**\*Surgical treatment of gingival and periodontal diseases\***

**\*\*\*Please refer to the slides**

**1-** **Gingivectomy**: to excise the overgrowth side of the gingiva which is a fibrotic in nature (a surgical procedure where a **gingival** pocket).

\*Gingival pocket: is the pseudo-pocket.

-Every Gingivectomy will left us with unsmooth surface, and should followed by procedure called Gingivoplasty.

2- **Gingivoplasty**: recontouring of gingiva to its original shape to give smooth touch.

\*And every procedure is connected to the other , we should start with gingivctomy and immediately followed by gingivoplasty.

\*Gingivectomy: is particularly enhancing by subsequent Gingivoplasty during a certain operation where gingival pocket depth reduced and the remaining gingiva give a physiological contour.

**\*Indications** of Gingivoplasty and Gingivoplasty (limit its application) :-

**1-gingival enlargement or overgrowth**; where decide to cut mucosa, first we do scaling and oral hygiene instruction and wait two weeks (after 2 weeks there will be still little enlargement but we remove the co-factor "inflammation due to bacteria").

-Gingival enlargement not usually long standing, it may cause of plaque induce inflammation that convert the gingiva from resilient to fibrotic in nature.

-Other things lead to gingival enlargement: medications like phenytoin, cyclosporine and adalat-nifedipine (channel blockers).

**2- Idiopathic gingiva fibromatosis**

**3- Shallow supra-bony pockets:** remove it by scaling and polishing and oral hygiene instruction (brushing, using mouth wash) so this will reduce the pocket , but if there's still resist to the treatment even if we supplement our treatment with antibiotic and we afraid to proceed to deeper pocket 🡪 remove pocket by Gingivectomy.

4- **Areas with difficult access**: like areas with caries (minor cavities) and there's teeth are overlapping these areas🡪 we don't extract the teeth or doing a flap, instead we remove a little bit from the gingiva to have a good access and remove the caries.

\***Contraindications**:

1**- Narrow or absent attached gingiva** (when we examine the attached gingiva is less than 1-3 mm) "normal width of the attached gingiva is 1-3 mm" and if we do Gingivectomy in this case this will lead to loss of attached gingiva and exposure of the bone and the roots.

2-**Infrabony pocket** (pocket more than 5 mm) and if we do Gingivectomy in this case will lead to increase exposing the bony defect.

3-**Thickning of marginal alveolar bone**, In this case we don't do Gingivectomy to prevent bone exposure, instead we raise a flap then doing osteoplasty to smooth the excess and do contouring with the adjacent bone then close the flap.

**\*Advantages**:

**1-Technically simple and good visual access.**

**2-Complete pocket elimination.**

**3-Predictable morphological result.** (Knowing exactly the shape of gingiva after cutting)🡪 Why predictable? Because we can measure it visually or by approach the excessive gingiva and remove it.

**\*Disadvantges**:

**1**-**Very limited indications**.

**2- Gross wound postoperative pain**. (when we cut the excessive gingiva we will have gross wound means that the wound is not attached to the gingival part and the surgical surface will be expose to the surgical environment, and the healing will be in the secondary intention and this will cause mild or maybe sever pain " this happen if the patient does not follow our instructions after surgery"

**3-Danger of exposing bone.** It depends on the practitioner skills.

**4- Loss of attached gingiva.** (in areas of narrow or absent attached gingiva)🡪 loos of attached gingiva with frequent Gingivectomy in patients take medications like; Phentol or Tegretol or Dilantin sodium.

-If we do Gingivectomy for a patient with one of these drugs and this patient follow the oral hygiene instructions, we will have little gingival enlargement in the next time, because we remove the factor of inflammation and there will be still the factor which is the drug-induced gingival enlargement.

**5-expose cervical area of tooth**; which is very little (it's an advantage somehow, because we will expose little of the tooth which is the cervical area with the benefit for the patient , however, those patients already come with gingival recession ).

**7-Phontics and esthetic problem in anterior area**.

Ex: patient with diastema or high frenum , and he already used to it in speaking , and all of the sudden we do Gingivectomy, we will have some disadvantages that he maybe doesn't handle the speech (phonics) so we wait until he gets to it (it's temporary change then back to normal).

* This is up to us to go for the procedure in this case or not (if for scientific purpose, we go for it).

**\*Principles of the procedure:** can be done by Instruments (machine)or by knife or by open a flapor it can beby laser also.

