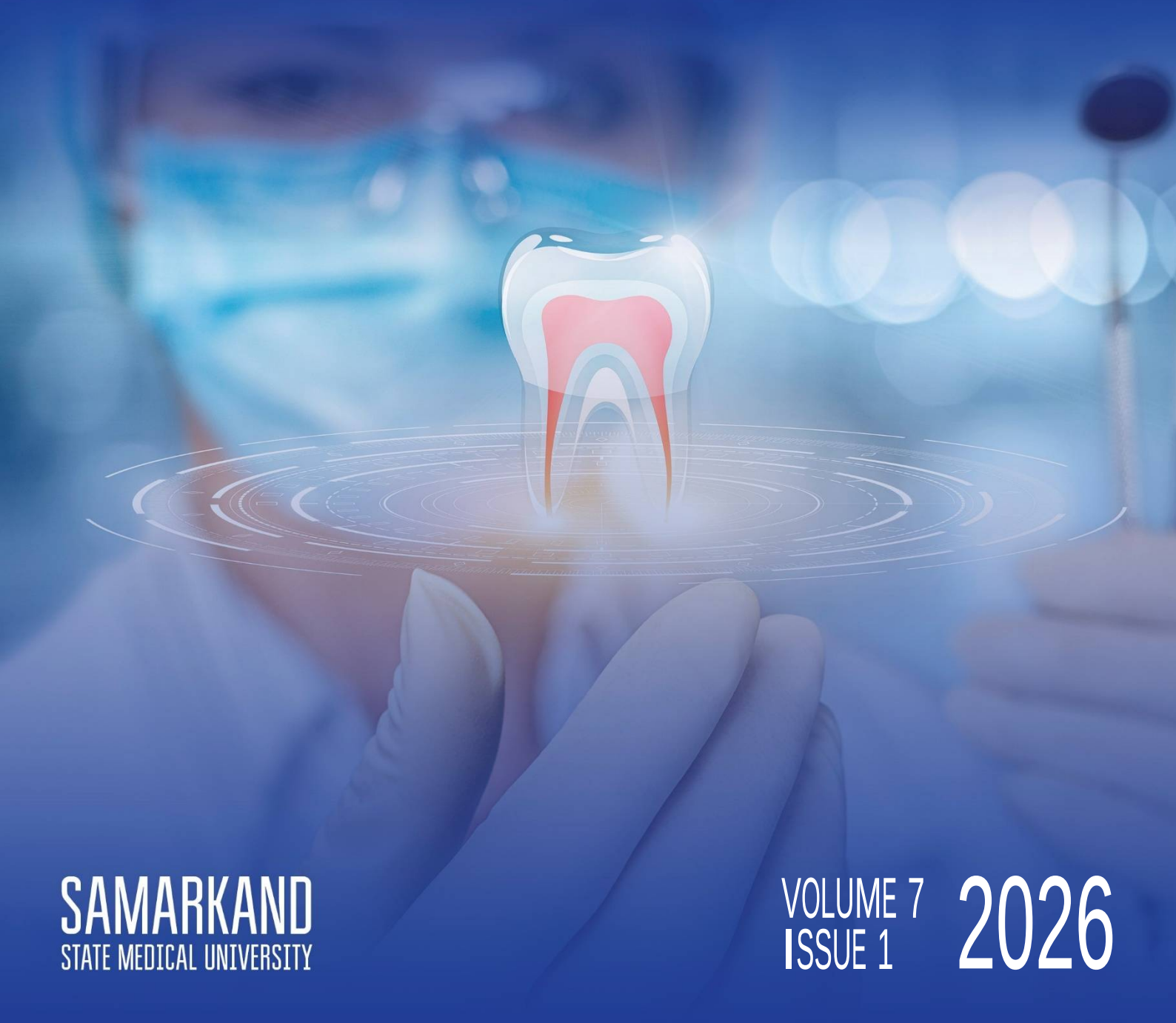
Impact Factor: 4.917

ISSN: 2181-0966
DOI: 10.26739/2181-0966
www.tadqiqot.uz

JOMCR

JOURNAL OF ORAL MEDICINE AND CRANIOFACIAL RESEARCH

Informing scientific practices around the world through research and development



SAMARKAND
STATE MEDICAL UNIVERSITY

VOLUME 7
ISSUE 1
2026

ISSN 2181-0966

Doi Journal 10.26739/2181-0966

ЖУРНАЛ СТОМАТОЛОГИИ И КРАНИОФАЦИАЛЬНЫХ ИССЛЕДОВАНИЙ

ТОМ 7, НОМЕР 1

JOURNAL OF ORAL MEDICINE AND CRANIOFACIAL RESEARCH

VOLUME 7, ISSUE 1

ТОШКЕНТ-2026

ЖУРНАЛ СТОМАТОЛОГИИ И КРАНИОФАЦИАЛЬНЫХ ИССЛЕДОВАНИЙ

№1 (2026) DOI http://dx.doi.org/10.26739/ 2181-0966-2026-1

Editorial staff of the journals of www.tadqiqot.uz
Tadqiqot LLC the city of Tashkent,
Amir Temur Street pr.1, House 2.
Web: http://www.tadqiqot.uz/; Email: info@tadqiqot.uz
Phone: (+998-94) 404-0000

Контакт редакций журналов. www.tadqiqot.uz
ООО Tadqiqot город Ташкент,
улица Амира Темура пр.1, дом-2.
Web: http://www.tadqiqot.uz/; Email: info@tadqiqot.uz
Тел: (+998-94) 404-0000

JOURNAL OF ORAL MEDICINE AND CRANIOFACIAL RESEARCH

№1 (2026) DOI http://dx.doi.org/10.26739/ 2181-0966-2026-1

Editorial staff of the journals of www.tadqiqot.uz
Tadqiqot LLC The city of Tashkent,
Amir Temur Street pr.1, House 2.
Web: http://www.tadqiqot.uz/; Email: info@tadqiqot.uz
Phone: (+998-94) 404-0000

Контакт редакций журналов. www.tadqiqot.uz
ООО Tadqiqot город Ташкент,
улица Амира Темура пр.1, дом-2.
Web: http://www.tadqiqot.uz/; Email: info@tadqiqot.uz
Тел: (+998-94) 404-0000

СОДЕРЖАНИЕ | CONTENT

JOURNAL OF ORAL MEDICINE AND CRANIOFACIAL RESEARCH
Informing scientific practices around the world through research and development
ISSN: 2181-0966
www.tadqiqot.uz
SAMARKAND STATE MEDICAL UNIVERSITY

Vohidov Elbek Rahimovich
Abu Ali Ibn Sino nomidagi
Buxoro Davlat Tibbiyot instituti

MASHINASOZLIK KORXONALARI ISHCHILARIDA OG'IZ BO'SHILIG'I A'ZOLARIDAGI PATOLOGIK O'ZGARISHLAR (ADABIYOTLAR SHARHI)

http://dx.doi.org/10.5281/zenodo.19538308

ANNOTATSIYA

