

## عنوان مقاله:

The Role Of Inflammatory Cytokines In Dental Caries Repair

## محل انتشار:

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## خلاصه مقاله:

Dental caries is being considered as the most common noncommunicable disease worldwide. It is being defined as sugar-driven, biofilm mediated and dynamic disorder which causes remineralization and demineralization of teeth hard tissues involving inflammatory system. It has been shown that IL-6, IL-8 and TNF-α was significantly increased in saliva of patients with dental caries. A cascade of four steps is required to repair dental pulp by direct capping with calcium hydroxide or by implanting bioactive extracellular matrix molecules: moderate inflammation, commitment of adult reserve stem cells, proliferation, and differentiation of these cells. Osteoblast/odontoblast-like differentiation and expression of mineralization-related ECM molecules may also be promoted by mild inflammation of antigen-presenting dendritic cells. Studies in humans and in vitro indicate that dentin barrier formation occurs only when pulp inflammation and infection are minimized, allowing for tissue homeostasis to return. To ensure the sustainability of dental treatments, promoting the resolution of pulp inflammation may be a valuable therapeutic opportunity. The potential significance of the initial inflammatory reaction is highlighted by experimental data obtained on pulp repair of healthy and carious teeth. In experimental capping of exposed sound pulps or after implantation of bioactive molecules at ectopic sites, this initial step appears to be linked to the activation of dormant or latent progenitors. We have reviewed the role inflammation in caries repair in this study.

## کلمات کلیدی:

Inflammatory, Cytokines, Dental

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