Non-Surgical Management of Periodontal Diseases: The Mainstay of Dental Therapy

Speaker: Paul Levi, Jr., Associate Clinical Professor

Exam Questions:

1. Dental plaque is attached to a tooth by:
   A. a calcified byproduct of bacteria
   B. a sticky glycocalyx secreted by the bacterial cells
   C. an electrostatic attraction of the bacterial cells to the tooth surface
   D. a fibrous attachment to the tooth

   **Answer:** B
   **Rationale:** Dental plaque is a complex, organized dense film of microorganisms constrained in glycocalyx (sticky polysaccharide matrix produced) with other organic and inorganic products.

2. An intrasulcular technique of brushing that is effective
   A. utilizes a sweep motion of brushing from the gingiva to the tooth
   B. utilizes a circular scrub motion of brushing
   C. utilizes a hard toothbrush
   D. maintains the bristles stationary in the gingival crevice

   **Answer:** D
   **Rationale:** The stroke should be short ≤5 mm inserted into the gingival crevice and as much as possible interproximally so less is the tendency to scrub; the longer the stroke, the more pressure is needed in order to maintain the bristle tips stationary.

3. The primary purpose of root planning is to:
   A. eliminate porous cementum
   B. to remove calculus supragingivally
   C. to remove plaque subgingivally
   D. to remove stain supragingivally

   **Answer:** A
   **Rationale:** Cementum tends to be porous which helps to retain calculus. The purpose of subgingival scaling and root planing is to remove calculus and to smooth the cementum.
4. When sharpening a periodontal curette the grit of the sharpening tool

A. makes no difference to the tooth
B. will determine the smoothness of the root being root planed
C. will be determined by which edge of the instrument is to be sharpened
D. will be determined by whether one is sharpening a curette or a scaler

Answer: B
Rationale: Sharpening instruments is a fundamental skill that should be performed as this will provide the best clinical outcome.

5. When a patient has been diagnosed with rapidly progressive periodontitis, you would expect to see which of the following combinations of microorganisms?

A. F nucleatum, P. gingivalis, A. actinomycetemcomitans
B. P. gingivalis, P. intermedia, A. actinomycetemcomitans
C. B. forsythus, P. gingivalis, C. rectus
D. Treponema ssp., E. corrodens, P. intermedia.

Answer: B
Rationale: P. gingivalis, P. intermedia, A. actinomycetemcomitans

Matching

A. Healing by reattachment
B. Healing by new attachment
C. Healing by regeneration

1. __A____ reunion of connective tissue and root that have been separated by incision or injury but not by disease.

2. __C____ the biological process by which the architecture and function of the lost tissue is completely restored.

3. __B____ the union of a pathologically exposed root with connective tissue or epithelium. This new attachment must occur in an area formerly damaged by disease.
## Case Study Patient:

<table>
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<th>Age</th>
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<th>Scenario</th>
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<tbody>
<tr>
<td>Sex</td>
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<td>Clinically:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bleeding upon probing</td>
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<td></td>
<td></td>
<td>Generalized biofilm</td>
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<td></td>
<td></td>
<td>Moderate supra calculus on lower anterior teeth (lingual)</td>
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<td></td>
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<td>CAL: 0mm</td>
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<tr>
<td></td>
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<td>Probing: 3-5 mm generalized</td>
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<tr>
<td>Weight</td>
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<tr>
<td>BP</td>
<td>WNL</td>
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<tr>
<td>Chief complaint</td>
<td>Gums bleed when patient brushes and flosses</td>
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<tr>
<td>Medical history</td>
<td>WNL</td>
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<tr>
<td>Current medications</td>
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<td>Social history</td>
<td>No contributing factors</td>
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</table>
1. How long does plaque have to be undisturbed before it elicits a bleeding response?

   A. 2 days
   B. 4 days
   C. 3 weeks
   D. 3 months

   Answer: B

2. The most significant feature of early/acute gingivitis?

   A. Marginal redness
   B. Edema of gingival margins
   C. Bleeding in response to probing
   D. Loss of stippling

   Answer: C

3. Gingivitis is a reversible process, and is diagnosed by radiographic bone loss.

   A. The first statement is true; second statement is false.
   B. The first statement is false; second statement is true
   C. Both statements are true
   D. Both statements are false

   Answer: A

4. Which inflammatory mediator is responsible for the breakdown of connective tissue?

   A. Prostaglandins (PGE)
   B. Matrix metalloproteinases (MMP's)
   C. Cytokines
   D. Tumor necrosis factor

   Answer: B
5. Which of the following best describes the epithelial lining of a diseased gingival sulcus?

A. Keratinized epithelium with rete pegs  
B. Keratinized epithelium without rete pegs  
C. Nonkeratinized epithelium with rete pegs  
D. Nonkeratinized epithelium without rete pegs  
E. Parakeratinized epithelium with rete pegs

**Answer:** C

6. Which of the following histologic changes in inflamed gingiva results in bleeding?

A. Vasodilation within the lamina propria  
B. Ulceration of the crevicular lining  
C. Extracellular fluid accumulation  
D. Inflammatory cellular infiltrate  
E. Alteration of fibroblast

**Answer:** B

7. How would one classify the type of periodontal pockets with a probe reading of a 5mm and CAL (clinical attachment level: 0):

A. Absolute pocket  
B. Pseudopocket  
C. Periodontal pocket  
D. True pocket

**Answer:** B