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Poster Presentation

Boswellia Serrata Ameliorates Neuro-Inflammation Caused by Periodontitis: A Narrative Review

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Abstract

Neuro-inflammation is the inflammation of nervous tissue due to oxidative stress, aging and autoimmunity and the major cause of Alzheimer's, Parkinson's and Huntington's disease. Periodontitis, the inflammation of the gums and supporting structures of the teeth, is a chronic peripheral immuno-inflammatory condition, affiliated with gram- negative, anaerobic bacteria that cause low-grade systemic inflammation by release of pro-inflammatory cytokines into systemic circulation and activation of microglia; So recent studies advocate for links between neuro-inflammatory diseases and periodontitis; Because neuro-inflammatory diseases begin to develop many years before clinical diagnosis and treating systemic inflammations like periodontitis may have an inhibitory effect on the pathogenesis of neuro-inflammation. *Boswellia Serrata*, a traditionally used herbal medicine, has anti-inflammatory and antibacterial properties; mainly noticed on *Aggregatibacter actinomycetemcomitans*, associated with aggressive forms of periodontitis. It can inhibit lipoxygenases, leading to its anti-cancer and anti-inflammation activity and is used to treat asthma and arthritis. Based on previous studies, it has no remarkable side-effects compared to NSAIDs; So it can be a good target for future anti-inflammatory drugs. Neuro-inflammation can be prevented or delayed by treating systemic inflammations like periodontitis. The current procedures for treating periodontitis are not completely efficient and it is important to use alternative and body-friendly, natural treatments. *Boswellia Serrata* is among natural anti-inflammatory, antibacterial substances which can be used in oral hygiene products, such as toothpaste, mouthwash, dental floss and even chewing gums and drinking water.

Keywords: Neuro-Inflammation, Periodontitis, *Boswellia Serrata*, Oral Health

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