

FLUID CONTROL AND SOFT TISSUE MANAGEMENT



FLUID CONTROL

- ▶ Complete control of the environment Of the operative Site is Essential during Restorative Dental Procedures.



Fluid control

- ▶ The need for removal of fluids depending upon the task being performed



During teeth preparation

Large volumes of water is

Produced by the hand piece spray.

During impression or
cementation

Smaller volume of water
is present

Fluid control

- ▶ Depending on the location of the preparation in the dental arch, several techniques can be used to create the necessary dry field of operation.
- ▶ 1- Rubber dam



Fluid control

- ▶ 2- High volume vacuum

High volume suction tips are extremely useful during the teeth preparation phase.

Performed by the assistant



Fluid control

▶ 3-Saliva Ejector

Can be utilized effectively in some situations by the dentist

Placed in the corner of the mouth opposite the quadrant being operated.

Useful during impression and cementation.



Fluid control

► 4- Svedopter

It's a metallic saliva ejector with attached tongue deflector.

Used for evacuation and isolation of the mandibular teeth.

Access to the lingual surface of the mandibular teeth is limited.



Fluid control

- ▶ 5- Anti sialogogues

For the patients who salivates excessively, drugs can be used to control the salivary flow.

Chemical methods of fluid control

- Commonly used chemical methods for fluid control are :
 - Anti – sialogogues
 - Local Anaesthetics

ANTISIALAGOGUES

- For patients who salivates excessively.
- Methantheline bromide.
50mg tablet 1 hour before appointment
- Propantheline bromide
15mg tablet 1 hour before appointment
- Onset of action- 5-10min.
- Duration of action- 1½ hours

CONTRAINDICATION:-

Hypersensitivity, glaucoma, asthma, obstructive conditions of GIT or urinary tracts, or congestive heart failure.

Anti salivary drugs

- The use of drugs in restorative dentistry to control salivation is rarely indicated and generally limited to **Atropine**.
- Is with any drug the operator should be familiar with its indications contra indications and side effects.
- It is important to remember that atropine is contra indicated for nursing mothers and for patients with glaucoma .

- Some anti histaminics like Hi receptor antagonists also cause dryness of mouth due to anti cholinergic action but they inhibit the action of local anesthesia so are contraindicated.

Fluid control

- ▶ 6- Cotton rolls



Retraction of gingival tissues



Importance of finish line

- ▶ The gingival tissue must be healthy & free of inflammation before cast restorations are fabricated
- ▶ The finish line must be reproduced in the impression .the marginal fit is very important in preventing recurrent caries and gingival inflammation (marginal integrity)
- ▶ Hence the finish line should be temporarily exposed to reproduce entire preparation

II- Tissue dilation (retraction)

- ▶ Definition: It is the process of pushing gingival tissues away from the tooth temporarily

Requirements of tissue dilation

- ▶ Create a proper space horizontally in order that:
 1. The impression material records the tooth structure beyond the margins in a vertical direction
 2. To provide sufficient strength of impression material to prevent distortion or tearing when impression is removed or poured
- ▶ Create a clean and dry field free from saliva or blood
- ▶ Maintain health of supporting periodontal tissues

Three major methods...

1. Mechanical
2. Chemico-mechanical
3. Surgical

I. Mechanical tissue displacement

- ▶ Physical stretching of circumferential gingival tissues.
- ▶ Lasts for 24 hours, if left longer, permanent gingival recession will occur



Figure 1



Figure 2



Figure 8



Figure 9



Figure 3



Figure 4



Figure 10



Figure 11



Figure 5



Figure 6



Figure 7



Figure 12



Figure 13

Copper band

- ▶ Copper band is supplied in different sizes and diameters to fit for anterior, premolars, molars.
- ▶ It is used to carry the impression as well as to displace the gingival to expose the finish line.



Copper band technique

- ▶ Copper band is a welded tube corresponding to the size of the prepared tooth.
- ▶ One end of the tube is trimmed to follow the outline of the gingival finish line.
- ▶ After positioning and contouring the prepared tooth it is filled with modeling compound and the impression is made.

DISADVANTAGE OF COPPER BAND

- ▶ Causes injury to the gingival tissues

chemico-mechanical

- ▶ It combines chemical action with pressure packing for enlargement of gingival sulcus
- ▶ It is the most universal method
- ▶ It lasts from 5-10 minutes
- ▶ The cord is placed under the gingiva using a blunt instrument with minimal pressure
- ▶ The cord pushes the gingiva mechanically, while chemicals have astringent action to stop bleeding.

Chemico-mechanical



Chemical medicaments

8% epinephrine

- ▶ Aluminium chloride 5-25%
- ▶ Aluminium sulphate
- ▶ Ferric sulphate 13%
- ▶ Alum solution 100%

- ▶ According to the presence of a chemical medicaments
 - a. impregnated cords
 - b. plain (non impregnated cords)
- ▶ According to shape
 - a. twisted
 - b. braided
 - c. woven

According to size(000,00,0,1,2,3)

Classification of retraction cords



Mechanical chemical tissue displacement



- ▶ Single cord technique
- ▶ Double cord technique

Surgical tissue displacement

- ▶ Gingivectomy
- ▶ Rotary curettage
- ▶ Electro -surgery
- ▶ Lasers

Gingivectomy

is mainly removal rather than displacement of gingival sulcus, to the level of epithelial attachment, then tissues will regenerate in to original height

POST OP



PRE OP



INTER OP



Rotary curettage (gingivittage)



troughing

using a rotary instrument



It is limited removal of inner epithelial tissues in the sulcus



- ▶ Indicated only on healthy inflammation -free gingival tissues
- ▶ Determined by
 - a. absence of bleeding on probing
 - b. sulcus depth less than 3 mm
 - c. presence of adequate keratinized gingiva

Technique

- ▶ It is usually done simultaneously along with finish line preparation
- ▶ Portion of sulcular epithelium is removed using a torpedo diamond bur.
- ▶ A retraction cord impregnated with AlCl_3 can be used to control bleeding

Electro surgery

- ▶ It is a controlled tissues destruction to achieve a surgical result
- ▶ High frequency current passing through very small electrode ...generating heat
- ▶ Tissues in contact with electrode are destroyed
- ▶ Bloodvessels are narrowed by coagulation

CONTRAINDICATION

patient with pacemaker

Patient with delayed healing eg.,under radiation therapy

Thin attached gingiva of the labial surface of the upper canine

Surgical electrode



Uses

- gingival sulcus enlargement
- crowns lengthening
- removal of edentulous cuff

LASERS

LIGHT AMPLIFICATION STIMULATED BY EMISSION RADIATION



RECENT ADVANCES

- ▶ Retraction paste (Expasyl)
- ▶ Gingi trac
- ▶ Magic foam cord



GingiTrac Features

- ▶ Hands-free technique
- ▶ Controls bleeding naturally
- ▶ For least trauma
- ▶ Works in less than 1 minute
- ▶ Works on single and multi-unit cases
- ▶ Fast & easy application

GingiTrac



thank
you!