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## THE INFLUENCE OF PSYCHOEMOTIONAL STATE ON PERIODONTAL DISEASES

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### ANNOTATION

Numerous epidemiological, clinical, and experimental studies demonstrate that stress influences the onset and progression of changes in periodontal tissues. However, studies examining the impact of stress during university studies on the development of periodontal diseases in students have been virtually nonexistent in the scientific literature.

**Key words:** psycho-emotional stress, periodontitis, students.

### АННОТАЦИЯ

Множественные эпидемиологические, клинические и экспериментальные исследования доказывают, что стресс влияет на возникновение и прогрессирование изменений в тканях пародонта. Однако исследований, в которых изучалось влияние стресса в период обучения в университете на развитие заболеваний пародонта у студентов, в научной литературе практически не встречалось.

**Ключевые слова:** психоэмоциональный стресс, пародонт, студенты.

### ANNOTATSIYA

Ko‘plab epidemiologik, klinik va eksperimental tadqiqotlar shuni isbotlaydiki, stress parodont to‘qimalarda o‘zgarishlarning paydo bo‘lishi va rivojlanishiga ta’sir qiladi. Biroq, universitetda o‘qish davridagi stressning talabalarda parodont kasalliklarining rivojlanishiga ta’siri o‘rganilgan tadqiqotlar ilmiy adabiyotlarda deyarli uchramagan.

**Kalit so‘zlar:** psixuemotsional stress, parodont, talabalar.

### INTRODUCTION

The prevalence of inflammatory periodontal diseases among adults is high and shows no sign of decreasing [7]. This is due to the increase in the incidence of periodontal diseases in younger generations, the growing prevalence in the adolescent population, the increasing intensity and changing nature of the disease, and a significant increase in aggressive forms of periodontal



disease [1, 6]. Numerous causes lead to the development of periodontal diseases in the oral cavity. The most common of these are neurotrophic, nutritional, vascular, and endocrine disorders, as well as local factors in the oral cavity [5].

Many scientists believe that poor oral hygiene, which leads to the formation of biofilm, a cluster of bacteria, is the main cause of gingivitis and periodontitis [1, 3]. However, the high prevalence of periodontal diseases is not only due to poor oral hygiene or the negative impact of somatic pathology. These conclusions were made based on the fact that periodontal diseases are diagnosed in practically healthy people [1].

Numerous epidemiological, clinical, and experimental studies demonstrate that stress influences the onset and progression of periodontal changes. However, studies examining the impact of stress during university studies on the development of periodontal disease in students have been virtually nonexistent in the scientific literature. Since students represent a special group of people who are exposed to various emotional factors on a daily basis, this motivated the present study.

#### **Aim of the study:**

To determine the relationship between psychoemotional stress and periodontal disease in students.

#### **MATERIALS AND METHODS**

A medical and social survey was conducted among 290 first- to seventh-year students of the Faculty of General Medicine at Karaganda Medical University. The students ranged in age from 18 to 25 years. In terms of gender ratio, among those examined, there were 155 men (52.3%) and 145 women (47.7%).

A dental examination was conducted according to WHO charts. The prevalence of periodontal disease was expressed as a percentage. Periodontal disease was assessed clinically using the standard examination protocol, and the results were recorded for each tooth. The PMA index and the Schiller-Pisarev test were determined. The severity of periodontal disease was recorded using the WHO CPI (WHO, 1982). Oral hygiene was assessed using the simplified Oral Hygiene Index (OHI-S, Green and Wermillion, 1964). Psychoemotional stress was assessed using the Psychological Stress Scale (PSM-25). Statistical processing was performed using IBM SPSS Statistics 22. The informed consent form was compiled according to the recommendations of the BEC. The informed consent was voluntarily signed by the study participant; all information obtained is strictly confidential.

#### **RESULTS AND DISCUSSION**

The prevalence of periodontal disease among students was very high (93.3%), while no changes in periodontal tissues were observed in only 5.7% of students. Inflammatory diseases were detected in 76.4% of students, and degenerative-inflammatory periodontal diseases were observed in 14.6%. The severity of periodontal disease in students, as measured by the CPI, was  $M = 1.25$ ;  $SD = 0.78$ , indicating a need for professional hygiene and the elimination of factors contributing to plaque development. Furthermore, patients needed oral hygiene training. Mild gingivitis was observed in 67.38% of students, moderate gingivitis in 22.40%, and severe gingivitis in 9.22%. An analysis of the OHI-S oral hygiene index (OHI-S) in students was also



conducted, as local exposure to irritants, such as plaque and tartar, plays a primary role in the development of periodontal disease.

The following results were obtained: poor oral hygiene was observed in 4.66% of students, 15% of children had unsatisfactory oral hygiene, 60.37% had satisfactory oral hygiene, and 17.66% had good oral hygiene. This indicates that the majority of medical students adhere to basic oral hygiene principles. A proportion of students with good and satisfactory oral hygiene had a mild inflammation score on the OHI-S index, suggesting that other associated factors influence the onset and progression of periodontal disease.

