

The Involvement of Viruses and Fungi in the Pathogenesis of Dental Infections

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Abstract : Tooth related infections or commonly named dental infections have been described as the most common causes of tooth loss in adults. These pathologies were mostly periodontitis, pericoronitis, and periapical infection. The involvement of various bacteria in the pathogenesis of these pathologies has been thoroughly mentioned and approved in the literature. However, the variability in the severity and prognosis of these lesions among patients suggests the association of other pathogens, like viruses and fungi, in the pathogenesis of these lesions. Several studies in the literature investigated the association of multiple viruses and fungi with the above-mentioned lesions, yet, a vast controversy was reached concerning this subject. Aim: Our study aims to fill the gap in the literature concerning the contribution of adenovirus, HPV-16, EBV, fungi, and candida in the pathogenesis of periodontitis, pericoronitis, and periapical infection. For this purpose, we utilized the quantitative PCR for pathogen detection in saliva, gingival, and lesions samples of involved subjects. Results: Some of these pathogens appeared to have an association with the investigated dental pathologies, while others showed no contribution to the pathogenesis of these lesions. Further investigation is required in order to identify the subtype of the involved pathogens in these tooth related oral pathology.

Keywords : periodontitis, pericoronitis, dental abscess, PCR, microbiology

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