

# Hygienic Condition of the Oral Cavity and the Level of Hygienic Knowledge of Silk-Winding Production Workers

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**Annotation:** The article presents information about the hygienic condition of the oral cavity, the condition of periodontal tissues, the level of hygienic knowledge and measures of therapeutic and preventive measures for workers of silk-winding production. The object of the study was 97 workers of the Bukhara Brilliant Silk alkali industry, exposed to industrial noise in production conditions, as one of the harmful production factors, as well as dustiness of the air of working premises in various workshops and microclimatic conditions, aged 29-59, are harmful production factors in importance. The control group consisted of 44 employees of the administrative and managerial apparatus, whose work process excludes the impact of factors of the production environment. The results of the research revealed a total prevalence of diseases of the hard tissues of the teeth (99.1%) and periodontal disease (100%) in workers of the Bukhara Brilliant Silk alkali industry, a high prevalence of diseases of the oral mucosa – 58.7%, a low level of oral hygiene and hygienic knowledge. There is an obvious need to develop a targeted prevention program that includes comprehensive – individual, professional oral hygiene and health education.

**Keywords:** silk-winding production, workers, oral cavity, level of hygienic knowledge, periodontitis, dental status.

## Relevance

Dental health for workers in various industries is currently very relevant [2], since the preservation of health is an important state, medical and social problem [4]. According to most studies, it has been revealed that a complex of professional production factors contributes to the development of chronic diseases of the oral cavity, such as inflammatory diseases of the oral mucosa, periodontal tissues, carious and non-carious lesions of the hard tissues of the teeth [2, 4, 5, 6, 7]. The number of works devoted to the issue of the level of knowledge about individual oral hygiene and its analysis strongly indicates a rather low level of hygienic knowledge and skills, especially among the working-age population [4].

**The purpose of the study** is to study oral hygiene and the level of hygienic knowledge, as well as the condition of periodontal tissues in workers of silk-winding production.

## Material and methods of research

One of the leading enterprises of Bukhara, which brings a significant share in the formation of the country's budget, was chosen as the basis of the study: Bukhara Brilliant Silk, which belongs to the largest production complexes of the modern, click-winding industry [1]. Object of study: 97 employees of "Bukhara Brilliant Silk", exposed to industrial conditions, industrial noise has acquired great importance as one of the harmful production factors, as well as dustiness of the air of working rooms in various workshops and, by significance, harmful production factors are microclimatic conditions, , at the age of 29 59 years. The patients sought dental care in the 2nd Dental Polyclinic of the Bukhara district. The control group consisted of 44 employees of the administrative and managerial apparatus, whose work process excludes the impact of factors of the production environment. Before starting treatment, a clinical quantified assessment of dental status was performed. The diagnostic criteria for inclusion in the observation group were the principles of the International Classification of Diseases (ICD-10), approved by WHO. When making the diagnosis, the classification of periodontal diseases was used, adopted at the XVI Plenum of the All-Union Scientific Society of Dentists in 1983 and

approved at the Plenum of the Periodontology Section of the Russian Academy of Dentistry in 2001. signs of diseases, the appearance of new symptoms, and also found out whether these symptoms were present before entering the job. During the survey, the presence or absence of bad habits, the regime and the nature of nutrition were established. To assess the level of knowledge on hygiene and prevention of dental diseases, and, consequently, the quality of oral hygiene, a survey of the subjects was conducted. During the examination, attention was paid to the general condition of the subject, regional lymph nodes were palpated, the condition of the temporomandibular joint was assessed. The examination of the oral cavity included examination of the oral mucosa, determination of the depth of the vestibule of the mouth, the position of the teeth in the dental arch, bite, defects of the dentition and their anomalies. The condition of the hard tissues of the teeth, the quality of fillings, the presence of contact points, and available prostheses were evaluated. The presence or absence of supercontacts, blocking occlusion, the shape and degree of erasability of teeth were checked. Attention was paid to the condition of periodontal tissues: color, humidity, swelling of the gums, depth of periodontal pockets, mobility of teeth, the presence of supra- and subgingival dental deposits. The examination was carried out using a periodontal probe with a ball at the end with a diameter of 0.5 mm. The hygienic state of the oral cavity was studied according to the simplified Green-Vermillion index (OHI-S – Oral Hygiene Index-Simplified). The state of language hygiene in patients was assessed using the WTC index proposed by N. G. Dmitrieva [3]. The CPITN index (Community Periodontal Index of Treatment Needs) according to WHO was calculated as an integral indicator of the need for treatment of periodontal diseases. The severity of gingival inflammation was determined by the reversible PMA index modified by S. Parma (1960), the severity of destructive processes in the periodontal periodontal index PI (A. Russel, 1956), the degree of bleeding of the gums – using the papillary index of bleeding PBI by U. P. Saxer and M. R. Muhlemann (1975). In order to clarify the diagnosis, an X-ray examination was performed, which included the analysis of orthopantomograms and targeted X-rays. The processing of the obtained research results was carried out taking into account the current requirements of evidence-based medicine.

