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THE GENETIC FACTORS OF DENTAL CARIES

Voiță Gheorghe Florin*, Mekereș Florica, Mekeres Gabriel Mihai ***, Bembea Marius ******

*University of Oradea, Faculty of Medicine and Pharmacy, Departement of Dental Medicine;
** University of Oradea, Faculty of Medicine and Pharmacy, Departement of Mophological Disciplines;
**** University of Oradea, Faculty of Medicine and Pharmacy;
*** Correspondent author: University of Oradea, Faculty of Medicine and Pharmacy, Department of Dental Medicine. Oradea- Romania, 1 Universității St., 410087 Oradea, Romania, e-mail: mekereș_gabriel@yahoo.com

Abstract

The genetics of dental caries is a little studied topic, although dental caries are the most common pathology in the oro-maxilo-facial sphere, among the population.Dental caries are a chronic destructive process of harsh, non-inflammatory tooth tissues that produce necrosis and their destruction, followed by coronary or root cavity. The process of tooth decay is closely related to the salivary environment, therefore caries do not appear on fully inserted teeth or teeth completely isolated from the mouth.Progression of dental caries is achieved by the acid produced by bacterial action on fermentable carbohydrates that diffuses into the tooth and produces demineralization. The primary prevention approach should be based on common risk factors. Secondary prevention and treatment should focus on time management for individual patients with a minimally invasive, tissue-retaining approach.

Key words:genetic factors, dental caries, preventive therapies;

INTRODUCTION

The genetics of dental caries is a little studied topic, although dental caries are the most common pathology in the oro-maxilo-facial sphere, among the population.(Boraas, 1988)

In recent decades, important events have taken place, new concepts have been issued, and important scientific insights have been made that have shaped our current understanding of one of the most common and old human diseases, dental caries.(Tanzer, 2001)

In dental practice, it is well known that occlusal surfaces with ditches and toothfolds are a strong starting point for the carious process.(Selwitz, "Dental caries." , 2007)

Data on the prevalence of caries in recent studies in European countries showed a low prevalence of caries in primary dentition, but there was no further decrease in permanent dentition. (Marthaler, 1996)

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followed by coronary or root cavity. The process of tooth decay is closely related to the salivary environment, therefore caries do not appear on fully inserted teeth or teeth completely isolated from the mouth. (A. Iliescu, 2001) (Bader, 1997)

MATERIAL AND METHOD

Dental caries are formed by a complex interaction over time between acid-producing bacteria, fermentable carbohydrates and many host factors, including teeth and saliva. The disease develops both coronary and radicular and may occur in early childhood as an aggressive tooth cavity affecting the first teeth of infants and young children.(Aas, 2008)

The risk to caries includes physical, biological, environmental, behavioral and lifestyle factors such as the high number of cariogenic bacteria, inadequate salivary flow, insufficient fluoride exposure, poor oral hygiene, inadequate infant feeding methods and the environment socially precarious. (Selwitz, 2007)

At present, this pathology is seen as a dynamic relationship with the interface between the tooth and the associated bacterial plaque. Cranial necrosis, passes into a cavitary lesion due to the imbalance between remineralization and demineralization processes that are uninterrupted. This multifactorial pathology is specific to living organisms, Bronner highlighting that the densest tissue of the body, dental enamel, is susceptible to destruction only during life, stagnating after death. (A. Iliescu, 2001) (Koray, 1996)

Progression of dental caries is achieved by the acid produced by bacterial action on fermentable carbohydrates that diffuses into the tooth and produces demineralization. Pathological factors that play a role in the progression of dental caries include acidogenic bacteria (mutant streptococci and lactobacilli), salivary dysfunction and carbohydrates. Protective factors can balance, prevent, or produce dental caries, among them salivary calcium, phosphate and proteins, salivary flow, fluoride in saliva and antibacterialcomponents or agents.(Featherstone J.D., 2000)(Liljemark, 1996)

The dentist may sometimes be the first to discover a general pathology when we are talking about a mouth-toothed poisoning. Hypothalamus deregulations, where glucose changes occur, may interfere with hormonal secretion that influences energy consumption, and so the patient feels the exaggerated need to consume carbohydrates, especially in hypoglycemic states. Along with other general factors that alter mineral metabolism, the prolonged and massive use of refined carbon hydrates can cause massive dental caries accompanied by painful symptoms, with the

exception of patients who consume narcotics, as they have a pain supportability limit increased. (Dragomirescu, 1996)

RESULTS AND DISCUSSION

Studies have shown that it leads to better oral health, health outcomes and gains in quality of life. In any case, over time, the positive effects of regular, preventive treatment are well established for all age groups, showing beneficial effects over the medium to long term. (John Spencer, 2008) (Sanchez, 1996)

Today, carious pathology is known as an infectious, transmissible disease whose main symptom is dental caries. The treatment of dental decay is possible after the development of the medical system at the basis of which it was identified the etiological factors and the risk factors, but also the elaboration of the ecological theory of the bacterial plaque.(Sheiham, 2006)

Dental cavity preventive therapies can cure carious pathology, or stop the episodic and asynchronous pathological process from its unhealthy stages. Also, dental caries are part of the complex diseases caused by the combined manifestation of genes, infectious and environmental factors, and risk behaviors. (NorinaForna, 2013)

The external tissue of the tooth, the dental enamel has a resistance to the complex carious process due to the positive influence of the developmental period, and in another stage of exercising the exogenous and endogenous influences on the tooth in question. (Oho, 1990)

A poor diet can cause metabolic disorders that may affect the dental bud during the intrauterine period or favor poor development and disrupt the process of mineralization, permanent dentition during the ectopic period. One of the consequences of these disturbances on the enamel is the chaotic arrangement of hydroxyapatite crystals, resulting in dysplastic and hypoplasic pathologies, which are defined by the decrease of mineral salts at the same time as the growth of organic tissue. (A. Iliescu, 2001)

CONCLUSIONS

1. Dental caries appear as a plurifactorial disease characterized by a localized destruction of dental hard tissue under the action of microorganisms.
2. The appearance of a dental caries is the result of time interactions of cariogenic buccal microflora with fermentable food on susceptible terrain (saliva and saliva).
3. The primary prevention approach should be based on common risk factors. Secondary prevention and treatment should focus on

time management for individual patients with a minimally invasive, tissue-retaining approach.

4. Progression or reversal of caries is determined by the balance between protective and pathological factors.

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