Mashinasozlik korxonalari xodimlarining stomatologik sog'ligi dolzarb tibbiy – ijtimoiy muammo hisoblanadi. Metall aerozollari, organik erituvchilar, kislotalar va ishqorlar, shuningdek ishlab chiqarish muhitining jismoniy omillari ta'siri natijasida maxsus (spetsifik) stomatologik patologiya shakllari rivojlanadi. Bu patologiyalar yuqori tarqalganlik, agressiv kechish va an'anaviy davolash usullariga rezistentligi bilan xarakterlanadi. Kasbiy omillar bilan bog'liq stomatologik kasalliklarning o'ziga xos jihati – ularning polietiologik va ko'p omilli tabiatidadir. Og'iz bo'shlig'idagi patologik o'zgarishlar ishlab chiqarish omillarining to'g'ridan to'g'ri toksik ta'siri bilan bir qatorda, organizm gomeostazining buzilishi, moslashuv zaxiralarining kamayishi hamda immun himoyaning susayishi orqali bilvosita ta'sir natijasida ham shakllanadi.

Kalit so'zlar: mashinasozlik korxonalari xodimlarining stomatologik sog'ligi, metall aerozollari, organik erituvchilar, kislotalar va ishqorlar, immun himoya.

Вохидов Элбек Рахимович
Бухарский Государственный Медицинский Институт
Имени Абу Али Ибн Сино

ПАТОЛОГИЧЕСКИЕ ИЗМЕНЕНИЯ ОРГАНОВ ПОЛОСТИ РТА У РАБОТНИКОВ МАШИНОСТРОИТЕЛЬНЫХ ПРЕДПРИЯТИЙ (ОБЗОР ЛИТЕРАТУРЫ)

Стоматологическое здоровье работников машиностроительных предприятий является актуальной медико – социальной проблемой. В результате воздействия аэрозолей металлов, органических растворителей, кислот и щелочей, а также физических факторов производственной среды развиваются особые (специфические) формы стоматологической патологии. Эти патологии характеризуются высокой распространенностью, агрессивным течением и резистентностью к традиционным методам лечения. Специфика стоматологических заболеваний, связанных с профессиональными факторами, заключается в их полиэтиологическом и многофакторном характере. Патологические изменения в полости рта образуются как в результате прямого токсического воздействия факторов производства, так и косвенного воздействия через нарушение гомеостаза организма, Снижение адаптационных резервов, ослабление иммунной защиты.

