



PRINCIPLES OF PERIODONTAL SURGERY

All surgical procedures should be carefully planned. The patient should be adequately prepared medically, psychologically, and practically for all aspects of intervention.

Main objective of periodontal surgery is to contribute to the long-term preservation of the periodontium by facilitating plaque removal and its control. Patient preparation is an important aspect of the intervention.

INDICATIONS

1. Impaired access for SRP
2. Root fissures
3. Root concavities
4. Grade II and Grade III Furcations
5. Defective margins of restorations in the subgingival area
6. Gross gingival Deformities
7. To facilitate proper restorative therapy.

CONTRAINDICATIONS

1. Poor patient cooperation
2. Cardiovascular diseases, Liver diseases
3. Patients with bleeding disorders, malignancies
4. Hormonal and metabolic disorders- uncontrolled diabetes
5. Smoking
6. Patients with advanced age
7. Inadequate patient motivation
8. Presence of infections
9. Poor Prognosis & Inevitable tooth loss

GENERAL PRINCIPLES OF SURGERY

1. Preparation of the patient
2. The General principles common to all periodontal surgical techniques
3. Complication that may occur after or during surgery.



GENERAL CONDITIONS THAT ARE COMMON TO ALL PATIENTS

1. Premedication
2. Sedation & Anaesthesia
3. Tissue Management
4. Suturing

PREMEDICATION

The prophylactic use of antibiotics before periodontal surgery shows reduced postoperative complications, reduced pain and swelling For patients who are not medically compromised the value of administering antibiotics routinely for periodontal surgery has not been clearly recommended Other pre-surgical medications involve – NSAIDS 1hour before the procedure and the use of 0.12% chlorhexidine gluconate.

NOTES:

SMOKING

Patient should be asked to quit smoking completely or atleast stop smoking for a minimum of 3-4 weeks after the procedure **INFORMED CONSENT** The patient should be informed about the diagnosis, prognosis and the different possible treatments, the expected results and the pros and cons in verbally and in writing.

EMERGENCY EQUIPMENT

The operator, the assistants and the office personnel should be trained to handle all the possible emergencies that may arise

TREATMENT OF SENSITIVE ROOTS

Root hypersensitivity may occur spontaneously when the root becomes exposed as a result of gingival recession or pocket formation Mechanism of action by which the desensitising agents work is by occlusion of the dentinal tubules or by nerve desensitisation The desensitising agents do not produce immediate relief and must be used for several days or weeks to produce results



MODES OF ADMINISTRATION OF DESENSITISING AGENTS AT HOME:

Tooth dentifrices and tooth pastes are over the counter desensitising materials to be used with soft bristled toothbrush Mouthwashes and chewing gums containing potassium nitrate and fluoride reduce dentinal hypersensitivity 2-4 weeks after at home therapy, degree of DH should be reinvestigated. If pain still exists dentist should start the next phase – IN OFFICE THERAPY

METHODS TO PREVENT TRANSMISSION OF INFECTION :

Universal precautions and barrier techniques are recommended for each patient which include use of disposable sterile gloves, surgical masks and protective eyewear All surfaces that may be possibly contaminated with blood or saliva and that cannot be sterilised (e.g., light handles, unit syringes) must be covered with aluminium foil or plastic wrap.

The most reliable means of providing painless surgery is the effective administration of local anaesthesia by regional block and local infiltration Apprehensive and neurotic patients require special management by anti-anxiety or sedative-hypnotic agents (which include inhalation, oral, intramuscular and intravenous routes) SEDATION AND ANESTHESIA.

TISSUE MANAGEMENT

Operate gently and carefully: Tissue manipulation should be precise, deliberate, and gentle. Roughness must be avoided because it produces excessive tissue injury, causes postoperative discomfort, and delays healing Observe the patient at all times: Facial expressions, pallor and perspiration are distinct signs that may indicate that the patient is experiencing pain, anxiety or fear Be certain that the instruments are sharp: Instruments must be sharp to be effective. Dull instruments inflict unnecessary trauma because of poor cutting and excessive force applied to compensate for their effectiveness.

