

**Periodontology** refers to the field of dentistry that involves the management and treatment of the periodontium, gingival tissue and dentition. There are a wide variety procedures and instruments that can be used for any periodontal procedure that goes well beyond what is presented here. Periodontists train for 3 years after obtaining their dental degree and can perform surgical and non-surgical procedures ranging from placing implants to scaling and root planing.

Periodontists are in the business of saving teeth, preserving gingiva and maintaining overall oral health. It is essential to present patients with all the possible treatment plans to preserve and maintain any bone or tooth structure to build a solid foundation for future oral health. It is also important to educate the patient so that they may maintain their oral health and become compliant with any post-treatment instructions. Here, we will be presenting some of the basics of periodontology and some of what you will do in dental school.

## 1. Periodontal Issues

- a. Periodontal issues can be classified as **generalized** (greater than 30% of the oral cavity) or **localized** (less than 30% of the oral cavity)
- b. Certain disease processes can cause the accumulation of dental plaque, dental calculus, inflammation of the gingival tissue and gingival recession among others
- c. **Gingivitis** that is associated with dental plaque formation is the most common form of gingival disease
  - i. Gingivitis has been previously characterized by the presence of clinical signs of inflammation that are confined to the gingiva and associated with teeth showing no attachment loss.
  - ii. Gingivitis has also been observed to affect the gingiva of periodontitis-affected teeth that have previously lost attachment but that have received periodontal therapy to stabilize any further attachment loss
  - iii. Gingivitis can be plaque induced or
- d. **Periodontitis**
  - i. Periodontitis is defined as “an inflammatory disease of the supporting tissues of the teeth caused by specific microorganisms or groups of specific microorganisms, resulting in progressive destruction of the periodontal ligament and alveolar bone with increased probing depth formation, recession, or both.”
  - ii. The clinical feature that distinguishes periodontitis from gingivitis is the presence of clinically detectable attachment loss; it’s accompanied by periodontal pocket formation and changes in the density and height of the subjacent alveolar bone
  - iii. Periodontitis can be acute, chronic, or aggressive and can also be seen as a manifestation of a systemic disease



Figure 3-2  
The maxillary second molar exhibits mild inflammation at the mesial-palatal surface. However, the clinical attachment loss has been stable for 15 years after the placement of an apically positioned flap and periodontal maintenance. The diagnosis is a history of moderate periodontitis, but the case is in remission.

**e. Necrotizing Periodontal Diseases**

- i. The clinical characteristics of necrotizing periodontal diseases may include (but are not limited to) ulcerated and necrotic papillary and marginal gingiva covered by a yellowish-white or grayish slough or pseudomembrane, blunting and cratering of the papillae, bleeding on provocation or spontaneous bleeding, pain, and fetid breath
- ii. These diseases may be accompanied by fever, malaise, and lymphadenopathy, although these characteristics are not consistent

**f. Periodontitis Associated with Endodontic Lesions**

- i. The classification of lesions that affect the periodontium and the pulp is based on the sequence of the disease process
- ii. You must determine if the lesion is of an endodontic lesion or from a periodontic lesion and treat the underlying cause

**g. Mucogingival deformity**

- i. *Mucogingival deformity* is a generic term used to describe the mucogingival junction and its relationship to the gingiva, the alveolar mucosa, and frenula muscle attachments.
  - ii. A *mucogingival deformity* is a significant departure from the normal shape of the gingiva and the alveolar mucosa, and it may involve the underlying alveolar bone
- h. Other issues can be caused by occlusal trauma which would require certain procedures such as fabrication of a night guard or enameloplasty

## 2. The Treatment Plan

- a. In order to plan the appropriate treatment for any periodontal disease, the clinician must make the proper diagnosis; additionally, the treatment should encompass short-term and long-term goals.
  - i. Short-term goals are the elimination of all infectious and inflammatory processes that cause periodontal and other oral problems that may hinder the patient's general health.
  - ii. Long-term goals are the reconstruction of a healthy dentition that fulfills all functional and esthetic requirements; this involves consideration of prosthetic reconstruction of the dentition, and orthodontic treatment if necessary

**b. Pertinent medical and dental history**

- i. It is important to review the patient's past medical history, to see if the patient is healthy enough to undergo any sort of procedure.
- ii. Proper antibiotic prophylaxis should be administered if necessary for example as well as making sure the patient is medically stable (proper blood pressure, blood sugar, etc.)
- iii. It's important to know the patient's social history, such as use of alcohol, smoke and tobacco products, and prescribed medications.

**c. Comprehensive Periodontal Examination**

- i. Includes thorough intraoral and extraoral examination
- ii. Accurate periodontal probing should be done to check the gingival health
- iii. Proper periodontal treatment plan should be executed
  1. Nonsurgical cleaning with a 6 month recall vs a 3 month recall or scaling and root planing for example
  2. Supragingival and subgingival scaling

**d. Patient education should be stressed and emphasized**

- i. Patient oral hygiene is critical to the overall short-term and long-term treatment outcome. Therefore oral hygiene must be repeatedly assessed and reinforced
- ii. Appropriate recall appointments as deemed necessary from the periodontal treatment plan for maintenance or reevaluation



Figure 44-2

**3. Periodontal Procedures**

**a. Nonsurgical Periodontal Therapy**

- i. Supragingival and subgingival scaling and root planing
- ii. Extraction of hopeless teeth
- iii. Removal or reshaping of overhangs and overcontoured restorations
- iv. Restoration of carious lesions
- v. Restoration of open contacts

- b. **Surgical Therapy** - Adjunct to nonsurgical therapy; should only occur once patient demonstrates proficient biofilm control
  - i. Access for root instrumentation
  - ii. Pocket reduction through soft tissue resection, osseous resection, or periodontal regeneration
    - 1. Periodontal access surgery (resective and regenerative)
    - 2. Periodontal plastic surgery (mucogingival surgery or aesthetic crown lengthening)
    - 3. Preprosthetic surgery (prosthetic crown lengthening or implant site preparation and implant placement)
  - iii. Can use sonic and ultrasonic instrumentation and irrigation

#### 4. Other procedures include the following:

- a. Sleep-disordered breathing treatment
- b. Implant surgical procedures and digitally assisted implant surgery
- c. The use of lasers in periodontal and peri-implant therapy
- d. Treatment of gingival enlargement
- e. Occlusal evaluation and therapy
  - i. Includes the fabrication of occlusal guards
- f. Bone grafting, guided tissue regeneration and gingivectomies

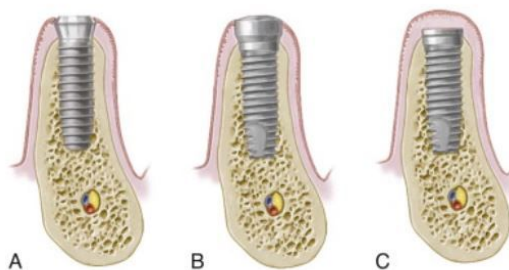


Figure 75-1

One-stage implant versus two-stage implant surgeries.

There are multiple procedures and treatments that can be done for patients, too many to list. The bottom line is that prior to any long-term treatment, the patient must complete the short-term goal of returning back to a healthy oral cavity.

#### References:

*Carranza's Clinical Periodontology*

Newman, Takei, Klokkevold, Carranza, **12th Edition**