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EFFECTIVE SCHEMES OF THERAPEUTIC AND PREVENTIVE MEASURES FOR DISEASES OF THE ORAL CAVITY IN PROFESSIONAL ATHLETES

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550 professional athletes aged 17-33 years with high sports qualifications were examined. When organizing treatment groups in the form of control, a group of 20 athletes who did not pass the course of treatment and prevention measures, of the same age, sports qualifications and somatic status as in the main group was selected (20). In the control group, the prevalence of apical periodontitis was $3.0 \pm 1.71\%$, in the groups with CVS diseases – $13.3 \pm 2.78\%$ ($p < 0.05$) and $10.7 \pm 2.52\%$ – with ENT diseases ($p < 0.05$), and in the group of athletes with gastrointestinal tract, the maximum values were recorded – $16.7 \pm 3.04\%$. The frequency of moderate severity of periodontal diseases in the main group also significantly decreased from 72% to 55%. The number of professional athletes with mild periodontitis in the main group increased. While in the control group it decreased to 18%.

Key words: athletes, caries, pulpitis, periodontitis, treatment

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ЕФЕКТИВНІ СХЕМИ ЛІКУВАЛЬНО-ПРОФІЛАКТИЧНИХ ЗАХОДІВ ПРИ ЗАХВОРЮВАННЯХ ПОРОЖНИНИ РОТА У ПРОФЕСІЙНИХ СПОРТСМЕНІВ

Було обстежено 550 професійних спортсменів у віці 17-33 роки, які мають високу спортивну кваліфікацію. При організації лікувальних груп у вигляді контролю було відібрано групу з 20 спортсменів, які не пройшли курс лікувально-профілактичних заходів, того ж віку, спортивної кваліфікації і соматичного статусу, що і в основній групі (20). У групі контролю поширеність апікального періодонтиту складала $3,0 \pm 1,71\%$, в групах із захворюваннями серцево-судинної системи – $13,3 \pm 2,78\%$ ($p < 0,05$) і $10,7 \pm 2,52\%$ – з ЛОР – захворюваннями ($p < 0,05$), а в групі спортсменів з шлунково-кишкового тракту були зареєстровані максимальні значення – $16,7 \pm 3,04\%$. Частота виникнення середнього ступеня тяжкості пародонтитів в основній групі також значно зменшилася з 72% до 55%. Кількість професійних спортсменів з легким ступенем тяжкості пародонтиту в основній групі збільшилася, натомість, у групі контролю вона зменшилася до 18%.

Ключові слова: спортсмени, карієс, пульпіт, пародонтит, лікування.

The high level of prevalence and intensity of major dental diseases, in particular, caries and inflammatory periodontal diseases, determine the need to develop and implement a more effective strategy and tactics of treatment and diagnostic activities of dentists, which should be based on modern diagnostic ideas about the etiopathogenetic mechanisms of these diseases and modern concepts for the selection of therapeutic and preventive means and methods [7, 10]. It should be noted that diseases of soft and hard tissues of the oral cavity of an inflammatory and destructive nature develop under the influence of both local factors, including plaque, pathogenic microorganisms, and their combined effects with violations of the body's immunological reactivity against the background of General somatic pathology [1, 3, 5, 8]. Among the general factors that cause pathological processes in the oral cavity in professional athletes, we should highlight: diseases of the gastrointestinal tract, due to special diets with vitamin deficiency, and with vitamin C deficiency and increased capillary permeability, psychoemotional disorders, decreased immunological reactivity of the body against the background of long and intensive training and excessive physical exertion, hypoxia, atherosclerotic vascular lesions and endocrine disorders [11, 12].

Weakening of the body's reactivity, at the same time, insufficient strength of compensatory mechanisms and a decrease in the body's resistance to infection against the background of a decrease in redox potential, slowing down the formation of bone tissue lead to the development of inflammatory and dystrophic changes in periodontal tissues [13, 14, 15].

Although the role of General and local factors in the development of inflammatory and especially dystrophic processes in the organs and tissues of the oral cavity of professional athletes is quite obvious, nevertheless, many processes of pathogenesis of periodontal and dental diseases in their diseases of the gastrointestinal tract, cardiovascular and endocrine systems, and allergic diseases remain not fully studied. The complex genesis of violations in the state of general and dental health of persons engaged in high-performance sports dictates the need to comply with certain principles in the organization of measures to improve the quality of life and sports performance, that is, a differentiated approach, duration, stages, coordination of actions of a sports doctor and a dentist.

