

## GENETIC PARAMETERS OF THE DEVELOPMENT OF PERIODONTITIS.

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**Relevance.** To date, active research is underway to search for genetic markers of periodontitis, the detection of which will make it possible to identify patients at risk long before the first signs of the disease appear, predict the course of the disease, and intensively carry out preventive measures aimed at eliminating negative environmental factors.

The goal is to systematize the available data on the study of the association of genes with the development of aggressive and chronic generalized periodontitis.

**Materials and methods.** The search engines PubMed, Google Search and eLIBRARY found 214 publications published from 2005 to 2020. A total of 135 publications were selected, including clinical trials and meta-analysis data.

**Results.** Chronic inflammatory diseases such as periodontitis are typically polygenic, and genes associated with such diseases are considered predisposition genes. The presence of a disease-associated allele in an individual is not an absolute diagnostic sign for the development of the disease, but reflects the risk of its development. When searching for genetic markers of periodontitis, a key role is given to those genes that encode proteins that play important roles at different stages of the pathogenesis of inflammatory periodontal diseases. Among them: defensins, interleukins, Toll-like receptors,  $\alpha$ 1-chain of type I collagen and others. To date, about 300 polymorphisms have been studied and an association of some of them with the development of periodontitis has been found.

**Conclusion.** The exact genetic marker of periodontitis is currently unknown. Further search for candidate genes should proceed in parallel with the expansion of knowledge about the pathogenesis of inflammatory periodontal diseases. Determination of presymptomatic predisposition to the disease will improve the quality of dental care and preventive measures even before the appearance of clinical signs.

### List of literature:

1. Гульмухамедов, П., Н. Хабилов, and К. Бобоев. "Необходимость генетических исследований в стоматологии." *Stomatologiya* 1.3 (68) (2017): 91-94.
2. Haaland, Øystein A., et al. "Genome-wide analysis of parent-of-origin interaction effects with environmental exposure (PoOxE): An application to European and Asian cleft palate trios." *PLoS One* 12.9 (2017): e0184358.