**Periodontal surgery**

**Part 3** **Dr.Huda Jasim Jebur**

**3-Distal wedge procedures**

In many cases the treatment of periodontal pockets on the distal surface of distal molars is complicated by the presence of bulbous tissues over the tuberosity or by a prominent retromolar pad. The most direct approach to pocket elimination in such cases in the maxillary jaw is the gingivectomy procedure. The incision is started on the distal surface of the tuberosity and carried forward to the base of the pocket of the distal surface of the molar .However, when only **limited amounts of keratinized gingiva** are present, or none at all, or if a **distal angular bony defect** has been diagnosed, the bulbous tissue should be reduced in size rather than removed. This may be accomplished by the distal wedge procedure **(Robinson 1966).** This technique facilitates access to the osseous defect and makes it possible to preserve sufficient amounts of gingiva and mucosa to achieve soft tissue coverage.

* **Technique**

1. Buccal and lingual incisions are made in a vertical direction through the tuberosity or retromolar pad to form a triangular wedge. The facial and lingual incisions should be extended in a mesial direction along the buccal and lingual surfaces of the distal molar to facilitate flap elevation.

2. The facial and lingual walls of the tuberosity or retromolar pad are deflected and the incised wedge of tissue is dissected and separated from the bone .

3. The walls of the facial and lingual flaps are then reduced in thickness by undermining incisions. Loose tags of tissue are removed and the root surfaces are debrided. If necessary, the bone is recontoured.

4. The buccal and lingual flaps are replaced over the exposed alveolar bone, and the edges trimmed to avoid overlapping wound margins. The flaps are secured in this position with interrupted sutures .The sutures are removed after approximately 1 week.

The original distal wedge procedure may be modified according to individual requirements (See PowerPoint). All having the goals of eliminating the deep pocket and achieving mucosal coverage of the remaining periodontium.

**4-Osseous surgery**

The principles of osseous surgery in periodontal therapy were outlined by Schluger (1949) and Goldman (1950). They pointed out that alveolar bone loss caused by inflammatory periodontal disease often results in an uneven outline of the bone crest. Since, according to these authors, the gingival contour is closely dependent on the contour of the underlying bone as well as the proximity and anatomy of adjacent tooth surfaces, the elimination of soft tissue pockets often has to be combined with osseous reshaping and the elimination of osseous craters and angular bony defects to establish and maintain shallow pockets and optimal gingival contour after surgery.

**A-Osteoplasty**

The term osteoplasty was introduced by Friedman in 1955. The purpose of osteoplasty is to **reshape the alveolar bone without removing any “supporting” bone**. Examples of osteoplasty are the thinning of thick osseous ledges and the establishment of a scalloped contour of the buccal (lingual and palatal) bone crest. The leveling of interproximal craters and the elimination (or reduction) of bony walls of circumferential osseous defects are often referred to as “osteoplasty” since usually no resection of supporting bone is required.

**B-Ostectomy**

In ostectomy**, supporting bone**, that is bone directly involved in the attachment of the tooth, is removed to reshape hard tissue deformities caused by periodontitis. Ostectomy is considered to be an important part of surgical techniques aimed at pocket elimination.

**5-Crown lengthening**

Crown –lengthening surgery is designed to increase the clinical crown length.

**Indications**

1. Inadequate clinical crown for retention due to extensive caries, subgingival caries or tooth fracture, root perforation, or root resorption within the cervical 1/3rd of the root in teeth with adequate periodontal attachment.

2. Short clinical crowns.

3. Placement of sub gingival restorative margins.

4. Unequal, excessive or unaesthetic gingival levels for esthetics.

5. Planning veneers or crowns on teeth with the gingival margin coronal to the cemeto enamel junction (delayed passive eruption).

6. Teeth with excessive occlusal wear or incisal wear.

7. Restorations which violate the biologic width.

8. In conjunction with tooth requiring hemisection or root resection.

9. Assist with impression accuracy by placing crown margins more supragingivally.

**Contraindications**

1. Deep caries or fracture requiring excessive bone removal.

2. Post-surgery creating unaesthetic outcomes.

3. Tooth with inadequate crown root ratio (ideally 2:1 ratio is preferred).

4. Non restorable teeth.

5. Tooth with increased risk of furcation involvement.

6. Unreasonable compromise of esthetics.

7. Unreasonable compromise on adjacent alveolar bone support.

**6-Mucogingival surgery (M.G.S)**

The term mucogingival surgery was initially introduced by Friedman to describe surgical procedures for the correction of relationships between the gingiva and the oral mucous membrane, with special reference to three problem areas: attached gingiva, shallow vestibules, and a frenum interfering with the marginal gingiva.

**1-Problems Associated With a Shallow Vestibule**

**-Vestibular extenuation procedures**

With minimal vestibular depth, proper hygiene procedures are jeopardized. Minimal attached gingiva with adequate vestibular depth may not require surgical correction if proper atraumatic hygiene is practiced with a soft brush. Minimal amounts of keratinized attached gingiva with no vestibular depth benefit from mucogingival correction.

**2-Problems Associated With Attached Gingiva**

**-Transplantation of gingiva & palatal mucosa**

The ultimate goal of mucogingival surgical procedures is the creation or widening of attached gingiva around teeth and implants. That may be either, free gingival graft or pedicle graft e.g. laterally repositioned flap.

**3-Problems Associated With an Aberrant Frenum**

**-Frenectomy and Frenetomy**

Frenectomy and frenotomy refer to surgical procedures that differ in degree. Frenectomy is complete removal of the frenum, including its attachment to underlying bone, and it may be required in the correction of an abnormal diastema between the maxillary central incisors. Frenotomy is relocation of the frenum, usually in a more apical position.

* **They are indicated when the frenum is present with:**

1. Significantly interferes with the patient's ability to maintain the area.
2. Compromises the labial flange of a maxillary denture.
3. Produces pull on the free gingival margin (that by history is causing progressive attachment loss).
4. Interferes with the orthodontic closure of a diastema.

* **Techniques for the labial Frenectomy**

1. **Dieffenbachia V-shape**

* Hold frenum with hemostat
* Surgical incision with #15 blade
* Excise wedge of tissue
* Dissect fibers from periosteum
* Interrupted suture placed

**2. Schuchardt Z-shape**:

The main advantage of this method over the V-shape method was minimal scar tissue formation. The method requires a skilled operator as it is tedious to perform. The technique is done to reduce loss of vestibular depth sometimes seen with linear incision.

* Make elliptical incision
* Excise fibrous tissue
* Make 2 oblique incisions
* Undermine pointed flaps
* Rotate points to close vertical incision horizontally

**“Live as if you were to die tomorrow. Learn as if you were to live forever.”**

**Mahatma Gandhi**