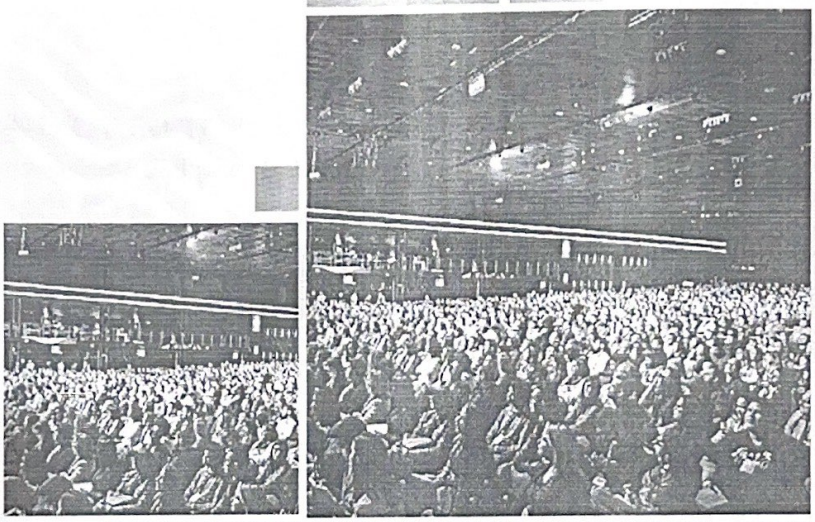
VIRTUAL CONFERENCES

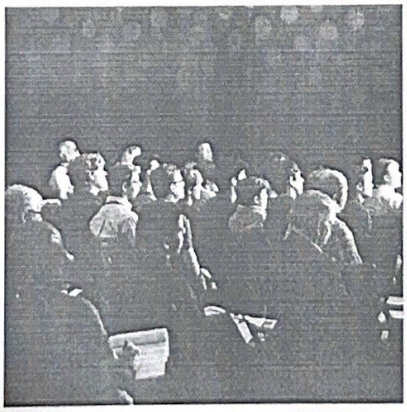
Bookwire by Bowker

Scopus

CUTTING-EDGE SCIENCE 2024

international scientific and practical conference





2024

SHAWNEE, USA

ISBN 978-1-64945-234-4 DOI https://doi.org/10.5281/zenodo.10463010

International scientific and practical conference

CUTTING EDGE-SCIENCE

2024 Shawnee, USA

Conference Proceedings

Primedia E-launch

Shawnee, USA

JANUARY JUNE 2024

Part-1

PRIMEDIA E-LAUNCH

International scientific and practical conference

CUTTING EDGE-SCIENCE

2024 Shawnee, USA

Conference Proceedings

Science editor: G. Kolne

Available at https://virtualconferences.press/

Published Primedia E-launch LLC.

Shawnee, USA

ISBN 978-1-64945-234-4

DOI https://doi.org/10.5281/zenodo.10463010

Primedia E-launch LLC, 5518 Flint St, Shawnee, 66203, USA

https://orcid.org/**0000-0001-9154-6049**

instituteforscientificresearch@gmail.com

ISBN 978-1-64945-234-4 DOI https://doi.org/10.5281/zenodo.10463010

Learn of molecular genetic criteria for the occurrence of gum recession (literature review)

Sabirov E.E., Boymuradov Sh.A.
Tashkent Medical Academy
sabirov.elyor@tma.uz

The results of modern studies of the human genome and the identification of genes whose polymorphism predisposes to the most common MDs make it possible to determine with a high degree of probability a person's predisposition to a particular disease. Of greatest practical importance is the analysis of polymorphisms of candidate genes,affecting the function of encoded proteins and contributing to the development of the pathological process under the influence of external factors. Compilation of a gene network for each MD based on knowledge of its etiology and pathogenesis, identification of central genes and modifier genes in it, study of intergenic and gene-environmental interactions, the development on this basis of a set of preventive and therapeutic measures for each patient constitutes the strategic basis of a new, rapidly developing direction - predictive medicine [1].

Goal of the work. Analysis of the problem of biochemical preparation of the root during gum grafting.

Materials and methods. The study was carried out through content analysis of literary data with elements of structural analysis.

