DENTIN HYPERSENSITIVITY

- A REVIEW

LIBRARY DISSERTATION

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Periodontal disease is an inflammatory disease of the periodontium which is characterized by a progressive destruction of the tissues supporting the tooth. Periodontal pocket formation is one of the most important clinical features of periodontal disease.

Progressive pocket formation leads to denudation of root surface which in turn results in hypersensitivity of the tooth. In addition to this abrasion, erosion, leaking restoration, dental caries, root planing and periodontal therapy may result in exposure of the dentinal tubule leading to dentin hypersensitivity.[71,35,53,33,47,24,84]

Dentin hypersensitivity can be described as an adverse reaction or pain in one or more teeth resulting from either a thermal, chemical or mechanical stimulus.[19]

Hypersensitivity occurs when the dentinal tubules are exposed to external sources of irritation. The dentinal tubules becomes exposed when the enamel covering the crown and cementum and the overlying periodontal tissues covering the root surface are lost. Hypersensitivity of dentine is characterized by the occurrence of pain or discomfort when mild stimulus is applied to exposed dentine.[55]

Four theories have been proposed 1) Transducer theory, 2) Modulation 3) Gate control, and 4) hydrodynamic theories. Of these theories the hydrodynamic theory of Brannstrom and others is currently the most widely accepted, hypothesis regarding dentin hypersensitivity. The studies of Brannstrom and others