The purpose of the study was to evaluate the effectiveness of a complex of therapeutic and preventive measures for symptomatic diseases in professional athletes.

Material and methods. 550 professional athletes of the veteran of sports at the age of 17-33 years who have high sports qualification were examined. Moreover, the analysis of the data of medical examination of athletes was carried out according to medical records: 150 people had pathologies of the cardiovascular system (CVS), 150 people had pathology of the gastrointestinal tract (GIT), 150–ENT diseases. We also identified a group of athletes – 100 people, whose dental pathologies were studied in the absence of systemic pathology. The result of this stage was the isolation of foci of chronic infection in the oral cavity of athletes, depending on the dynamics of the functional state of organs and body systems.

When organizing treatment groups in the form of control, a group of 20 athletes who did not pass the course of treatment and prevention measures, of the same age, sports qualifications and somatic status as in the main group was selected (20). Preliminary medical examination and dispensary registration was carried out by doctors of different specialties. All the examined patients underwent all the necessary diagnostic tests with general and clinical blood and urine analysis. Dental examination included: examination of the oral cavity; examination of the gums to determine the presence of supra-and subgingival deposits, determine the hygienic state of the oral cavity, the presence of periodontal pockets, assess the color of the gums; assess the presence of fistulas, abscesses, assess the state of hygiene and periodontal tissues, and the presence of dental anomalies. Assessment of the prevalence and intensity of major dental pathologies was performed according to the International classification of dental diseases based on ICD-10. Radiography was performed to assess the periapical dental tissues. The results of the study were processed by the method of variation statistics. To characterize a group of homogeneous units, their arithmetic mean values (M), its standard error (m), and the range of changes (min–max) were determined. For statistical data processing, the nonparametric U (Wilcoxon – Mann–Whitney) test and the parametric student's t test were used as a method for evaluating differences in indicators. The statistical difference between the groups was considered significant at $p < 0.05$. Statistical processing of the obtained data was carried out on a personal computer using modern software and the Statistica 7.0 application software package.

Results of the study and their discussion. Analyzing the data obtained for people of different ages engaged in professional sports activities, a high level of morbidity was revealed. Of the 550 athletes surveyed, only 100 of them were practically healthy in terms of overall physical condition. The rest were taken on dispensary registration by doctors of narrow specialties–cardiologist, ENT doctor, therapist and dentist. The high percentage of morbidity of professional athletes can be explained by the impact of extreme factors that are manifested against the background of prolonged physical and psychoemotional loads, especially in the pre-competition and competitive periods.

At the time of planning and subsequent implementation of the medical support program, a high percentage of dental morbidity was detected during the clinical examination. At the same time, the detected diseases of the oral cavity can be considered a kind of indicator of General somatic pathology. That is, in this case, the lesion of the tooth and periodontal tissues depended on the functional state of the athlete's body as a whole. Significant differences were found in the prevalence of caries and pulpitis in these groups. The increase in the incidence of caries in the groups of athletes with cardiovascular disorders in comparison with the control is mainly determined by an increase in the number of its complications, which are greater here than in the control group of practically healthy individuals- $p < 0.05$ (table 1).

Table 1

Frequency of dental diseases among athletes (%)

Prevalence	Control (n=100)		ENT (n=150)		CVS (n=150)		GIT (n=150)	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%
Caries	66	66.0±4.74	101	67.3±3.83	96	64.0±3.92	88	58.7±4.02
Pulpitis	6	6.0±2.37	15	10.0±2.45	16	10.7±2.52	13	8.7±2.30
Periodontitis	3	3.0±1.71	16	10.7±2.52*	20	13.3±2.78*	25	16.7±3.04*
Combination of disease	1	1.0±0.99	5	3.3±1.47	11	7.3±2.13*	19	12.7±2.72*

Note: Reliability of differences in the component in comparison with the control: *– $p < 0.05$.

So, if in the control group the prevalence of apical periodontitis was 3.0±1.71%, then in the groups with CVS diseases – 13.3±2.78% ($p < 0.05$) and 10.7±2.52% – with ENT diseases ($p < 0.05$), and in the group of athletes with gastrointestinal tract, the maximum values were recorded – 16.7±3.04%.