## Results and their discussion.

Analysis of complaints of patients identified during questioning allowed us to obtain the data presented in Table 1. Table 1 Complaints identified during the survey of patients Complaints n (%) Bleeding gums 59 (60.8) Pain from various stimuli 45 (46.4) Burning tongue 40 (41.2) Dry mouth 20 (20.6) Bad breath mouth 79 (81.4) It was found that 31% of 97 people had their oral cavity sanitized. Periodontal pathology was found in 100% of patients. As a result of the assessment of the dental health of patients, the compliance of the periodontological status with the diagnostic criteria of chronic generalized periodontitis of mild, moderate and severe degree was revealed: chronic generalized periodontitis of mild degree was diagnosed in 17 (17.53%) patients, moderate severity – in 46 (47.42%) patients, severe – in 34 (35.05%). During the index evaluation, the following data were obtained: the average value of the OHI-S index was  $3.6 \pm 0.6$ ; PMA –  $69.5 \pm 3.1$ ; PI –  $4.6 \pm 0.4$ . Almost all patients had the first and second degree of bleeding gums. As a result of the survey, a low value of the ONI-S index corresponding to a good hygienic condition of the oral cavity was detected only in 8 workers, which is 8.25% of the total number of examined with an average value of the WTC index equal to 0.9. The state of the oral cavity in hygienic terms was satisfactory in 19 (19.59%) patients and the average WTC was 3.6. An unsatisfactory level of oral hygiene with a value of ONI-S from 1.9 and higher was observed in 69 (71.13%) workers with an average value of the WTC index equal to 6.3. There was a clear relationship between the state of oral hygiene and language, which were unsatisfactory in almost a significant part of the surveyed (71.13%). Therapeutic dentistry / Therapeutic dentistry Original studies and declared hygienic knowledge of the examined persons indicates the need to clean not only the teeth, but also the tongue and characterizes an objective picture of the state of hygiene of the tongue. It was revealed that 17 employees brushed their teeth 2 times a day and rinsed them after meals, 29 employees – 1 time a day and mostly in the morning before meals, the rest of the employees noted that they practically do not brush their teeth. In this regard, cleaning the tongue along with brushing teeth and using mouthwashes should become a mandatory prerequisite in the complex of individual hygiene.

The hygienic procedure for cleaning the tongue should begin using special cleaners (scrapers with a brush) or a softer toothbrush with even bristles. Particular attention should be paid to the hygiene of the tongue to persons who often accumulate mucus, plaque, which are a favorable environment for the vital activity of microflora, which contributes to the development of dental caries and inflammatory processes of the soft tissues of the oral cavity and periodontal. Among the factors that favor the occurrence of dental deposits, the most important are: general bacterial contamination of the oral cavity; a variety of bacterial flora (saprophytes, pathogenic, conditionally pathogenic microflora); hyposalivation and an increase in the viscosity of saliva; frequent use of easily digestible carbohydrates; low level of individual oral hygiene. In persons working in conditions of harmful industrial exposure, the above factors may be aggravated by irrational nutrition, a high level of dental morbidity. The main recommendations on rational oral hygiene for workers in contact with harmful and dangerous working conditions: therapeutic and prophylactic toothpastes with anti-inflammatory, antimicrobial components of combined action, containing extracts of medicinal plants, salts, antiseptics, enzymes, vitamins, trace elements. The selection of toothpaste should be individual, taking into account the dental status; toothbrushes of medium hardness with medium and small head size, no more than 30mm and 7.5-11mm wide, with a multi-level arrangement of bristles and cone-shaped bundles of fibers; rinses containing components that inhibit the formation of plaque – triclosan, chlorhexidine, hexetidine. These agents neutralize the acidic environment, contributing to more effective treatment of periodontal tissue lesions and oral mucosa. It was found that workers in the structure of the formation of moral values have no need to take care of their own health: for example, 33.1% of workers visit the dentist less than 1 time a year, 89.6% of people – only when pain appears. To the questions asked, what prevents getting timely treatment at the dentist, 21.1% of the applicants answered that they do not tolerate and are afraid of pain, 47.6% do not have the financial means to conduct paid treatment, and 31.3% do not have time to visit the dentist. All of the above indicates that workers do not pay adequate attention to the condition of the oral cavity, which indicates a low level of hygienic knowledge. Self-assessment of the state of the oral cavity in workers of enterprises was carried out according to three criteria: good, satisfactory and unsatisfactory. Of those who applied, only 5.8% rated the condition of the oral cavity as good, 55.2% – as satisfactory and 39% – as unsatisfactory. According to the dental examination, 99.1% had carious lesions of the hard tissues of the teeth, 38.9% had non-carious lesions, 100% had periodontal diseases. Half of the employees (50.4%) knew about the negative impact of harmful factors of production on the condition of the oral organs, 33.2% of workers knew that fluoride increases the resistance of teeth to caries, 72.7% did not have information about additional oral hygiene products, and 18.2% believed that the prevention of dental diseases is a visit to the dentist for the purpose of filling teeth. The low level of hygienic knowledge of workers is confirmed by the results of dental examination and is characterized by an average index value of  $3.3 \pm 0.33$ , interpreted as "very poor".

## Conclusions.

Thus, the research results indicate a total prevalence of diseases of the hard tissues of the teeth (99.1%) and periodontal disease (100%) in workers, high prevalence of dental problems – 23-27%. The actual problems in dentistry (Russia) 27 prevalence of diseases of the oral mucosa – 58.7%, low level of oral hygiene and hygienic knowledge of workers. Lye-winding industry "Bukhara Brilliant Silk". There is an obvious need to develop a targeted prevention program that includes comprehensive – individual, professional oral hygiene and health education. The use of an intensive comprehensive program combining individual and professional oral hygiene will, on the one hand, increase the effectiveness of treatment, and on the other hand, maintain inflammatory periodontal diseases and diseases of the oral mucosa in remission for a long time.

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