Gingival Surgical Procedures

- limited to the gingival and not involving underlying osseous structures
  - Gingival Curettage
  - Gingivectomy
  - Gingivoplasty
  - Gingival Flap

Gingival Curettage

- **Curettage** - removal of the gingival wall of a periodontal pocket to separate diseased soft tissue
- **Inadvertent curettage** - Unintentional curettage performed when scaling and root planing

Gingival Curettage

- **Theory**
  - Reduces inflamed granulation tissue in the soft tissue wall
  - Removes epithelium lining allowing healing with connective tissue attachment
  - Reduced the bacteria

AAP Position Paper on Gingival Curettage

- **Reality**
  - No new attachment occurs with gingival curettage healing is by long junctional epithelium
  - Result do not differ from results obtained by S/RP alone
  - Code for Gingival Curettage dropped from AAP codes

AAP Position Paper on Gingival Curettage

- **Academy Statement** — J. Perio 2002
  - “Gingival curettage has no therapeutic benefit in treatment of chronic periodontitis and concludes that the dental community as a whole regards gingival curettage as a procedure with NO clinical value.”
Gingival Curettage by any other name

- Excisional New Attachment Procedures (ENAP)
- Ultrasonic curettage
- Caustic drugs

Also has no clinical value

Gingivectomy

- Indications
  - Elimination of suprabony pockets in firm fibrous pockets
  - Elimination of gingival enlargements
  - Elimination of suprabony abscesses

Definition:
Current Dental Terminology (CDT-09) - Revised
D4210 – Gingivectomy or gingivoplasty: .... for suprabony pockets which need access for restorative dentistry, when moderate gingival enlargements or aberrations are present, and when there is asymmetrical, or unesthetic gingival topography.

Treatment Planning Considerations & Limitations - Begin with the End in Mind

- How much keratinized tissue is present?
- Can keratinized tissue be sacrificed?

Gingivectomy Technique

- Measure pocket depth
- Mark with bleeding points
- Initial incision
  - Apical to bleeding points
  - 45 degree bevel to the root

Dr. Deby Johnson
Periodontology III
Spring Semester, 2009
School of Dentistry
University of Minnesota
Healing after Gingivectomy

- Initial response—formation of protective clot, underlying tissue has acute PMN infiltrate and some necrosis
- Clot replaced by granulation tissue
- 24 hours increase CT and angioblast below surface layer
- 12–24 hours epithelial cells at margin migrate into the granulation tissue, beneath the necrotic tissue

Healing after Gingivectomy

- After 5–14 days surface epithelization is complete, but keratinization is incomplete
- Vasodilation and vascularity begin to decrease about the 4th day and appear normal by about 16 days. Epithelium grows about 0.5 mm per day.
- Complete repair of the connective tissue takes about 7 weeks

Esthetically Functionally Short Crowns

- Gummy Smile
- Delayed passive eruption

Dr. Russ Dylla

Centrals = 25% wider than laterals and 10% wider than canines
Centrals + Canines = 20% longer than laterals
Ratio = 1.2/1.0
Can the biologic width affect the position of the gingival margin?

- Important in esthetic areas
- Help prevent coronal rebound of the gingival margin following surgery

Biologic Rationale
Gargiulo et al.; J Periodont 32: 261-267, 1961

- Supra-alveolar Tissues or Dentogingival Junction – 2.73 mm
- Biologic Width or attachment apparatus – 2.04 mm
Attachment apparatus = ~2.04mm

Vertical Mattress sutures

Dr. Russ Dylla

Gingivectomy by Electrosurgery

- Advantage: hemorrhage control
- Disadvantage: contraindicated in patients with poorly shielded cardiac pacemakers
- Can cause bone necrosis if tip touches bone and areas of cementum can be burned if tip touches those areas
- Must be limited to superficial procedures

Gingivectomy by Chemosurgery

- Difficult to control depth of action
- Healing is slower
- NOT RECOMMENDED

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Gingivectomy

- **LIMITING FACTORS:**
  - Amount of keratinized gingival
  - Maintenance of esthetics
  - Require access to osseous defects for definitive defect correction
  - Frequent post operative pain with procedure that will allow primary closure
  - Heavy pigmentation may contraindicate treatment

Treatment of Gingival Enlargement

Chronic Inflammatory Enlargement

*Edematous tissue - treated with S/RP*

IF extremely fibrous and interferes with access, surgical removal may be indicated

Techniques for reduction of gingival enlargement

- Gingivectomy
- Flap operation - APF
- Combined Techniques

Gingivectomy

Can recontour at margin if adequate KG

Can be used with soft friable tissue

Flap operation

Need firmer tissue

Conserves KG
Combined Techniques: Gingivectomy and Gingiveplasty

Treatment Planning Considerations & Limitations - Begin with the End in Mind

Functional or esthetic compromise of involved or adjacent teeth
- Opening interdental spaces
- Creating excessively “long” teeth
Gingival Diseases-Dental Plaque Induced

1. Gingival Disease
   - Dental plaque-induced gingival diseases

- Gingival Diseases modified by medications
  - Drug-influenced gingival diseases
    - Drug-influenced gingival enlargements
    - Drug-influenced gingivitis
      - Oral contraceptive associated
      - Other

Esthetically/Functionally Short Crowns

- Inflammatory drug induced hyperplasia
Drugs causing overgrowth

- Nifedipine
- Cyclosporine
- Phenytoin (Dilantin)

credits

- Dr. James Le
- Dr. Allen Todd
- Coury Staadecker