

ANALYSIS OF THE NEGATIVE IMPACT OF PSYCHO-EMOTIONAL STATE ON PERIODONTAL AND GINGIVAL RECESSON

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Psycho-emotional tension has become a constant companion of modern life. Information overload, acceleration of the pace of life, and unfavorable working and living conditions create or significantly exacerbate chronic stress [1]. Numerous contemporary studies have demonstrated that emotional factors play a leading role in the development of cardiovascular pathology, neurotic states, and ulcerative processes in the digestive tract [2]. Periodontal tissues are characterized by high sensitivity to stressful stimuli. In the mechanism of cellular damage to the periodontium during stress, as mentioned above, a significant role is attributed to the activation of lipid peroxidation (LPO) and hemostasis [3,4].

Research objective: To study the negative impact of psycho-emotional state on periodontal tissues and gingival recession

Research materials and methods: For the purpose of this study, 80 patients underwent clinical examinations at the dental clinic of Tashkent State Medical University during 2024-2025.

Research Results: Under conditions of chronic emotional-pain stress, histological studies of soft tissues revealed deeper dystrophic changes in cellular, epithelial, and connective tissue elements compared to acute emotional-pain stress. In the gingival epithelium, the contours are unclear. The boundary between the basal and spinous layers is poorly defined. Cells with pyknotic and lysed nuclei are encountered, as well as isolated areas of epithelial micronecrosis. Disorganization of the periodontal connective tissue is observed, manifested in the disruption of collagen fibers. The latter appear edematous and swollen. Fibroblasts are located along the collagen fibers. Blood capillaries and small veins are dilated and engorged with blood. Very rarely, destruction of capillary walls is observed. In larger vessels, endothelial swelling is noted. Mast cells filled with granules are present, as well as those in a degranulated state. Examination of patients with stage I generalized periodontitis, who are in a state of chronic emotional tension, also revealed a tendency towards worsening clinical manifestations of the disease compared to patients working under conditions of reduced stress. They experienced deterioration in oral hygiene and an increase in the prevalence of inflammatory processes in the periodontium. A similar trend was observed in patients with moderate generalized periodontitis. In these patients, a

significant increase in the level of total collagenolytic activity of the gums and oral fluid was noted, with this indicator being higher in women than in men. The author concludes that chronic emotional stress intensifies the collagenolysis process and contributes to the depolymerization of the main substance of the periodontal connective tissue. Furthermore, a close correlation between the level of collagen activity in the gums and oral fluid and the excretion of hydroxyproline in urine was found, which proves increased catabolism of collagen in periodontal tissues in patients. Finally, studies of individual typological features of nervous regulation in patients with generalized periodontitis showed moderate and high levels of general anxiety. In the group of workers experiencing chronic emotional stress, an increase in the level of general anxiety was established compared to those working under normal conditions. The identified close correlations between the level of collagen activity in the gums, oral fluid, blood serum, and the level of general anxiety indicate a dependence of metabolic changes in periodontitis on individual typological features of nervous regulation. The findings from our data regarding the acceleration of periodontal involution under conditions of chronic emotional stress, loss of molars, and increased resorption of jaw bone tissue can be considered as evidence supporting the concept of aging as an accumulation of damage at all levels of living organisms.

References:

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