Psychoemotional stress was assessed using the Psychological Stress Scale (PSM-25). The following results were obtained: students with low stress levels constituted the majority of the students (74.6%), moderate stress levels were observed in 17.6% of cases, and 7.6% of students had high stress levels. The data obtained in identifying the relationship between the level of psychoemotional stress according to the PSM-25 index and the presence of inflammatory processes in the oral gums indicate a significant moderate direct relationship. The Pearson correlation coefficient was 0.511.

The correlation is significant at the 0.01 level. The relationship between the level of psychoemotional stress according to the PSM-25 index and the severity of periodontal disease according to the CPI index indicates a significant weak direct relationship. The Pearson correlation coefficient was 0.408. The correlation is significant at the 0.01 level.

Thus, taking into account the study results, it can be noted that psychoemotional stress is one of the factors leading to the development of periodontal disease in students.

## CONCLUSIONS

1. The prevalence of periodontal disease in students is high, amounting to 94.3%.
2. There is a direct correlation between psycho-emotional stress and periodontal disease in students.

## REFERENCES

- 1 Borovsky E. V. Therapeutic dentistry: textbook / E. V. Borovsky, V. S. Ivanov, Yu. M. Maksimovsky / Ed. Prof. E. V. Borovsky. – M., 2009. – 736 p.
- 2 Bulkina N.V. Prevalence and intensity of signs of periodontal disease among the adult population of Saratov / N.V. Bulkina, L.D. Magdeeva //Modern. Problem Sciences and Education. – 2014. – No. 1. – pp. 13-19.
- 3 Grigoryan A. S. Periodontal diseases /A. S. Grigoryan, A. I. Grudyanov, N. A. Rabukhina. – M.: Medical Information Agency, 2004. – 287p.
4. Diseases of the Endodontum, Periodontum, and Oral Mucosa / Ed. A.K. Iordanishvili. – Moscow: MEDpress-inform,2008. – 344 p.
5. Nazarova N. S., Xatamova M. A. Shukurov SH.SH., BIOCHEMICAL CHANGES OF CHRONIC GENERALIZED PERIODONTITIS IN CHRONIC VIRAL HEPATITIS B, C AND MIXEDINFECTIONS. JOURNAL OF ORAL MEDICINE AND CRANIOFACIAL RESEARCH, Vol.4 issue 3(2023), 49-52.



6. Xotamova M.A., Nazarova N.SH., Bahriiddinova M.R., CLINICAL MEASURES AND OCCUPATIONAL HYGIENE IN THE TREATMENT OF PERIODONTAL DISEASES AND DISCUSSION OF THE EFFECTIVENESS OF PREVENTIVE MEASURES: Journal of Biomedicine and practice, 2024. – No. 6. – P.344--352.
7. Nazarova N. S., Xatamova M. A. EVALUATION OF THE EFFECTIVENESS OF ORGANIZATIONAL AND DENTAL MEASURES FOR THE PREVENTION OF DENTAL PERIODONTAL DISEASES AMONG WORKERS IN THE PRODUCTION OF METAL STRUCTURES OF METAL PROCESSING ENTERPRISES // "Central Asian Journal of Medicine" – 2024. – no. 2. – P. 39-43.
8. Rizaev, Z. A., Abdunosirovich, R. R., & Sharipovna, N. N. (2020). Ways to improve the organization of dental services for chemical industry workers. The American journal of medical sciences and pharmaceutical research, 2(12), 35-39.
9. Rizaev, J. A., Khaidarov, N. K., & Abdullaev, S. Y. (2021). Current approach to the diagnosis and treatment of glossalgia (literature review). World Bulletin of Public Health, 4, 96-98.
10. Nazarova, N. Sh., Ruzimuradova, Z. Sh., Clinical and pathogenetic aspects of dental and periodontal hard tissue diseases in patients with thyroid dysfunction // Journal of Dentistry and Craniofacial Research. - 2022. - Vol. 3. - No. 3/.
11. Nazarova, N. SH., Ruzimuradova, Z. SH., Morphological and functional factors of periodontal and hard tissue diseases // The American Journal of Medical Sciences and Pharmaceutical Research - 2022. - Vol. 4. - No. 09. - p. 27-34.
12. Nazarova N. Sh., Ruzimurodova Z. Sh., Etiological and pathogenetic factors of periodontal diseases in patients with hypothyroidism // Journal of Medicine and Innovations 2022. - Vol. 4. - No. 8. - Pp. 436-444.
13. Nazarova N. Sh., Ruzimurodova Z. Sh. Clinical and functional aspects of periodontal and dental hard tissue diseases in patients with hypothyroidism // Preventive Medicine and Health. - 2022. - Vol. 1. - No. 1. - Pp. 83-91
14. Ruzimurodova Z. Sh. Clinical and pathogenetic aspects of dental and periodontal diseases in patients with thyroid dysfunction // Journal of Achievements of Modern Education. - 2023. - Vol. 7. - No. 7. - Pp. 107-112