When conducting a preliminary dental examination in the control and main groups before the start of the basic therapy, there was a change in the color of the gums, its bleeding, low level of oral hygiene, the presence of above and subgingival dental deposits, that is, the entire spectrum of the main symptoms indicating the obvious development of the inflammatory process in periodontal tissues was revealed. From the anamnesis, it followed that the examined athletes, against the background of long-term morbidity and lack of dispensary records and timely periodontal treatment, note the seasonality of exacerbations of pathological processes in periodontal tissues.

The main criteria for assessing the severity of periodontal diseases before the start of treatment and prevention measures were the assessment of the severity of the disease and the frequency of exacerbations (table 2).

Table 2

Qualitative criteria of periodontal pathology in professional athletes

Pathological condition	Main group, 20	Control group, 20
Presence of inflammation	100%	100 %
Degree of severity:		
easy	23%	22%
medium	72%	69%
heavy	5%	9%
Frequency of exacerbations		
without exacerbations	0	0
once a year	22%	23%
twice a year	74%	70%
more than 2 times a year	4%	7%

As can be seen from table 2, the initial statistical data in both treatment groups did not differ significantly from each other.

After passing an in-depth dental examination, all professional athletes involved in the research were taken by the dentist for dispensary registration and at the same time integrated treatment schemes were implemented (table 3).

Table 3

Scheme of complex treatment and rehabilitation measures for oral diseases in athletes

Stages of treatment and rehabilitation activities	Purpose of work
I. Main stages	
1. Doctors-experts:	
Symptomatic treatment	Removal of symptoms of the disease
Semoval of symptoms of the disease	Elimination of foci of chronic odontogenic infection
Removal of dental deposits	Elimination of microbial plaque
Correction of occlusion	Elimination of the traumatic factor
Maintaining a good level of oral hygiene	
II. The auxiliary stages	
Individual consultation	Maintaining motivation

Treatment and rehabilitation activities were carried out at the Dental clinic of the Azerbaijan Medical University, followed by home treatment and mandatory check-UPS every three months.

Athletes in the control group were treated with professional oral hygiene according to the traditional preventive scheme, which differed from the main group in the absence of anti-inflammatory therapy. A special place was given to improving the condition of soft parotid tissues and the hygienic condition of the oral cavity. In other words, due to the lack of proper rest and nutrition, as well as the lack of opportunities to receive timely high-quality dental care, the problem of introducing effective means of prevention and treatment of inflammatory and destructive periodontal diseases remains very urgent, which would show their therapeutic effectiveness in a very short time and would preserve it for a long time, which is very important from the point of view of improving the level of health, improving the quality of life of a professional athlete and achieving high sports achievements on this basis.

The scheme of basic therapy of periodontal diseases developed by us with the use of a complex of traditional methods, as well as combined natural preparations widely used in practical medicine, containing a relatively high concentration of antiseptic substances and natural antioxidants, according to the results of clinical studies, can be recommended as an additional supportive and corrective therapy.

The effectiveness of timely therapeutic measures and medical records of professional athletes was evaluated (table 4).

As follows from the data in table 4, the most important parameters in the main group were significantly higher than in the control group, which indicates a good preventive and therapeutic work of dentists to improve and maintain the condition of periodontal tissues at a good level. In terms of the severity of the studied pathology, some changes were also observed.

In the conducted clinical studies, it was found that the incidence of caries in professional athletes with ENT pathologies is higher than in the control group. In the control group, the average number of subjects with caries was 66.0±4.74%. Among athletes, in terms of the frequency of diagnosis of carious disease, the most successful were the groups of athletes with gastrointestinal tract and CVD, where caries was diagnosed on average in 64.0±3.92% and 58.7±4.02% of cases, respectively.

Efficacy of therapeutic and preventive measures

Pathological condition	Main group	Control group
Presence of inflammation	100%	100%
degree of severity:		
easy	40%	18%
medium	55%	71%
heavy	5%	11%
Frequency of exacerbations		
without exacerbations	28%	0
once a year	49%	21%
twice a year	23%	70%
more than 2 times a year	0	9%

Thus, a higher level of prevalence and intensity of caries is recorded in those groups of athletes where the training process was carried out in the presence of certain General organizational pathologies and was characterized by the introduction of special and intensive physical programs aimed at developing endurance in this category of athletes, and the impact of exogenous risk factors cannot be excluded.

As for the complications of caries, i.e. pulpitis and periodontitis, the greatest intensity of caries was found in athletes with certain diseases of the body's organs and systems [4]. In our opinion, somatic pathologies against the background of intense physical activity can significantly and significantly affect the frequent occurrence and development of diseases of soft and hard tissues in the oral cavity.

