

Special Issue

The Bidirectional Biological Interaction Between Periodontal Disease and Diabetes Mellitus

Message from the Guest Editors

There is growing evidence that diabetes mellitus (DM) has a significant impact on the pathogenesis of oral conditions, such as periodontal disease (PD) and apical periodontitis, increasing their risk and severity. PD is a chronic inflammatory condition associated with dysbiotic dental biofilm, which activates the host immune response and causes alveolar bone destruction and collagen degradation. The host immune response is modified by diabetes and might play a causative role in bacteria-induced tissue damage. On the other hand, persistent local infections, such as periodontitis, could induce or perpetuate low-grade chronic systemic inflammation, which may contribute to altered glycemic metabolism, eventually leading to a hyperglycemic state and diabetic complications. Altered glycemic metabolism can enhance the release of proinflammatory cytokines, increasing the risk of local and systemic complications. Understanding the influence of DM on inflammatory bone resorption and its impact on the quality of life of affected patients is crucial for successful management and treatment.

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