

CLINICAL ASSESSMENT OF THE PROGNOSIS OF DENTAL DISEASES IN INDIVIDUALS WITH CARDIOVASCULAR PATHOLOGY

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Abstract. *Currently, the prognosis of the development of pathology is important in all areas of health care. However, despite the importance and scientific and practical importance of forecasting in dentistry, at the moment we have not found information about predictive models of the individual risk of developing periodontitis in patients with cardiovascular diseases. Under these conditions, it is important to individually assess and predict the risk of developing periodontitis in patients with arrhythmia. Such studies serve as the basis for identifying patients at high risk of developing periodontal diseases, grouping them for the purpose of dental monitoring and implementing measures to eliminate the negative consequences of periodontal diseases in the course of cardiovascular pathology. The need to solve this problem served as the basis for conducting this study.*

Keywords: *periodontitis, cardiovascular system (YQTT), arrhythmia, homeostasis, oral cavity, somatic diseases.*

The goal is: to develop a model for individual prediction of the risk of developing dental diseases in patients with cardiovascular pathology and to assess its effectiveness.

Materials and methods. The study was carried out in the clinics of Samarkand State Medical University. A retrospective-prospective situation control study was conducted. We examined 112 patients with cardiovascular pathology aged 36 to 65 years (average age 45.32 ± 0.22 years) who were admitted to inpatient treatment at the Department of therapeutic dentistry. Diagnosis of cardiac arrhythmias and periodontitis according to WHO criteria and recommendations, according to the International Classification of diseases, revised 10. The criteria for inclusion were patients who had previously been diagnosed with arrhythmia, and after diagnosis all patients underwent a complete dental examination. Fluid and blood samples were collected from the mouth. After a complete dental examination, a dental patient's medical card (form 043/y) was completed for each patient and data was moved from the inpatient medical card (form 003/y). Taking into account the purpose of the study, patients with arrhythmia are divided into two groups: the main one - periodontitis (patients) and the control group (patients) - and without periodontitis. In accordance with the principles of evidence-based medicine, individuals of the same gender and age were selected when forming the main and control groups. All patients signed informed consent to participate in the study. The study protocol was reviewed and approved by the Ethics Committee. When determining risk factors, we took into account the multifactorial nature of CV disease and periodontitis and their dependence on a complex of medical and Social Risk Factors and metabolic disorders of the most important homeostatic systems of the body. In this regard, Medical Risk Factors and the nature and changes in lipid profile were studied, during the study, indicators were identified that most significantly affect the course of both pathologies under study. The severity of Periodontal injury was assessed using inflammatory and periodontal

destruction indices and oral hygiene (PMA, PI, Muhlemann, OHI-s). Assessment of the prognostic importance of risk factors for the development of periodontal disease in patients with hypertension was carried out using the Kullback reference measure with determination of J_i (K) value. Given that the presence or absence of a related variable, periodontal disease, can be characterized by only two values of 0 to 1 (there is a periodontitis/no periodontitis), the likelihood of developing periodontitis was assessed in patients with arrhythmia. a prognostic model constructed using the binary logical regression method. For statistical processing and analysis of the data obtained, the programs MS Excel 2007, MS Access 2007, Statistics 8.0 and Statgraphics Centurion XVI (Version 16.2.04) were applied.

Results: significant but statistically unrelated risk factors were selected as dependent variables. The choice of risk factors was made by the method of "discrete correlation pleiades", which takes into account the main feature (pleiad) with the maximum importance of its influence on the risk of periodontitis compared to other indicators of the same type. Therefore, the model did not include many parameters that significantly affect the severity of the pathology, but appeared as a result of the presence of the disease and does not begin its development. As a result of the calculations, the following indicators were selected to create a risk model for the development of periodontitis in patients with CV pathology:

Periodontitis development probability assessment scale: 0-0, 39-low, 0.40 - 0.69-medium, 0.70 - 1.00-high. The combination of studies and the uniformity of scale of indicators included in the model made it possible to comparative assess their contribution to the risk of developing periodontal diseases in patients with arrhythmia. According to the obtained coefficients, all these factors contribute to an increased risk of general periodontitis in patients with CV disease. The statistical significance of the equation was checked using the determination coefficient and the Fisher test. It turns out that in the situation under study, 96.98% of the total variability in Y is explained by changes in X_j factors. The resulting model is a tool for assessing the prognosis of the likelihood of developing periodontitis in patients with arrhythmia, taking into account medical characteristics and indicators of blood lipid profile. A clinical evaluation of the structured model to predict the development of periodontitis was conducted in 112 patients with CV disease, of which 85 (75.31% of patients with hypertension) were diagnosed with periodontitis. A high probability of periodontitis was predicted in 80 (72.84%) patients with arrhythmia after extensive examination. In the likelihood of developing periodontitis in patients with CV, the sensitivity of the model was 96.72%. Of the 30 patients who did not have periodontal disease at the time of examination, 2 (5.00%) were classified as low to moderate risk of periodontitis. Thus, the specificity of the developmental model of periodontitis was 29.50%. The overall diagnostic accuracy of the method was 95.57%. The model in which the results of the study were developed has a high predictability and makes it possible to conclude that in the practice of general practitioners and periodontologists it is necessary to predict the development of periodontitis in patients with arrhythmia and use it to form groups for dispensary observation. The planned software tool is designed to provide an individual approach to the treatment of periodontal disease in CV patients, personalizing periodontal disease therapy, achieving targeted interdisciplinary interaction, and significantly reducing the negative effects of inflammatory-destructive periodontal lesions. Mechanisms of development of CV disease.

Conclusion. Based on the developed prognostic model, the characteristics of the individual medical characteristics of patients with somatic pathology and general periodontitis were

determined. Leading risk factors were identified, including age, hereditary disease history, bad smoking habit, stage of arrhythmic disease, presence and number of chronic diseases, total cholesterol levels in the blood, triglyceride levels, and atherogenicity index. Predicting the likelihood of the development of periodontal disease in patients with CV disease is possible based on an equation developed taking into account the minimum set of the most important medical and laboratory indicators. After clinical examination, a computer program "predictive modeling of the likelihood of the development of periodontal disease in patients with somatic diseases" may be recommended for use in practical health care.

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