Ключевые слова: стоматологическое здоровье работников машиностроительных предприятий, аэрозоли металлов, органические растворители, кислоты и щелочи, иммунная защита.

Vohidov Elbek Rahimovich
Bukhara State Medical Institute
named After Abu Ali Ibn Sino

PATHOLOGICAL CHANGES IN THE ORGANS OF THE ORAL CAVITY IN WORKERS OF MACHINE-BUILDING ENTERPRISES (LITERATURE REVIEW)

ANNOTATION

Dental health of employees of machine–building enterprises is an urgent medical and social problem. As a result of exposure to metal aerosols, organic solvents, acids and alkalis, as well as physical factors of the industrial environment, special (specific) forms of dental pathology develop. These pathologies are characterized by high prevalence, aggressive course and resistance to traditional treatment methods. The specificity of dental diseases associated with occupational factors lies in their polyethological and multifactorial nature. Pathological changes in the oral cavity are formed as a result of direct toxic effects of factors of production, as

well as indirect effects through a violation of the body's homeostasis, a decrease in adaptive reserves, and a weakening of immune defenses.

Keywords: dental health of workers of machine-building enterprises, metal aerosols, organic solvents, acids and alkalis, immune protection.

Relevance of the study. Modern production workers in mechanical engineering are characterized by a high degree of morbidity, including somatic diseases, occupational and work-related diseases, as well as a significant decrease or loss of labor capacity due to inconveniences in temporary and permanent work ravines, as well as a high mortality rate, especially among men of working age. The proportion of elderly people in the working population is increasing, which also reduces the level of working capacity. It is known that the socio-economic development of the country largely depends on the health and working capacity of workers. One of the main tasks of ensuring the medical and dental health of modern production workers in mechanical engineering is the maintenance of Labor potential, the quality of life and health of workers, reducing the consequences of industrial injuries, accidents, occupational diseases, timely provision of preventive and therapeutic services, availability and effectiveness of medical care. Providing dental care to workers of industrial enterprises medical and one of the most important principles of the organization of preventive care is the work of the worker significantly affects the health of the contingent. At the same time, the absence of a single scheme for providing dental assistance to workers in industrial enterprises leads to a sharp decrease in the effectiveness and quality of preliminary and periodic dental examinations, which are the main link of the system for the Prevention of dental diseases in workers affected by harmful and dangerous professional factors.

The purpose of the study. improvement of immunological changes in the organs of the oral cavity in workers of mechanical engineering enterprises. Results and analyzes. The study was carried out on the basis of dental units under the medical and sanitary parts of the mechanical engineering enterprises of the Samarkand region: SamAvto, MAN LLC. The core group included 356 employees aged 20-60 (median age 39.2±8.7 years) working in key manufacturing sectors. In them, the work experience in harmful labor conditions was from 1 to 32 years, and the average internship was 13.4±6.8 years. The control group included 120 employees of the administrative and managerial apparatus corresponding to the main group by gender and age, which were not affected by the harmful factors of production. Criteria for inclusion in the study: 20-60 years old; having worked at the machine shop for at least 1 year; absence of decompensated somatic pathology; signing informed consent to participate in the study. Distribution of employees of the main group by types of production: Casting (lithey) production – 52 people (14.6%): metal dust, high temperature, thermal radiation effect. Mechanical processing production – 98 people (27.5%): lubricating and cooling fluids, metal dust, noise exposure. Welding production – 56 people (15.7%): exposure to metal aerosols, ultraviolet radiation.

Thermal production-38 people (10.7%): high temperature, oil vapor effect. Galvanic production-32 people (9.0%): the effect of acids, alkalis, heavy metal salts. Dye-based production - 42 people (11.8%): organic solvents, effects of dye aerosols. Assembly-based production-38 people (10.7%): noise, vibration effect. The quality of life associated with dental health was assessed using the Russian language variant of the OHIP-14 (Oral Health Impact Profile) Survey. The subjective emotions of patients across seven domains were analyzed: functional limitations, physical pain, psychological discomfort, physical incapacity for work, psychological incapacity, social disadaptation, disability-inducing conditions. Statistical processing of data was carried out using the SPSS Statistics 26,0 program.

