**General principle of periodontal surgery**

**Maintenance of an adequate blood supply to the tissue is THE SINGLE MOST IMPORTANT surgical principle to follow.**

* **Aseptic surgical technique**

We know that the oral cavity is a Unique & complex environment & there's

Continuous bacterial contamination and its avascular radicular surface.

It composed from 3 aspects:

* Operating room
* Operating team
* patient

First: Operating room preparation:-

* Proper, clean & disinfected unit
* Perfectly sterilized instruments
* Irrigation with sterile saline or water

- Sterile coverings for light handles

Second: Operating team:-

* Surgical caps & masks
* Disposable & sterile gowns
* Disposable sterile gloves
* Eyes protection
* Scrubbing

Third: Patient preparation:-

* Informed consent (specific for surgical procedures).
* ORAL HYGIENE.
* Smoking cessation for1 wk before & 3-4 wks after surgery (theoretically), but at clinic we accept 1-2 days before surgery and 5 days after surgery.

- Pre-operative rinse with CHX for 30-60 sec.

- Prophylactic antibiotics for healthy patients (NO EVIDENCE).

**Note: A surgeon must be deft, delicate, and accurate in the management of all tissues within the surgical field.**

* **Atraumatic surgical technique**

Flap management:

1. Incisions 2. Flap preparation

3. Flap design 4. Flap reflection

5. Flap retraction 6. Open flap debridement (OFD)

7. Flap positioning

**First: Incisions**

Incision selection & execution is based on careful planning that takes surgical anatomy, the surgical objective, flap design, & the principles of atraumatic tissue management into consideration.

We have to use Sharp cutting instrument with definitive, clean & smooth movement this will result in faster healing & less patient discomfort.

**Types of incision:**

1. External bevel incision (gingivectomy)

2. Internal bevel incision (reverse bevel / inverse bevel)

3. Sulcular incision (crevicular)

4. Releasing incision (vertical)

5. Thinning incision

6. Cutback incision

7. Periosteal releasing incision

* External bevel incision :

- Objectives:

* Pocket Elimination
* Access to Roots
* Improved Gingival Contours
* Contained to the gingiva
* Coronal direction
* Gingivectomy and flap surgery

-Contraindications:

* Intrabony defects
* Narrow zone of Keratinized gingiva , it's better to preserve minimal keratinized tissue because it's better for the patient in oral hygiene and better for the doctor in further management as crown and sub gingival restorative margins
* Pocket depth apical to Muco-gingival Junction (MGJ)
* Anatomical considerations (shallow vault, pronounced External oblique ridge )
* Esthetic concerns (root exposure)
* High caries index
* Preexisting root sensitivity
* Internal bevel incision :

-Useful in apically positioning the palatal flap margin.

-used in facial surfaces when there's adequate Keratinized gingiva .

-Scalloped incision (ANATOMY), follow the anatomy of gingiva .

-ANTICIPATED amount of apical positioning .

* Sulcular incision :

- Preserve tissues, we go inside the sulcus.

* Vertical incision :

-At the line angles of teeth.

-Increase access to alveolar bone.

-Decrease tension of flaps.

Limit inclusion of non-diseased sites.-

Placement of vertical incision:-

* Prominent bony ledges or exostoses
* Pronounced concavities
* Root prominences
* Middle of dental papilla
* Include papilla (blood supply)
* Thinning incision :

-It reduce bulk of connective tissue from underside, we make incision inside the flap and remove from the tissue so we reduce the bulkiness of the tissue.

-Better flap adaptation.

Greater comfort.-

-Thinning (Tuberosity & retromolar pad) used in distal wedges in most distal tooth as:

* Triangular wedge
* Linear wedge
* Trap doo we elevate a flap and make incision and remove from the tissue ينرفع رفع



* Cutback incision :

-Allow greater movement for lateral positioning flap

-Less tension

-Used with pedicle flaps



* Periosteal releasing :

-Coronal advancement

-Lateral advancement

**Second: Flap preparation**

-Two ways for flap preparation:

* Full thickness flap or muco-periosteal flap
* Partial thickness flap or split-thickness flap

**-The differences between the two preparation are found in the table ( imp.) question of exam ☺**



**Third: Flap design**

-**Maintain optimal blood supply (imp) depend on**:

* Type of flap preparation (partial vs. full thickness).
* Releasing incision
* Flap length (height)-to-base ratio

-There are different flap designs according to the indication of surgery & the objective of treatment as apically positioned flap, coronally advanced flap, modified Widman flap.

**Fourth: Flap reflection**

Atraumatic elevation-

-Papillae are reflected first then marginal gingiva

-Across anterior/posterior extent of the flap

-GENTLE FORCE

Follow bone morphologic contours-

**Fifth: Flap retraction**

-PASSIVE retraction

-Proper flap design

-Adequate flap reflection

-Retractor edge always on bone

-Continuous flap retraction should be avoided

Frequent irrigation of the surgical site -

**Sixth: Open flap debridement**

-Prototypical periodontal flap surgery

-↑ Effectiveness of SRP

-Allows debridement of granulomatous inflammatory tissue

**Note: “Simply stated, roots are planed, defects are degranulated, & flaps are closed either at or apical to their original position.”**

**Seventh: Flap positioning**

-Repositioning, apical, coronal, or lateral repositioning

-The final position should be planned before the start of the surgery

-Determined by goals of therapy and the surgical technique

PASSIVE positioning-

* **Hemostasis**

-In both:

* Intra-operative
* Post-operative

Some extra notes

Extra notes

Page 4 Slid 4

Exploratory surgery 🡪 ex. Pt has periapical lesion , proper RCT and proper filing have been done but the lesion persistent and recurrent abscess … what do u think? May be Crack or vertical root fracture ( doesn’t appear on Rx ).. how to diagnose ? flab exploration

page 5 slide 1   
-poor oral hygiene is the most imp one   
- we should sovlethe caries problem before the surgery treatment   
- Unrealistic patient expectations or desires : ( cosmetic surgery )

page 5 slide 4   
Pic “ we should be able to swear to the pt that I can get this result before I start the Tx, and the result (healthy tissue )stay at least 5 yrs🡪 this what called “evidence based approach” العلم القائم على الادله =" ضمان للمريض اني رح اقدر اوصله للنتيجه المطلوبه "

"the most important thing in surgery is knowing your limitation “

Page 6 slide 3   
the most imp things that surgeons should know are : anatomy and wound healing  
  
( anatomical structures and spaces ( msh ma6looben ))

Page 7 slide 3

the blood supply( facial artery,lingual artery ,maxillary artery )all of them are from external carotid artery

page 8 slide 1   
Provide profound and lasting anesthesia to the pt for the surgery is crucial part for perio surgery , without it surgery objectives are impossible to obtain

If u know the right anatomy u can give one cartridge and its enough to finish the whole procedure ^\_^

Page8slide4   
- scrubbing in minor surgery is not required   
-pic ….. wrong : he hold the x-ray with sterilized gloves

GOOD LUCK ALL …