**Gingivoectomy and gingivoplasty**

We learned in the previous course how to treat gingivitis by scaling, polishing & oral hygiene instruction , and how to treat periodontitis by scaling, polishing & root planning. However, when there is gingival enlargement; gingiva becomes fibrous so scaling and polishing are not enough

 **why ?** it’s a fibrous tissue it’s not resilient at all it will not shrink by scaling so in these cases we need something else which is **a gingivectomy** .

-another case when we need to do a crown on a tooth but there is no enough length of tooth so we do crown lengthening through gingivectomy

-also when we have shallow pocket without bone resorption and gingiva is not regenerating anymore by scaling and polishing to fill the pocket , then we need to do gingivectomy .

-also when we have inaccessible carious lesion (subgingival) we need to remove gingival tissue and expose the tooth to do our restorative procedure .

so in this sheet we will take about gingivectomy and gingivoplasty .

**gingivectomy** : suffix ectomy mean partial removal

of gingival tissues

in literature; it is defined as surgical procedure in which  **gingival pocket** is eliminated by removing gingival tissue (this is the first use for gingivectomy before being used for the other above mentioned purposes )

gingivectomy procedure always ends up with tissue irregularities .

so **always** after doing gingivectomy and in **single** clinic we do what's called **gingivoplasty**

which is a re-contouring and remodeling of a gingival surface .

**indication :**

gingival overgrowth induced by phenytoin for example -

idiopathic gingival fibromatosis -

-psudopocket : which is a coronal migration of interdentall papilla which become fibrous

-shallow suprabony pocket so it less than 5 mm in depth , there is no bone resorption usually it regenerates by scaling and polishing so when there is no response to scaling we would go for gingivectomy

areas with difficult access : like in subgingival class 5-

minor corrective surgery -

 ***Contraindication :***

1-absent or narrow attached gingiva

Thickness should be more than 2-3 mm

2- infrabony pocket , why not ? that mean there is bone loss so we will remove tissue until reach bone margin so imagine to remove at least a 7 mm of gingival tissues!

3- thickening of marginal alveolar bone; in some teeth there is a site where bone is very prominent and gingival tissues follow so if we remove gingival tissue the bone will be exposed.

 for this case we do **osteoplasty** instead .

**Advantages:**

* Technically simple &good visual access. ( easy to perform).
* Predictable morphological results: In gingivectomy and gingivoplasty, it’s so easy to predict where to cut and how tissues look like after procedure.
* Complete elimination of a suprabony pocket

***Disadvanteges :***

* Very limited indications .
* Gross wound , why is it a disadvantage ?

Gross wound is always exposed to oral environment it is a grossly exposed not small cuts and there is a possibility to heal with **scar" fibrotic tissue as started initially "**

* (healing by secondry intention )
* Danger of exposing bone due to lack of experience.
* Loss of attached gingiva

Even if patient doesn’t have enough thickness of attached gingiva, we must balance between removal of fibrotic tissue with thin attached gingival or leave the gingival enlargement which makes oral health maintenance worser (with time situation become worse)

* Exposed cervical areas of teeth
* phonetics and esthetic problems of anterior teeth. (S,O letters are affected)

Occur in 1 for each 1000 patient and it’s a reversible

***Instrument used in this procedure :***

1-**pocket marker** : one side is probe and the other side is a needle puncture that is placed in sulcus until pocket depth and then needle puncture is made labially to the depth marketed by the other end ‘probe’

As a result, pocket marker that measures the pocketing depth will be the bleeding point on the other side

2- Two types of **knives** to are accommodated to certain anatomies:

Kirkland

Orban

3-**electrosurgey** (cautery) with different tip shapes , each one for specific site .

Used to do cut and clots (no bleeding)

Tip shapes : triangular (interdentally) / straight /round ovale

 ***Knives used to do cut for gingvictomy ,cautery tips used to do cut needed for gingivoplasty***

-minimum time needed for gingiva wound healing is ***one week*** so wound can’t be left exposed all that period pf time.as a result, surgeons use periodontal dressing materials to cover wound areas and reduce patient discomfort ( non-therapeutic )

1. ***types of dressing material :***

1- Zinc oxide non eugenol (cause eugenol is irritant)

2- Light cured periodontal dressing, it has an excellent appearance that can’t be diffrientiated from gingiva and it is a hygienic one ( best one )

3-Sianoacrylate: very good material, it works like superglue and it is a transparent

Substances are impregnated in dressings such as antibiotics and the best impregnated substance is ***chlorohexden gluconate*** which releases 50% of its concentration at first day and it stays at ***MIC*** for the rest of the week.

***Case:***

A patient with phenytoin intake and thus gingival over growth (not treated even if he has good OH.Treating him with scaling and polishing is not objective so the choice is gingivoectomy

***Treatment steps :***

1. Correct diagnosis reveals that conventional method is not successful to remove pockets and the choice of treatment is gingivoectomy and gingivoplasty ( see pocket + by blowing air gingival detach away )
2. After administration of local anesthesia, we use pocket marker to mark the pocket depth and see bleeding points on labial aspect , if there is no observed bleeding points labially then a probe is used to widen it.
3. Now, schematic diagram helps in cutting , starting from bleeding point to above
4. The initial incision starts from **the inter dental** area **distal** form the most distal bleeding point using **Kirkland knife** with 45 degree toward tissues (starts apically), why? Because if incisions start coronally, reverse cutting following the original contours is made
5. The incision should be continuous following points ( non -stop point during cutting) .
6. Orban knife is used under gingiva in interdental area to split the **labial** gingival from the **lingual** one.

NOTE: we always do scaling and polishing for every case

Even in removal of calculus from visible root surfaces,this procedure is well known as scaling and **not** root planning .

1. ***gingivoplasty time*** to maintain the original contours by using cautery with **sweep(يكنس** ) movement from one side to another because if sweeping is not done, we would stop and go deeply at some point which makes defects in gingiva.
2. We clean the operation site and irrigate it .
3. It is an optional to put antibiotic ointments but not any antibiotic can be used :we use Agromycin (tetracycline derivative)

10- Dressing material is used to lock the area between teeth ***mechanically*** for one week (mechanical dovetail)

 This material doesn’t adhere to teeth and tissues 100% resulting in microlekage and plaque accumulation necessitating scaling and polishing later on.

**NOTE : dressing material should not extend to frenum because each time patient moves, dressing dislodges.**

For a minor corrective surgery to re-contour gingiva for composite filling, cautery tips are used to remove gingival tissues then finishing it

**so the principle of gingivctomy and ginvioplasty operation :**

1-Contnious incision at 45 degree at the base of the pocket (apical to the pocket)

2- Sharp dissection for the tissue in the inter dental papille

3- Smoothening of a wound edges

4- Coverage with dressing material

5-scaling and polishing

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