

CHEMICAL PLAQUE CONTROL

- A REVIEW

A Library Dissertation

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[The World Health Organisation defined plaque as a specific but highly variable structural entity resulting from colonization and growth of microorganism on the surface of the tooth and consisting of numerous microbial species and strains embedded in an extracellular matrix.

There is no doubt that this bacterial plaque is regarded as the main aetiological factor in the initiation and promotion of periodontal disease, i.e, gingivitis and periodontitis. The knowledge of this fact has been derived from epidemiological studies as well as clinical experiments. Several clinical studies of experimental gingivitis, established the direct cause and effect relationship between plaque and gingival inflammation. Following complete removal of bacterial plaque, healthy gingival condition could again be established.

It is assumed that gingivitis and periodontal disease develop as a result of toxins and other products originating from the microorganism in the total plaque mass. Under normal circumstances, the human body is prepared to neutralize certain amount of toxins, so that the disease can not manifest itself. However in the presence of gingivitis and periodontal disease, the threshold seems to be surpassed. As a result leading to further periodontal breakdown.⁷⁶]

Plaque control refers to all the the measures taken by both the patient and the dental team to prevent accumulation of bacterial plaque and other deposits on the tooth and adjacent gingival surface. The best way to control plaque, would be to reduce the amount adhering to the tooth and still better to prevent its formation. [There are essentially three approaches to preventing build up of bacterial plaque :^{36,13}

1. Mechanical plaque removal by individual.
2. Mechanical plaque removal by dental professional.
3. Chemotherapeutic method of plaque control.]

Till date the most dependable mode of plaque control is mechanical cleaning with a tooth brush and other hygiene aids. Chemical inhibitors of plaque incorporated in mouthwashes or dentifrices have place as adjuncts, and should be prescribed according to the need of individual patients.²⁹