Research results and discussion. Etiopathogenetic basis of diseases periodontal disease, including gum recession, constitute functional weakened allelic variants of certain genes. This genetic effect can be realized against the background of unfavorable factors external environment. In children of primary school age (6–11 years), localized gum recession in the area of the anterior group of teeth with root exposure up to 3–5 mm is very often observed. The main causes Gum recession in children was previously considered to be trauma to the gingival margin during improper brushing of teeth and bad habits (biting nails and pens). But this is not entirely true; these reasons can only aggravate the process, they are superimposed on the true causes of gum recession, which are anatomical and physiological features

ISBN 978-1-64945-234-4 DOI https://doi.org/10.5281/zenodo.10463010

(small vestibule of the mouth, massive muco-epithelial cords and frenulums, dentofacial anomalies, thin gum biotype), bruxism (muscle hypertonicity) and iatrogenic factors (chemical burn) [6]. Thus, the manifestation and progression of signs of gum recession depends on many factors, including the individual characteristics of the subject, social, behavioral, systemic, and genetic factors. In the presence of gum recession, patients are concerned about impaired aesthetics, increased sensitivity, cervical defects and inflammation. A large number of extra- and intracellular proteins are involved in the regulation of inflammation. It is known that the genes encoding the structure of these proteins are polymorphic in various regions, which affects the functional activity of the encoded proteins and the level of their production inflammatory cells processes. The study of polymorphism of protein genes involved in the regulation of inflammation processes will identify genetic risk factors for the development of gum recession. In recent years, the interest of researchers has been aimed at analyzing the role of genes that regulate inflammation, primarily the genes of cytokines - interleukins (IL) with anti- and pro-inflammatory activity, and genes of matrix metalloproteinases [7,8]. Cytokines are a group of non-enzymatic hormone-like proteins and peptides involved in the induction of inflammation and immune response. They represent a group of polypeptide mediators of intercellular interaction; they participate in the regulation of various physiological functions and processes of tissue regeneration when their integrity is violated [9]. IL-1β is a secretory cytokine that acts locally and at the systemic level. When tissue is damaged, IL-1β causes activation of all cell types, participating in the formation of a local inflammatory reaction (fibroblasts, macrophages and blood leukocytes). IL-1β has stimulating effect on connective tissue metabolism by stimulating fibroblast proliferation. Cytokine genes have a high degree of polymorphism. Since cytokines are mediators of inflammation, the study of genes that control their activity is a promising task in studying the mechanisms of development, the course of many diseases, and identifying predisposition to them. It is known that the 511C/T polymorphism of the IL-1β gene

3N 978-1-64945-234-4 DOI https://doi.org/10.5281/zenodo.10463010

s16944) plays an important role in the functioning ofimmune system and may be ne of the main genetically due to the causes of pronounced dysregulation of nflammation, it has a significant impact on the general features of the course of the inflammatory response in periodontal tissues in patients [10].

CONCLUSION. The problem of studying molecular genetic criteria leading to gum recession in children as a multifactorial pathology is a very urgent task. In this regard, the study of gene polymorphism would make it possible to clarify the predisposition to gum recession, establish a connection between genetic factors and the causes of its occurrence, and also, in the future, develop individual programs for diagnosis, prevention and improvement of methods for complex treatment of this disease.

REFERENCES

1. Баранов В.С., Баранова Е.В., Иващенко Т.Э. Научные основы предиктивной медицины. Молекулярно-биологические технологии в медицинской практике // Сборник научных трудов / Под ред. А.Б.Масленникова. Вып. 4. Новосибирск: Альфа Виста, 2003. 252 с
2. Сабиров Э.Э., Боймурадов Ш.А. Современный взгляд этиопатогенеза и лечения рецессии десны // Stomatologiya, 2021. – №2. – С. 25-28 4. Сабиров
3. Sabirov E.E., Boymuradov Sh.A., Sultanova R.K. Modern view of the etiopathogenesis and treatment gum recession // International journal of psychosocial rehabilitation. – London, 2020. – Vol. 24. – Issue 06. – P. 18058-18068.
4. Jankovic S., Aleksic Zoran M, Dimitrijevic B., Camargo P. Impact of interleukin 1 gene polymorphism and smoking on long-term stability following gingival recession treatment. Int J Periodontics Restorative Dent. 2013; 33 (1): 16–23