ALGORITHMS FOR THE DIAGNOSIS OF DENTAL DISEASES

Medical examination of employees Medical examination of employees of machine-building enterprises is the basis for the prevention of dental diseases and should be carried out in accordance with the following algorithm. Stage

1. Screening examination It is performed for all employees upon hiring and annually as part of periodic medical examinations. Includes: Visual inspection of the oral cavity. Determination of KPU, PMA, and OHI-S indexes. Detection of non-carious lesions. Assessment of the need for dental treatment. Stage

2. Distribution by dispensary groups Based on the results of the screening examination, employees are divided into 5 dispensary groups: group I – practically healthy (CP <5, PMA=0, OHI-S <1.0): preventive examinations 1 time per year, occupational hygiene 1 time per year. Group II – risk of developing diseases (CP 6-10, PMA 1-25%, OHI-S 1.0-1.6): preventive examinations 2 times a year, occupational hygiene 2 times a year, remineralizing therapy 2 times a year. Group III – initial manifestations of diseases (CP 11-15, PMA 26-50%, OHI-S 1.7-2.5): preventive examinations 3 times a year, occupational hygiene 3 times a year, remineralizing therapy 3 times a year, treatment of caries and gingivitis. Group IV – severe manifestations of diseases (CP 16-20, PMA >50%, moderate periodontitis, OHI-S >2.5): preventive examinations 4 times a year, occupational hygiene 4 times a year, comprehensive treatment of periodontitis, antioxidant and immunocorrective therapy. Group V – severe forms of diseases (CP >20, severe periodontitis, acid necrosis of enamel): preventive examinations 4-6 times a year, comprehensive treatment, orthopedic rehabilitation, solving the issue of rational employment. Stage 3. In-depth examination It is carried out for employees of III-V dispensary groups and includes:

Orthopantomography is used to assess the condition of the jaw bone tissue. Biochemical examination of oral fluid (pH, calcium, phosphorus, MDA, SOD). Immunological examination (sIgA, lysozyme, IL-1b).

Microbiological examination (according to indications for periodontitis). Diagnostic criteria for major diseases Dental caries Compensated form: CPR does not exceed the age norm, new carious cavities do not appear during the year, good oral hygiene, saliva pH >6.8.

Subcompensated form: CPR exceeds the age norm by 1.5-2 times, 1-2 new carious cavities per year, satisfactory hygiene, saliva pH 6.5-6.8. Decompensated form: CPR exceeds the age norm by more than 2 times, multiple caries (more than 3 new cavities per year), poor hygiene, saliva pH <6.5, decreased calcium in saliva. Acid necrosis of enamel Grade I: local enamel demineralization without visible defects, matte surface, positive vital coloration. Grade II: formation of surface enamel defects, roughness, pronounced hyperesthesia. Grade III: extensive

enamel defects with dentine exposure, reshaping of tooth crowns, intense hyperesthesia.

Periodontal diseases Mild gingivitis: PMA up to 25%, bleeding during probing, hyperemia and swelling of the gingival papillae. Moderate gingivitis: PMA 25-50%, bleeding when brushing teeth, edema of the marginal and alveolar gums. Mild periodontitis: periodontal pockets up to 3.5 mm, alveolar bone resorption up to 1/3 of the root length, PMA >50%. Moderate periodontitis: periodontal pockets 4-5 mm, bone resorption up to 1/2 root length, grade I tooth mobility, PI 3-5.

Severe periodontitis: periodontal pockets >6 mm, bone resorption greater than 1/2 of the root length, grade II-III tooth mobility, PI >5, suppuration from pockets.

Descriptive statistical methods, parametric and nonparametric criteria for group comparison, correlation analysis were used. The discrepancies were accepted as statistically significant at $p<0.05$. Employees of mechanical engineering enterprises noted a clear violation of the balance between the system of oxidation of lipids using peroxide and antioxidant protection. The main product of peroxide - assisted oxidation of lipids, malon dialdehyde (MDA), which was reliably increased, was 3.86±0.18 mkmol/L; in the control group-1.92±0.12 mkmol/l ($p<0.001$). Increased MDA levels indicate activation of free radical oxidation processes. Antioxidant protective enzyme activity reliably decreased:

