

A BRIEF LANDSCAPE OF EPIGENETIC MECHANISMS IN DENTAL PATHOLOGIES

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Epigenetics is the study of modifications in DNA expression without changing the sequences in deoxyribonucleic acid. Epigenetic mechanisms are specific “control” modifications responsible for the activity or inactivity of selected genes. Researchers are revealing a strong impact of epigenetic mechanisms on various general diseases in human. It gives clinicians great hope to understand pathomechanisms and start causal treatment. The possibility for dental clinicians is also wide and consists of diagnosis and treatment of diseases occurring in the oral cavity. This review presents the role of epigenetic mechanisms and the growing interest in their possible associations with dental pathologies such as periodontal diseases, craniofacial malformations, and tooth agenesis.

Key words: epigenetics, genes, dental pathologies, periodontal diseases, tooth agenesis.

КОРОТКИЙ ОГЛЯД ЕПІГЕНЕТИЧНИХ МЕХАНІЗМІВ СТОМАТОЛОГІЧНИХ ПАТОЛОГІЙ

Епігенетика – це наука, що вивчає модифікації експресії ДНК без зміни послідовностей ДНК. Епігенетичні механізми – це специфічні «контрольні» модифікації, які відповідають за діяльність або бездіяльність обраних генів. Дослідники виявляють великий вплив епігенетичних механізмів на різноманітні загальні захворювання людини. Це дає надію лікарям-практикам на можливість розуміння патологічних механізмів і запровадження каузальної терапії. Широкими також є можливості для практикуючих стоматологів у плані діагностики і лікування захворювань, що виникають у ротовій порожнині. У цьому огляді представлено роль епігенетичних механізмів та зростаючий інтерес до їх можливої асоціації з такими стоматологічними патологіями, як захворювання пародонту, черепно-лицьові деформації та агенез зубів.

Ключові слова: епігенетика, гени, стоматологічні патології, захворювання пародонту, агенез зубів.

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