Typical and frequent clinical manifestations of periodontal diseases were: mild pain and bleeding gums, unpleasant smell, i.e. halitosis, in some cases, the examined athletes noted a certain mobility of some teeth. In addition, during an objective study of the oral cavity of professional athletes, there were abundant subgingival and supragingival hard and soft dental deposits, the gum mucosa was in many cases hyperemic, and spontaneous bleeding was observed.

The state of dental health of professional athletes at the time of clinical examination corresponds to the so-called "overtraining syndrome", which develops with a high level of competitive activity and excessive physical and psychoemotional loads during certain periods of training [2]. The hygienic state of the oral cavity in all examined professional athletes with and without inflammatory periodontal diseases could be assessed as satisfactory.

At the same time, more positive results were achieved in the main group, where only five cases of athletes were diagnosed with periodontitis with a severe course of the disease, compared to 11% in the control group. The frequency of moderate severity of periodontal diseases in the main group also significantly decreased from 72% to 55%. The number of professional athletes with mild periodontitis in the main group increased. While in the control group it decreased to 18%.

It should be noted that 28% of athletes in the main group did not have relapses, while in the control group, exacerbations were diagnosed in all the examined professional athletes. The number of people with exacerbations once a year, which were more often detected against the background of hypovitaminosis and a decrease in the overall resistance of the body during the intensification of the training process, especially in the pre-competition period, increased in the main group.

The group of athletes who had two repeated clinical manifestations of periodontitis after treatment and rehabilitation measures with the introduction of anti-inflammatory therapy decreased to 23%, compared to 70 in the control group.

Conclusion

A survey of professional athletes showed that athletes without general somatic pathology are least in need of dental care, with an average of 76%, compared to 92-94% who need specialized dental care in groups of athletes subject to somatic diseases. Justification of timely, complex treatment and preventive rehabilitation of diseases of the oral cavity of professional athletes against the background of General somatic diseases is carried out. Performing complex, therapeutic and rehabilitation measures for two years, simultaneously with medical and social efficiency, allowed us to observe a pronounced health effect that positively affects the quality of life of athletes and their sports results.

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MORPHOCLINICAL ASPECTS OF THE CLINICAL COURSE OF ATOPIC CHEILITIS

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The paper presents some clinical and morphological features and aspects of the clinical course of atopic cheilitis. The findings of comprehensive observations proved that clinical course of the disease have an impact on the nature of changes in the cellular composition of the vermilion border. The comprehensive analysis of the cytograms enables considering atopic cheilitis in the examined cohort, in the absence of adequate therapy, as a continuous self-destructive process. Its components (inflammatory-infiltrative and destructive) can regress under the influence of effective treatment and reactivate when the process is exacerbated under the influence of provoking factors, namely neurogenic and sensitizing. The findings of the study indicate the pathogenetic significance of destructive changes in epitheliocytes and violation of colonization resistance to the clinical course of atopic cheilitis.

Keywords: cheilitis, vermilion border, cells, nucleus, microflora.

Н.В. Гасюк, Г.А. Єрошенко, Ю.О. Мочалов, О.В. Клітинська, Х.В. Погорєцька МОРФОЛОГІЧНІ АСПЕКТИ КЛІНІЧНОГО ПЕРЕБІГУ АТОПІЧНОГО ХЕЙЛІТУ

В статті представлені результати комплексного клініко- морфологічного дослідження особливостей клінічного перебігу та змін клітинного складу червоної облямівки губ у хворих на atopічний хейліт. Характер змін клітинного складу червоної облямівки, обумовлений клінічним перебігом atopічного хейліту, що дає можливість розгляду даного захворювання у осіб обстеженого контингенту, за умов відсутності адекватної терапії, як безперервний саморуйнівний процес. Отримані результати слугуватимуть теоретичним підґрунтям для динамічного спостереження за станом пацієнтів при призначенні комплексного етіотропного, патогенетичного, симптоматичного лікування.

Ключові слова: хейліт, червона облямівка, клітини, ядро, мікрофлора.

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Phylogenetic and anatomical integrity of skin and vermilion border, as well as environmental factors, have an impact on the pattern of the fine dermatoglyphic furrows of skin and vermilion border, which makes this area favorable for the influence of exogenous factors and the development of pathological processes. Atopic cheilitis takes a special place among the latter, which can be both an independent disease and a symptom of atopic dermatitis [1, 4, 8, 9].