Superoxidismutase (SOD) is 0.086±0.006 yed/ml, 0.154±0.008 yed/ml in the control group ($p<0.001$). Catalase-12.4±0.8 mkkat/l, 21.6±1.2 mkkat/l ($p<0.001$) in the control group. Glutathionperoxidase (GP) is 18.6±1.4 mkkat/l, 32.4±1.8 mkkat/l ($p<0.001$) in the control group. The development of oxidative stress leads to damage to cell membranes, disruption of microcirculatory rusl vessel conduction, fibroblasts and osteoblasts dysfunction. It is considered one of the leading pathogenetic mechanisms for the development of periodont diseases. A direct correlation relationship ($R=0.62$, $p<0.001$) between MDA levels and RMA index, as well as an inverse relationship ($R=-0.58$, $p<0.001$) between sod activity and periodontitis severity, was found.

Lysozyme activity with bacteriolytic effects also decreased reliably: 32.4±2.2% - compared to 58.6±3.4% in the control group ($p<0.001$). A decrease in lysozyme activity serves to increase the level of microbial contamination in the oral cavity. Yalling-the amount of cytokines reliably increased: Interleukin-1β (IL - 1β) - 86.4±4.2 pg/ml, 32.8±2.4 pg/ml ($p<0.001$) in the control group. Interleukin-6 (IL - 6) is 54.6±3.8 pg/ml, 18.2±1.6 pg/ml ($p<0.001$) in the control group. Tumor necrosis factor-α (TNF-α) - 72.8±4.6 pg/ml, 24.4±2.2 pg/ml in the control group ($p<0.001$). Increased levels of pre-yalling cytokines indicate chronic activation of the immune response. This leads to the degradation of the parodont tissue and resorption of the alveolar bone. A direct correlation relationship ($R=0.68$, $p<0.001$) between IL-1β levels and the depth of the periodontal pockets, as well as a direct correlation ($R=0.64$, $p<0.001$) between TNF-α levels and alveolar bone resorption levels were also found.

A microbiological study found that there were significant changes in the microbiocenosis of the oral cavity in employees of machine-building enterprises. Total microbial contamination in the oral fluid was reliably increased to 8.4±0.6 lg KOYE/ml; 5.2±0.4 lg KOYE/ml ($p<0.001$) in the control group. A significant increase in the amount of periodontopathogenic species was noted: Porphyromonas gingivalis-3.8 times higher than the control group. Prevotella intermedia-2.9 times higher. Aggregatibacter actinomycetemcomitans-2.5 times higher. Tannerella forsythia - 3.2 times higher. At the same time, a decrease in the amount of representatives of normal microflora (lactobacilli, Bifidobacteria) was also observed, which indicates the formation of dysbiotic States. A direct correlation between the amount of periodontopathogens and the weight of the periodontitis was found ($r = 0.72$, $p<0.001$).

The pathogenetic basis for the development of dental diseases in mechanical engineering personnel is the following: impaired acid-alkaline balance and mineralizing function of saliva, activation of processes of peroxide-mediated oxidation of lipids under conditions of impaired antioxidant protection, decreased local immunity, oral dysbiosis. Characteristic features of dental pathology include: the predominance of decompensated forms of caries, the early development and rapid progression of parodont diseases, the occurrence of nocarious lesions at high frequency, including acidic necrosis of professional enamel on employees of galvanic production.

Employees of machine-building enterprises are at high risk of developing dental diseases. The prevalence of caries among them is 97.5%, periodontal diseases – 89.3%, non–carious lesions - 43.8%, which significantly exceeds the rates of people who are not exposed to industrial hazards. The pathogenetic basis for the development of dental diseases in mechanical engineering workers are: violation of the acid-base balance and mineralizing function of saliva, activation of lipid peroxidation processes with inhibition of antioxidant protection, decreased local immunity, dysbiosis of the oral cavity. The features of dental pathology are: the predominance of decompensated forms of caries, early development and rapid progression of periodontal diseases, high incidence of non-carious lesions, including occupational acid necrosis of enamel in workers of electroplating industries. The severity of dental diseases is directly dependent on the length of service in harmful conditions and the type of production. The most unfavorable situation is noted in the electroplating, foundry and welding industries.

The medical examination of employees with the distribution of health groups and a differentiated approach to preventive measures is the basis for the organization of dental care in industrial enterprises. A comprehensive prevention system should include organizational, hygienic and medicinal measures at three levels: primary prevention (disease prevention), secondary prevention (early detection and treatment), and tertiary prevention (prevention of complications and relapses). Treatment of dental diseases in workers of machine-building enterprises should be differentiated, taking into account the degree of compensation of the pathological process, the nature of industrial impacts, and include both local and systemic therapy using antioxidants and immunocorrectors.

