Chapter 14

Periodontal Disease
Lesson 14.1

Periodontal Disease

1. Pronounce, define, and spell the Key Terms.
2. Discuss the periodontium, including:
   • Name and describe the structures and tissues of the periodontium.
   • Describe the prevalence of periodontal disease.
3. Identify systemic factors that may cause periodontal disease.
4. Discuss the causes and risk factors of periodontal disease.
5. Identify and describe the two basic types of periodontal disease and explain the significance of plaque and calculus in periodontal disease.
6. List the seven basic case types and signs and symptoms of periodontal disease.
Definition and Prevalence of Periodontal Disease

- Periodontal disease is an infectious disease process that involves inflammation
- Periodontal diseases involve the structures of the periodontium
- Periodontal disease can cause a breakdown of the periodontium, resulting in loss of tissue attachment and destruction of the alveolar bone
Structures of the Periodontium

Prevalence of Periodontal Disease

- Periodontal disease is the leading cause of tooth loss in adults
- Almost 75% of American adults have some form of periodontal disease, and most are unaware of the condition
- Almost all adults and many children have calculus on their teeth
Periodontal Disease and Systemic Health

- Chronic inflammatory periodontal disease may significantly affect health conditions such as coronary heart disease, stroke, or preterm birth
  - Chronic inflammation appears to do harm to the entire body
- Certain systemic conditions increase the patient’s susceptibility to periodontal disease
  - Periodontal disease may actually increase a patient’s susceptibility to certain systemic conditions
Periodontal Disease and Systemic Health (Cont.)

- **Cardiovascular disease**
  - Individuals with periodontal disease have a greater incidence of coronary heart disease

- **Preterm low birth weight**
  - Women with severe periodontal disease have seven times the risk of preterm low-birth-weight (PLBW) infants

- **Respiratory disease**
  - Individuals with periodontal disease may be at increased risk for respiratory infection
Causes of Periodontal Disease

- Dental plaque
- Calculus
  - Provides a surface to which plaque can attach
  - Usually divided into two types:
    - Supragingival calculus found above the margin of the gingiva
    - Subgingival calculus on root surfaces below the gingival margin that can extend into periodontal pockets
Dental Plaque

Calculus Deposits of the Lower Anterior Teeth

Courtesy Dr. Edward J. Taggart, San Francisco, CA.
Other Risk Factors

- Inflammation caused by an accumulation of bacterial plaque
- Disease-causing bacteria are necessary for periodontal disease to occur, but they are not totally responsible for destruction of the periodontium
- Other risk factors alter the body’s response to bacteria that are present in the mouth
Types of Periodontal Disease

- “Periodontal disease” is an inclusive term describing any disease of the periodontium
- Includes:
  - Gingivitis
  - Periodontitis
- Each has a variety of forms
Signs and Symptoms of Periodontal Disease

- Red, swollen, or tender gingiva
- Bleeding gingiva while brushing or flossing
- Loose or separating teeth
- Pain or pressure when chewing
- Pus around the teeth or gingival tissues
Gingivitis

- Inflammation of the gingival tissue
- Characterized by areas of redness and swelling; there is a tendency for the gingiva to bleed easily
- Limited to the epithelium and gingival connective tissues
Gingivitis Type I
Gingivitis (Cont.)

- Other types of gingivitis are associated with:
  - Puberty
  - Pregnancy
  - Use of birth control medications

- Gingivitis is painless and often goes unrecognized until a dental professional emphasizes its importance

- Improved daily oral hygiene will reverse gingivitis
Medication-Induced Gingivitis
Periodontitis

- *Periodontitis* means “inflammation of the supporting tissues of the teeth”
- Extension of the inflammatory process from the gingiva into the connective tissue and alveolar bone that supports the teeth
- Progression of periodontitis involves the destruction of connective tissue attachment at the most apical portion of a periodontal pocket
Cross-section of a Tooth and Associated Anatomic Structures
Description of Periodontal Disease

- Described in terms of severity and how much of the mouth is affected:
  - Localized
  - Generalized

- Severity determined by assessment of the amount of lost attachment:
  - Slight or early
  - Moderate
  - Severe or advanced

- The American Academy of Periodontology (AAP) has identified seven basic case types of periodontal disease
Generalized Horizontal Bone Loss

Seven Basic Case Types of Periodontitis

- **Chronic periodontitis:**
  - Slight or early periodontitis
  - Moderate periodontitis
  - Severe or advanced periodontitis

- **Aggressive periodontitis:**
  - Prepubertal periodontitis
  - Juvenile periodontitis
Seven Basic Case Types of Periodontitis (Cont.)

- Necrotizing periodontal disease:
  - Necrotizing ulcerative gingivitis (NUG)
  - Necrotizing ulcerative periodontitis (NUP)
Questions?