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IMPROVEMENT OF PREVENTION AND TREATMENT OF PERIODONTAL DISEASES IN WORKERS OF METAL PROCESSING ENTERPRISES

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Introduction. Periodontal diseases remain one of the most common dental pathologies among the adult population and represent a significant medical and social problem. Workers employed in metal processing enterprises are constantly exposed to unfavorable occupational factors, including industrial dust, metal aerosols, vibration, noise, elevated temperatures, and chemical compounds. Long-term exposure to these factors may contribute to the development and progression of inflammatory periodontal diseases.

Occupational hazards negatively affect local immunity, oral microcirculation, and the protective properties of saliva, leading to deterioration of periodontal tissue health. In addition, insufficient awareness of oral hygiene and irregular dental examinations further increase the risk of periodontal pathology in this occupational group. Therefore, the development of effective preventive and therapeutic approaches for workers of metal processing enterprises is an important task of modern dentistry.

Aim of the study. To analyze contemporary scientific data regarding periodontal diseases among workers of metal processing enterprises and to identify effective methods for improving prevention and treatment.

Materials and Methods. The study was based on the analysis of scientific literature devoted to occupational dentistry, periodontal diseases, and preventive medicine. Publications from domestic and international peer-reviewed journals, educational literature, and methodological recommendations were reviewed. Particular attention was paid to studies evaluating the influence of occupational factors on periodontal tissues, mechanisms of disease development, and methods of prevention and treatment.

Results and Discussion. Analysis of the available literature demonstrated that periodontal diseases occur more frequently among workers exposed to harmful industrial factors than among individuals not employed in hazardous occupations. Chronic gingivitis and chronic generalized periodontitis were identified as the most common periodontal conditions.
The pathogenic mechanisms involve chronic irritation of oral tissues by industrial dust and aerosols, impaired microcirculation, reduced salivary secretion, and disturbances in local immune defense. These changes create favorable conditions for the accumulation of dental plaque and progression of inflammatory processes in periodontal tissues.

Modern approaches to prevention include professional oral hygiene procedures, individual oral hygiene education, regular periodontal screening, elimination of local risk factors, and the use of preventive anti-inflammatory agents. Therapeutic measures should be aimed at controlling inflammation, improving periodontal blood circulation, and restoring the protective properties of oral fluid.

The literature data indicate that comprehensive preventive programs implemented directly at industrial enterprises significantly reduce the prevalence and severity of periodontal diseases and improve the quality of life of workers.

Conclusions

Workers of metal processing enterprises are at increased risk of developing periodontal diseases due to continuous exposure to occupational hazards.

Harmful industrial factors contribute to inflammatory changes in periodontal tissues and deterioration of oral health status.

Prevention of periodontal diseases should include professional oral hygiene, health education, and regular dental monitoring.

Comprehensive preventive and therapeutic measures improve periodontal health and reduce the progression of periodontal pathology among industrial workers.

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