Dental rehabilitation of employees should include orthopedic treatment with the preferred use of non-removable structures made of bioinert materials, physiotherapy methods, and spa treatment using balneological factors. The implementation of the developed system of prevention, treatment and rehabilitation makes it possible to significantly improve the dental status of employees, improve the quality of life, reduce temporary disability and ensure medical and economic efficiency.

The severity of dental diseases directly depends on the type of seniority and production in harmful working conditions. The most unfavorable situation was noted in the production of galvanic, cast (litey) and welding. Dispensarization with the distribution of employees by health groups and a differential

approach to preventive measures form the basis of the organization of dental care in industrial enterprises.

The complex system of prevention should include organizational, hygienic and medicamentous measures in three stages: primary prevention (disease prevention), secondary prevention (early detection and treatment), tertiary prevention (prevention of complications and recidivism). Treatment of dental diseases in employees of mechanical engineering enterprises should be carried out in a differential way, taking into account the degree of compensation of the pathological process and the nature of the production effects, as well as cover local and systemic therapy with the use of antioxidants and immunocorrectors.

Dental rehabilitation of employees should include orthopedic treatment (giving priority to non - removable constructions made of bioinert materials), physiotherapeutic methods and sanatorium-resort treatment with the use of balneological factors. The implementation of the developed preventive, therapeutic and rehabilitation system into practice makes it possible to improve the dental health of employees, improve the quality of life, reduce the incidence of temporary incapacity for work and ensure medico-economic efficiency.

ALGORITHMS FOR THE TREATMENT OF MAJOR DENTAL DISEASES

Dental caries treatment With a compensated form of caries Preparation of the carious cavity according to generally accepted principles. Medical treatment: 2% chlorhexidine bigluconate solution. Sealing: light-cured composite materials, glass ionomer cements.

Prevention: fluoridation 2 times a year. With subcompensated caries Complete sanitation of the oral cavity. Boundary-widening dissection to prevent relapse. Treatment of the cavity with 0.2% chlorhexidine solution with an exposure of 60 seconds. Sealing with materials with high fluorine content (compomers, modified glass ionomer cements). Remineralizing therapy with a course of 10-14 days.

Deep fluoridation 3-4 times a year. With decompensated caries Stage-by-stage rehabilitation of the oral cavity with priority treatment of teeth of strategic importance. Temporary sealing with glass ionomer cement in case of impossibility of final processing. Antiseptic treatment: 2% chlorhexidine solution + Metrogil Denta gel application for 15 minutes. Final sealing with fluorinated materials. Intensive remineralizing therapy: application of 10% calcium gluconate solution daily for 14 days, followed by fluoridation. Systemic antioxidant therapy with a 30-day course. Dynamic monitoring with checkups every 2-3 months.

Treatment of acid necrosis of enamel Grade I (initial demineralization) Elimination of contact with acidic aerosols (transfer to another work site). Professional oral hygiene. Intensive remineralizing therapy: applications of calcium preparations (R.O.C.S. Medical Minerals, GC Tooth Mousse) daily for 30 days. Deep fluoridation every 3 months. Care recommendations: fluoride-containing toothpaste (1450 ppm F), neutralizing mouthwashes. Grade II-III (severe defects) Mandatory cessation of contact with harmful factors. Intensive remineralizing therapy for 2 months.

Treatment of hyperesthesia: desensitizers (Fluocal, Seal&Protect), coating with dentine adhesives. Aesthetic restoration of affected teeth with composite materials or ceramic veneers. If there is a significant loss of tissues, artificial crowns can be made. Comprehensive treatment of periodontal diseases Gingivitis Stage 1. Elimination of local factors (5-7 days): Professional oral hygiene. Sanitation of the oral cavity. Correction of overhanging fillings and sharp edges of teeth. Stage 2. Anti-inflammatory therapy (10-14 days): Applications of Metrogil Denta or Holisal gel 2 times a day. Rinsing with 0.05% chlorhexidine solution 2 times a day. With severe inflammation, instillation of antiseptic solutions into the gingival pockets. Stage 3. Supportive therapy: Professional hygiene every 3-4 months. The use of therapeutic and preventive toothpastes. Check-ups every 3 months.