A) Continue incision of 45 degree angle of the blade at the base of the pocket. (toward the pocket not the tooth).

B) Sharp dissection tissue.

C) Smoothing of the incision edge.

D) Contouring the gingival surface.

E) Scaling and root planning (certainly when removing gingiva we will find long standing calculus or black calculus🡪 black because it derived from the blood).--> so we do polishing and root planning if we expose cervical margins then coverage with periodontal dressing)

**\*Periodontal dressing (wound coverage)**

Dressing doesn't repair or healing of the tissue , it just cover the gross wound to reduce the exposure of the oral environment from the wound and this increase healing , and if not dressed this lead to retard healing and bring the healing back to fibrotic in nature (scar tissue).

-We have to understand and measure the depth of the pocket to know from where we cut, so there's a **Puncturing tweezer** have two sides one of them is graded in millimeter which is like the probe we inserted in the sulcus (to the maximum depth of the pocket), and the other side is needle like (sharp edge) to punch the labial surface when we reach the maximum depth of the pocket- to mark the outline of the surgical procedure cause we will have multiple lines or dots of bleeding points to help us to dissect the excess tissue.

**-To do dissection we have two types of cutting instruments:**

1- **Kirkland Knife:** has left and right, upper and lower sides to give us the 45 degree to place on the gingiva. We use it by dissecting the tissue from outside to the base of the pocket.

2- **Hairbin knife** (like arrow or sickle) we use it by insert it in the interdental area and this instrument has double cutting edges left and right so we can release the entire tissue.

\***Electro-surgery unit instrument**: it cuts and clot, so there's no bleeding if we us it at the required temperature. Temperature depends on the thickness of the tissue.

-This unit is generating heat and has a two tips (one is round and the other is contra-angle like triangle in shape. the triangle tip work as the Hairbin knife to smoothing or cutting the interdental papillae).

**-Ex of periodontal dressing (wound coverage):**

1- Coe-Pak.

2- Zinc oxide non-eugenol (Catalyst and base)

3- Alginate (normal or fast setting)

Each of them we use it depends on the case we work on it.

(32:36 in this minute I didn't understand what the doctor said)

-We place the dressing after drying the area (we roll the dressing like a cotton role and place it on the area where we did Gingivectomy 🡪 it has a mechanical bond "lock")

**\*Why mechanical?**

Because we put the dressing roll then push it interdentally and give us a dovetail shape like.

4- Chlorhexidine gluconate or acetate powder (antiseptic material); we use it to enhance or disinfect the wound area; we can impregnate Chlorhexidine into the dressing material then place it. (It optional but it give more value)

5-Syanoaccrylate periodontal dressing: give 100% of tissue healing completely, and it's expansive.

6- Eye ointment (put it on the tissue and over it place the dressing ,this will disinfect the area).--> Not available anymore.

**\*How long we keep the dressing?**

Depends on how long the wound takes to good healing ; The healing takes 1 week so we leave the dressing for 1 week.

\*Removing the dressing by the tweezer or the tip of the probe, and then do polishing.

**-Here the doctor showed us a picture and he explained on it how to do the Gingivectomy:**

First Infiltration then we measure the pseudopocket by the periodontal probe, we do puncturing , so we will have series of bleeding points (predictable morphological outcome, then we place the Hairbin knife 45 degree to the tissue by following the sequence of bleeding points in one shot from one side to the other until complete the dissection.

**\*What happen if the bleeding point was in the mid of the interdental papillae?**

Usually we start cutting from the distal bleeding point, so if the point was at the middle we start distal to this point to prevent cutting the interdental-papillae to two.

\*another picture showed the position of the Hairbin knife between the tissue and the angle of the Hairbin knife.

-By using the Kirkland knife we cut from the outside and the Inter-dental-papillae is still attached, so we bring the Hairbin knife and we insert it underneath and we split it at 45 degree to leave little of interdental papillae and prevent black triangle. We cut it as one piece, and then we bring the curette or scaler to smooth the root surfaces and polish the area.

**-** **Gingivoplasty:**

Called sweeping, to sweep (smooth) the side from one side to the other to give a uniform surface, and if we stop at the middle we will burn the area, there will be depression and deformity.

-So we bring the Hairbin knife and scrape the burned area.

**\*Minor corrective procedures:**

If there are two overlapping teeth, we remove a little bit from the interdental papillae so we can access the entire cavity.

Best wishes =)