Chemical plaque control in Periodontal Diseases

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Phase I Therapy

- The objective of Phase I therapy is to alter or eliminate the microbial etiology and contributing factors for gingival and periodontal diseases.
Phase I Therapy

Control or elimination of contributing local factors including the following:

A. Treatment of poorly fitting restorations

B. Correction of poorly fitting prosthesis.
Phase I Therapy

C. Restoration of carious lesions

D. Odontoplasty

E. Tooth movement

F. Treatment of food impaction areas

G. Treatment of occlusal trauma

H. Extraction of hopeless teeth
CHEMICAL PLAQUE CONTROL
Chemical plaque control (adjunctive aids) are:

I. Disclosing agents

II. Supragingival and Subgingival irrigating devices

III. Dentifrices

IV. Antiseptic mouth
N.B. The use of chemotherapeutic agents must be considered adjunctive therapy and not a substitute for non-surgical or surgical debridement.
Antiseptic mouth rinses
Chemical plaque control

- Ideal Properties of a Mouthwash
Antiseptic agents as:

- Chlorhexidine (mouth rinse, Periochip)
- Essential oil mouth rinse (thymol, menthol, methyl salicylate)
- Sanguinarine
- Quaternary ammonia
- Stannous flouride
Antiseptic mouth rinses

- The American dental association (ADA) has accepted two agents for treatment of gingivitis: prescriptions solutions of chlorhexidine digluconate mouthrinse and nonprescription essential oil mouthrinse.
Antiseptic agents could influence dental plaque through following approaches:

1. Act as antiadhesive agents to prevent the bacterial attachment
2. Affect bacterial proliferation (anti-bacterial effect)
3. Removal of established dental plaque (chemical tooth brush)
4. Alter the pathogenicity of bacterial species
• **Chlorhexidine:-**

• It is most effective plaque inhibitory agent, it is effective against both gram+ve, gram-ve, bacteria & facultative aerobes and anaerobes
Indications and uses
Mechanism of action:

- ???
Therapeutic use of Chlorhexidine:

- Chlorhexidine is useful for short periods (up to 2 weeks) when oral hygiene may be difficult (NUG & following periodontal surgery)
The main side effects:

- Staining of the teeth, tongue, resin restorations
- Its unpleasant taste, and may impair taste perception.
Essential oil mouth rinse

- An antimicrobial mouthrinse where the active ingredient is the fixed combination of four essential oils (EO), thymol, menthol, eucalyptol and methyl salicylate in a hydroalcohol solution (pharmaceutical grade ethanol functions as a solvent, a vehicle for the active ingredients and as a preservative in a mouthrinse),
Disclosing Agents

- Disclosing agents are solutions or wafers capable of staining bacterial biofilms on the surfaces of teeth, tongue, and gingiva.
- These can be used as educational and motivational tools to improve the efficiency of plaque biofilm control procedures.
Other products

- Triclosan
Quaternary ammonia
Sanguinarine
Stannous fluoride