Mild periodontitis Stage

1. Initial treatment: Professional hygiene with removal of supra- and subgingival deposits. Sanitation of the oral cavity. Selective grinding in case of premature contact. Stage

2. Anti-inflammatory therapy (14 days): Application of anti-inflammatory gels. Instillation into periodontal pockets: 0.2% chlorhexidine solution, 1% dioxidine solution. Physical therapy: darsonvalization, UFO, laser therapy. Stage

3. Systemic therapy (if necessary): Antioxidants in a 30-day course. Immunocorrectors (Imudone). Calcium and vitamin D preparations. Moderate to severe periodontitis Stage 1. Initial treatment (similar to mild). Stage 2. Drug therapy (14-21 days): Antibiotic therapy: doxycycline 100 mg 2 times a day for 7-10 days or amoxicillin + metronidazole. Local antiseptics: instillation, pocket washing. Prolonged forms of antiseptics (Diplene Denta, Metrogil Dental gel). Stage 3. Surgical treatment (if necessary): Closed curettage with a pocket depth of up to 5 mm. An open curettage or flap operation with a pocket depth of more than 5 mm. Targeted tissue regeneration using membranes and bone-plastic materials. Stage

4. Splinting (with grade II-III tooth mobility): Adhesive splinting with fiberglass. Splinting with orthopedic structures. Stage

5. Supportive therapy: Professional hygiene every 3 months. Check-ups with antiseptic treatment of pockets. Repeated courses of antioxidant therapy 2 times a year.

ALGORITHMS OF DENTAL REHABILITATION

Orthopedic rehabilitation Orthopedic rehabilitation of workers in machine-building enterprises is of particular importance due to the high prevalence of partial adentia and should be carried out as soon as possible to restore chewing function and prevent further tooth loss.

Indications for orthopedic treatment Defects in the crowns of teeth that cannot be repaired with filling materials. Partial adentia with impaired chewing function. Pathological tooth erasure. Aesthetic defects after acid necrosis. The need for splinting in periodontal diseases. Types of orthopedic structures Non-removable structures (preferred for manual workers): Ceramic inlays, onlays – when the tooth crown is destroyed by up to 50%. Artificial crowns (metal–ceramic, metal-free) - with a fracture of more than 50%. Bridge–like prostheses are used for minor defects (1-2 teeth).

Dental implants are used when there is a sufficient amount of bone tissue. Removable structures: Partial removable dentures – for extended defects, end defects. Dentures provide better fixation and load distribution. Full removable dentures – with full adentia. Features of the choice of materials When choosing construction materials for employees of machine-building enterprises, it is necessary to take into account: Bioinertivity – preference is given to materials that do not contain nickel, cobalt and other potential allergens. Corrosion resistance is important for workers in contact with acids and alkalis.

Durability is for manual workers. Recommended materials: zirconium dioxide, all-ceramic structures, titanium, metal-free ceramics. Physiotherapeutic methods of rehabilitation Physiotherapy is an important component of the comprehensive rehabilitation of workers with periodontal diseases and is used after the relief of acute inflammatory phenomena.

Darsonalization Indications: catarrhal gingivitis, periodontitis in remission, hyperesthesia. Technique: contact, with a weak spark, for 5-7 minutes on the upper and lower jaw area. A course of 10-12 procedures daily or every other day. Effect: improvement of microcirculation, anti-inflammatory effect, normalization of vascular tone. Laser therapy Indications: gingivitis, periodontitis, alveolitis, hyperesthesia, postoperative period. Technique: helium-neon laser (wavelength 632.8 nm), power 2-3 MW, exposure 2-3 minutes in the field. The course of 8-10 procedures. Effect : anti-inflammatory, analgesic, regenerative effect. Ultrasound therapy Indications: chronic periodontitis, contractures of the masticatory muscles. Technique: frequency 880 kHz, continuous mode, intensity 0.2-0.4 W/cm2, 5-10 minutes. The course of 8-10 procedures. Effect : improvement of tissue trophism, resorption, analgesia. Electrophoresis of medicinal substances Indications: periodontal diseases, neuralgia. Method: solutions of vitamins (C, B1), calcium chloride (2%), lidase are used. The current is 2-3 mA, 15-20 minutes. The course of 10-12 procedures. Effect: prolonged action of the drug, anti-inflammatory effect. Balneological factors For workers of machine-building enterprises, sanatorium-resort treatment with the use of balneological factors is recommended once every 2 years.

Mineral baths General balneological procedures help to improve the general condition of the body, normalize metabolic processes, which has a beneficial effect on dental health. Recommended: radon, hydrogen sulfide, and iodine-bromine baths. A course of 10-12 baths every other day. Rinsing with mineral waters Indications: periodontal diseases, caries. Method: rinsing with slightly mineralized alkaline waters 4-6 times a day for 200 ml for 3-4 weeks. Effect: normalization of pH, improvement of trophic mucosa, anti-inflammatory effect.

