Dental Calculus and Dental Discoloration

By

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Dental Calculus

Mineralized bacterial plaque, hard, tenacious mass which forms on the clinical crowns of the natural teeth and on dentures and other dental prostheses.
Classification and Distribution of Dental Calculus

- Supragingival calculus: on the clinical coronal to the margin of the gingiva

- Subgingival calculus: on the clinical crown apical to the margin of the gingiva
Classification and Distribution of Dental Calculus

• Most sites: on the lingual surfaces of the mandibular anterior teeth and the facial surfaces of the maxillary first and second molars (opposite the opening of the ducts of the salivary glands)

• It may be generalized or localized on single teeth or a group of teeth
Occurrence of Dental Calculus

- Occurs at any age and on both permanent and primary teeth

- Incidence increases with age and in some population
Composition of Dental Calculus

• Inorganic:
  1. Inorganic components: calcium, phosphorus, carbonate, sodium, magnesium, and potassium
  2. Trace elements: chlorine, zinc, strontium, bromine, copper, manganese, tungsten, gold, aluminum, silicon, iron, and fluorine

• Organic:
  ✓ E.g. Epithelial cells, and leukocytes.
Prevention of Dental Calculus

- Personal bacterial plaque control
Scaling and Root Planing
Calculus Removal (Manually) : by Dental Scalers and Curettes
Calculus Removal (Powerdriven)
Dental Discoloration
Classification of Stains

By Location:

- Extrinsic: occurs on the external surface of the tooth and may be removed by procedures of toothbrushing, scaling, and/ or polishing.

- Intrinsic: occurs within the tooth substance and cannot be removed by technique of scaling or polishing.
Classification of Stains

- **By Source:**
  - Exogenous: developed from sources outside of tooth (may be extrinsic or intrinsic)
  - Endogenous: developed from within the tooth (always intrinsic)
Extrinsic Stain

- Yellow stain: usually food pigments
- Green stain: oral uncleanliness, chromogenic bacteria
Extrinsic Stain

- Black line stain: highly retentive black or brown calculus, and may occur on primary or permanent teeth
- Tobacco stain
- Orange and red stains: chromogenic bacteria
Endogenous Intrinsic Stains

• Pulpless teeth: but not all pulpless teeth discolored

• Tetracyclines

• Imperfect tooth development
• How about Fluorosis (a brownish spots at tooth surfaces due to Increased in fluoride intake)…… ???.......What type of dental discoloration..!!!
Thank You