SCALING AND ROOT PLANING

Although scaling and root planing have been performed previously as a part of Phase I therapy, all exposed root surfaces should be carefully explored and planed as a part of the surgical procedure Also, areas of difficult access (eg. Furcations, deep pockets) should be assessed HEMOSTASIS Good intraoperative control of bleeding permits an accurate visualisation of the



surgical site Good haemostasis prevents the excessive loss of blood into the mouth, oropharynx and stomach.

NOTE: Periodontal surgeries can produce profuse bleeding during initial incisions and flap reflection and upon removal of granulation tissue, bleeding is considerably reduced Intraoperative bleeding can be managed with continuous aspiration/suctioning Application of pressure with gauze can control the site specific bleeding Fortunately, the laceration of the large or medium vessels is less because incisions near highly vascular areas such as posterior mandibular (inferior alveolar and lingual) and mid palatal regions are avoided in incision and flap design If a medium or large vessel is lacerated, a suture around the bleeding end is necessary for the hemostasis.

PERIODONTAL DRESSINGS



In general, dressings have no curative properties; they assist healing by protecting the tissue rather than providing healing factors **ADVANTAGES:** © Minimizes post-operative infection and hemorrhage © Prevents surface trauma during mastication © Protects against pain induced by contact of wound with food or the tongue.

IDEAL PROPERTIES OF PERIODONTAL DRESSING

1. The dressing should be soft, but still have enough plasticity and flexibility to facilitate its placement in the operated area and to allow proper adaptation.
2. The dressing should harden within a reasonable time.
3. After setting, the dressing should be sufficiently rigid to prevent fracture and dislocation.
4. The dressing should have a smooth surface after setting to prevent irritation to the cheeks and lips.
5. The dressing should preferably have bactericidal properties to prevent excessive plaque formation.



6. The dressing must not detrimentally interfere with healing.

ZINC OXIDE EUGENOL PACKS

Reaction between zinc oxide and eugenol Developed by Ward in 1923 Addition of accelerator like zinc oxide gives the dressing a better working time Disadvantage: Eugenol may cause an allergic reaction that results in reddening of the area and burning pain in some patients.

NONEUGENOL PACKS

Reaction between a metallic oxide and fatty acids Marketed as Coe-Pak Supplied in two tubes – contents mixed to obtain a uniform colour Other noneugenol packs – cyanoacrylates, tissue conditioners (methacrylate gels). • Non-eugenol dressings are currently the most widely used periodontal dressings. Commercially available non-eugenol dressings include • Coe-Pak, • Cross Pack, • Peripac, • Septopack, • PerioCare, • Perio Putty and • Periogenix.

COE-PAK

• Most widely used non-eugenol intraoral dressing, and is manufactured by Coe Laboratories (Alsip, IL, USA). • Base paste - zinc oxide with added oils and gums, and lorothidol which is a fungicide related to hexachlorophene. • The catalyst paste - coconut fatty acids thickened with colophony resin or rosin and chlorothymol as an antibacterial agent.





POSTOPERATIVE PAIN AND DRESSING

One of the purposes of periodontal dressings is to aid in reducing postoperative discomfort. • In earlier reports, measuring the degree of pain experienced by the patient was done based on the consumption of analgesic tablets. • Such studies reported that the experience of pain was significantly more frequent after the use of Peripac than Coe-Pak and Wondrpak, based on higher tablet consumption in the Peripac group. • Also, when sensitivity was observed, it was seen that the highest proportion of sensitive teeth was found after the use of Coe-Pak, and the lowest with Peripac.

Goals of Suturing

1. Maintains hemostasis
2. Permits healing by primary intention
3. Reduces postoperative pain
4. Permits proper flap position
5. Prevents bone exposure resulting in delayed healing & unnecessary resorption.

Different Suturing Techniques

1. Interrupted Suture

- a) Direct or loop
- b) Figure eight
- c) Horizontal mattress
- d) Vertical mattress
- e) Distal Wedge / Anchor
- f) Periosteal

2. Continuous Suture

- a) Papillary sling
- b) Horizontal mattress
- c) Vertical mattress