Conclusion. A study of local immunity indicators showed that the protective factors of the oral cavity are clearly weakened in employees of machine-building enterprises. The secretory immunoglobulin A (sIgA), a key factor in specific local immunity, was reliably reduced to 124.6±8.4 mg/l; while the control group had 248.4±12.6 mg/l ($p<0.001$). a decrease in the level of sIgA more than 2 times leads to a violation of colonizing resistance and creates conditions for the activation of conditional-pathogenic microflora.

LIST OF USED LITERATURE

1. Е.В.Боровский, В.К.Леонтьев Биология полости рта. - М.: Медицина, 2019.- 432 с.
2. А.И.Грудянов. Заболевания пародонта. - М.:Медицинское информационное агентство, 2019.-336 с.
3. Л.А.Дмитриева, Ю.М.Максимовский. Терапевтическая стоматология: национальное руководство.- М.: ГЭОТАР-Медиа, 2021.-888 с.
4. А.К.Иорданишвили. Клиническая ортопедическая стоматология.-М.: МЕДпресс-информ, 2020.-464 с.
5. Э.М.Кузьмина. Профилактика стоматологических заболеваний. - М.: Тонга-принт, 2021.-544 с.
6. А.И.Николаев., Л.М.Цепов. Практическая терапевтическая стоматология. - М.: МЕДпресс-информ, 2021.-928 с.
7. Л.Ю.Орехова. Заболевания пародонта.-М.: Поли Медиа Пресс, 2019.-798 с.
8. И.М.Рабинович., С.В.Москвин. Лазеротерапия в стоматологии. - М.: НПЛЦ “Техника”, 2018.-230 с.
9. Г.И.Ронь., Е.А.Бриль. Профилактика стоматологических заболеваний у работников промышленных предприятий. - Екатеринбург: УГМА, 2018.-156 с.
10. С.Б.Улитовский. Гигиена полости рта в пародонтологии. - М.: Медицинская книга, 2022.-268 с.
11. Ю.А.Фёдоров., В.А.Дрожжина. Клиника, диагностика и лечение некариозных поражений зубов. - СПб.: Нордмедиздат, 2019.-187 с.
12. О.О.Янушевич., Э.М.Кузьмина. Стоматологическая заболеваемость населения России. - М.: МГМСУ, 2022.-236 с.

Зарубежная литература

13. Chapple I.L.C., Mealey B.L., Van Dyke T.E. et al. Periodontal health and gingival diseases and conditions on an intact and a reduced periodontium: Consensus report of workgroup 1 of the 2017 World Workshop on the Classification of Periodontal and Peri-Implant Diseases and Conditions // J Clin Periodontol. – 2018. – Vol. 45 (Suppl 20). – P. S68-S77.
14. Kassebaum N.J., Smith A.G.C., Bernabé E. et al. Global, regional, and national prevalence, incidence, and disability-adjusted life years for oral conditions for 195 countries, 1990-2015: a systematic analysis for the global burden of diseases, injuries, and risk factors // J Dent Res. – 2020. – Vol. 96(4). – P. 380-387.
15. Kinane D.F., Stathopoulou P.G., Papapanou P.N. Periodontal diseases // Nat Rev Dis Primers. – 2017. – Vol. 3. – P. 17038.
16. Petersen P.E., Bourgeois D., Ogawa H. et al. The global burden of oral diseases and risks to oral health // Bull World Health Organ. – 2019. – Vol. 83(9). – P. 661-669.

ISSN 2181-0966

Doi Journal 10.26739/2181-0966

ЖУРНАЛ СТОМАТОЛОГИИ И КРАНИОФАЦИАЛЬНЫХ ИССЛЕДОВАНИЙ

JOURNAL OF ORAL MEDICINE AND CRANIOFACIAL RESEARCH

Editorial staff of the journals of www.tadqiqot.uz
Tadqiqot LLC The city of Tashkent,
Amir Temur Street pr.1, House 2.
Web: http://www.tadqiqot.uz/; Email: info@tadqiqot.uz
Phone: (+998-94) 404-0000

Контакт редакций журналов. www.tadqiqot.uz
ООО Tadqiqot город Ташкент,
улица Амира Темура пр.1, дом-2.
Web: http://www.tadqiqot.uz/; Email: info@tadqiqot.uz
Тел: (+998-94) 404-0000