Bacterial Plaque

By

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Bacterial Plaque

- Dense, noncalcified, highly organized bacterial mass
- Firmly adherent to the teeth or other hard materials within the mouth
Bacterial Plaque
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- It can be formed on oral appliances and restorations
- Cannot be washed off by salivary or water flow
Categories of Bacterial Plaque

• 1. Supragingival
Categories of Bacterial Plaque

- 2. Subgingival
• Not clinically visible

• Using the disclosing agent as a means of plaque detection

• It becomes visible by its mass and discoloration
• Plaque can be removed by mechanical cleaning (Daily Removal) at the following areas:

✓ Supragingivally and subgingivally
✓ Around the gingival third of the tooth
✓ Interproximal areas
✓ Tongue

• Plaque may be deposited on a cleaned tooth surface within 6 hours
Stages in the Formation of Plaque

1. Formation of a Pellicle: selective adsorption of protein components from the saliva
2. Bacteria attached to the pellicle
3. Bacterial multiplication
4. Plaque growth and maturation
5. Matrix formation
Structures and Composition of Bacterial Plaque

- Water (80 %)

- Solids (20%: of which 95 % bacterial)

- Different organisms may be found in plaque

- Extracellular microbial products

- Saliva and immunoglobulins
Factors Influencing Plaque Accumulation

- Crowded Teeth
- Rough Surfaces
- Difficult to Clean
- Out of Occlusion
Significance of Bacterial Plaque

• Play a major role in initiating and progression of both:
  ✓ Dental caries
  ✓ Periodontal diseases

• Plaque is significant in forming a dental calculus
Dental Calculus
• The longer plaque remains on the tooth surface, the more types of microorganisms will be present until the plaque reaches maturity in a few days.

• Bacterial plaque is the principle etiological agent of inflammatory periodontal diseases.

• The accumulation of bacterial plaque on the teeth and tongue will contribute to an unpleasant personal esthetic appearance as well as to halitosis.
Thank You