Esthetic surgery **dr alaa omran**

GINGIVAL RECESSION

Gingival recession is defined as the **apical migration of the junctional epithelium** with exposure of root surfaces. [**Kassab MM, Cohen RE-2003**].

Gingival recession is the **apical shift of the marginal**

gingiva from its normal position on the crown of the

tooth to levels on the root surface beyond the cemento

enamel junction [**Loe H-1992**].

Indications:

- root sensitivity
- esthetics
- protect root surface from caries/abrasions
- improved hygiene
- If the recession is not progressing and does not provoke tooth sensitivity or poor aesthetics, then tooth- brushing instructions and regular observation through a strict maintenance program would be the optimal treatment.
- The need to improve soft tissue aesthetics
- Reduce hypersensitivity
- Improve plaque control
- Prevent further progression of recession defect

RECIPIENT SITE

- Gingival recession is limited to one tooth or extends to multiple teeth
- **Degree of gingival** recession
- **Amount and thickness of existing** keratinized gingiva in the area of Recession
- **Restorative/Prosthodontic treatment** after root coverage is necessary

Pedicle soft tissue graft procedures :

Rotational flaps

- Laterally positioned flap
- Double papilla flap

Advanced flaps

- Coronally positioned flap
- Semilunar flap

Submerged grafts

- Connective tissue graft + laterally positioned flap
- Connective tissue graft + double papilla flap
- Connective tissue graft + coronally positioned flap
- subepithelial connective tissue graft
- Envelope techniques
- Tunnel technique

Advantages

a. **One surgical** site
b. **Good vascularity of the** pedicle flap.
c. Ability to **cover isolated, denuded roots** that have adequate donor tissue laterally.

Disadvantages

a. Limited by the amount of **adjacent keratinized attached gingiva.**
b. Possibility of **recession at the donor site**.
c. **Dehiscence or fenestration** at the donor site.
d. Limited to **one or two teeth with gingival recession.**

Lateral reposioning flap

Indications:

a. For covering the isolated denuded root.
b. When there is sufficient **width of interdental papilla** in the adjacent teeth,

and **Sufficient vestibular depth.**

Contraindications:

a. Presence of **deep interproximal pockets.**
b. **Excessive root prominence**.
c. Deep or extensive root abrasion or erosion.

Double papilla flap

Indications:

1. When the **interproximal papillae adjacent** to the **mucogingival problem are**

sufficiently wide.

2. When the **attached gingiva on an approximating tooth is insufficient to allow for a Lateral Pedicle Flap**.

Advantages:

1. The risk of **loss of alveolar bone is minimized because the interdental bone**

is more resistant to loss than is radicular bone.

2. The papillae usually supply a greater width of attached gingiva than from the radicular surface of a tooth.

Colonially reposition flap

Indications:

- Esthetic coverage of exposed roots.
- For tooth sensitivity owing to gingival recession.

Advantages:

- Treatment of **multiple areas of root exposure.**
- No need for involvement of adjacent teeth.
- High degree of success.
- Even if the **procedure does not work, it** does not increase the existing problem.

Criteria of root coverage

The **gingival margin is on the CEJ in class I, Class** II.
The **depth of gingival sulcus is within 2mm.** There is **no bleeding on**

probing ,

Color **match with adjacent tissue**

Papilla loss reconstruction

Black triangle

Etiology:

1. Loss of Periodontal support due to plaque associated periodontal diseases.
2. High frenal pull
3. Abnormal tooth shape
4. Improper prosthetic contour
5. Traumatic oral hygiene procedure

- Classification

- Nordland and Tarnow (1998) based on three anatomic landmarks:

1. the interdental contact point,
2. the coronal extent of the proximal CEJ
3. the apical extent of the facial CEJ, and gingival margin

methods of reconstruction

1-Beagle (1992) described a pedicle graft procedure utilizing the soft tissues palatal to the interdental area.

2-Han and Takei (1996) proposed an approach for papilla reconstruction ***("semilunar coronally repositioned papilla")*** based on the use of a free connective tissue graft

3-. Azzi et al. (1999) described a technique in which an envelope-type flap is prepared for coverage of a connective tissue graft

Tissue Volumizing

Among several minimally invasive techniques proposed, the injection of various fillers and biological preparations has been studied for papilla reconstruction

.Hyaluronic acid (HA) is a large molecule, non-sulphated glycosaminoglycan present in connective tissues like skin and cartilage. Under physiological conditions, it contributes to tissue hydrodynamics, by binding to water to provide elasticity and stability resulting in tissue regeneration and healing. Its non-immunogenic, biocompatibility and bacteriostatic properties enhance its clinical significance. Long used as dermal fillers, recent findings have suggested its use to treat interdental papilla loss. HA in tissues is digested by macrophages in blood or lymphatic system and broken HA reaches bloodstream to get disintegrated in liver for excretion. HA is usually eliminated through urine at a very minute quantity. HA acts as an antioxidant by scavenging reactive oxygen species, which helps in the regulation of immune response implying its anti-inflammatory properties. HA's anti-inflammatory response make it ideal for biomedical usage. Chemical modified hyaluronic acid preparations degrade more slowly than biological HA (due to cross-linkage and decreased water solubility) extending its clinical efficacy by 6-12 months. Such preparations are used as fillers which are usually manufactured from animal sources and more recently *Streptococcus* species of bacteria was used to extract gel form of hyaluronic acid which was chemically cross-linked with butanediol diglycidyl ether, stabilized and suspended in neutral phosphate buffered saline.

Gingival depigmentation

- A treatment to remove the melanin hyperpigmentation.
- **Melanin** is the physiologic pigment of the gingiva… but conditions

  associated with hyper melanosis are:

  - Smoking
  - Drugs
  - Albright syndrome
  - Puetz- Jaghers syndrome
  - Malignant melanoma