined patients.

Table 1 shows the results of determining the Silness-Loe and Stallard indices, as well as the presence of tartar. The results obtained indicate the poor hygienic condition of the oral cavity of the patients. On average for the group, the Silness-Loe index was 2.28 ± 0.17 points, the Stallard index was 2.26 ± 0.13 points, which indicates the presence of dental plaque and the presence of abundant soft dental plaque. Based on this, it can be concluded that the level of individual oral hygiene is insufficient.

Table 1

The level of oral hygiene of the subjects

Indicator, scores	Group examined (n = 60)
Index Silness-Loe M \pm m	2,28 \pm 0,17
Index Stallard M \pm m	2,26 \pm 0,13
Dental calculus M \pm m	2,44 \pm 0,12

The indicator of the presence of dental calculus in the group of the examined, on average, was 2.44 ± 0.14 points, which also corresponds to the unsatisfactory hygienic state of the oral cavity.

Assessing the overall hygienic state of the oral cavity of patients, it should be noted that a poor level of hygiene among the surveyed group was found in 43.3% of cases. Unsatisfactory - 36.7%. Satisfactory - 16.7%. Good - 6.7%.

The low level of oral hygiene in the elderly is associated not only with the extinction of the habit and the ability to brush teeth, but also with objective factors. The latter include: age-related changes in periodontal tissues, changes in the composition and viscosity of saliva, the transition to softer food, general health, material limitations in the acquisition of high-quality modern oral hygiene products and in the possibility of rational prosthetics.

When assessing the state of the periodontal tissues, we found that the PMA index was $49.77 \pm 2.64\%$, which indicates a moderate severity of inflammatory phenomena in the periodontal tissues (Table 2)

Table 2

Index assessment of periodontal tissues of the examined

Indicator	Group examined (n = 60)
PMA (%) M±m	49,77±2,64%
Bleeding index, points M±m	2,20±0,05
Schiller-Pisarev test, points M±m	2,40±0,09

The Müllemann index among the examined men was 2.20 ± 0.05 , which indicates the presence of severe periodontal bleeding during probing. The indicators of the Schiller-Pisarev test indicate the presence of an inflammatory process in the gums.

After collecting anamnesis, complaints and clinical examination with an index assessment of the state of periodontal tissues, it was found that among the examined patients, 18 persons (30%) were diagnosed with an exacerbated course of generalized periodontitis. 42 patients (70%) had a chronic course of generalized periodontitis.

Table 3

Indicator	Group examined (n = 60)
Index PI, points	3,55±0,08

M±m	
PP, мм	3,93±0,12
M±m	

The PI index data correspond to the II degree of severity of the course of generalized periodontitis (Table 3). The depth of periodontal pockets (PP) was 3.93 ± 0.12 mm. However, the results obtained may not reflect the true picture due to the fact that when determining these indices, the degree of gingival recession and the loss of epithelial attachment are not taken into account in the presence of degenerative processes characteristic of the elderly.

Conclusions. On the basis of the data obtained, it can be concluded that the hygienic condition of the oral cavity of elderly men is unsatisfactory, the level of individual oral hygiene is insufficient, and the subjects' motivation to carry out hygienic and preventive procedures is low. The results of a clinical examination of men in the second half of mature and elderly age indicate the prevalence of the chronic course of generalized periodontitis and the presence of gum recession due to degenerative processes characteristic of the elderly.

Literature:

1. Улитовский С.Б., Яременко А.Н., Калинина О.В., Алескерев Д.Ш. Проблемы совершенствования стоматологической помощи у жителей промышленного района //Учебные записки СПбГМУ им. Акад. И.П. Павлова. – Т. XXI. – №4. – 2014. – С. 48-50
2. Леонтьева Е.Ю., Быковская Т.Ю., Тлепцеришев Р.А. Производственные биологические факторы и их влияние на челюстно-лицевую область: обзор / Е.Ю. Леонтьева, Т.Ю. Быковская, Р.А. Тлепцеришев // Главный врач юга России. – 2017. - №58. – С. 7-10
3. Юсупов З.Я., Бабаев А.Б., Ашуров Г.Г. О влиянии техногенных факторов производственной и окружающей среды на распространенность и структуру патологии зубочелюстной системы /З.Я. Юсупов, А.Б. Бабаев, Г.Г. Ашуров // Вестник Авиценны. – 2017. - №2 – С. 261-265

