



GINGIVECTOMY

Gingivectomy is the excision of gingival tissue, usually to remove the diseased wall of a periodontal pocket (true pocket or pseudopocket). The term “gingivectomy” was coined by **Pickerill** in 1912.

Gingivoplasty is the recontouring of the gingiva to its proper anatomical form without the reduction of periodontal pocket depth.

This is typically a combined procedure, which can be used in isolation or together with other surgical procedures such as flap surgery. The main indication for gingivectomy or gingivoplasty in dentistry is in the management of gingival enlargements. Gingivectomy may also be used for type 1 surgical crown lengthening.

The basic prerequisites for gingivectomy are as follows:

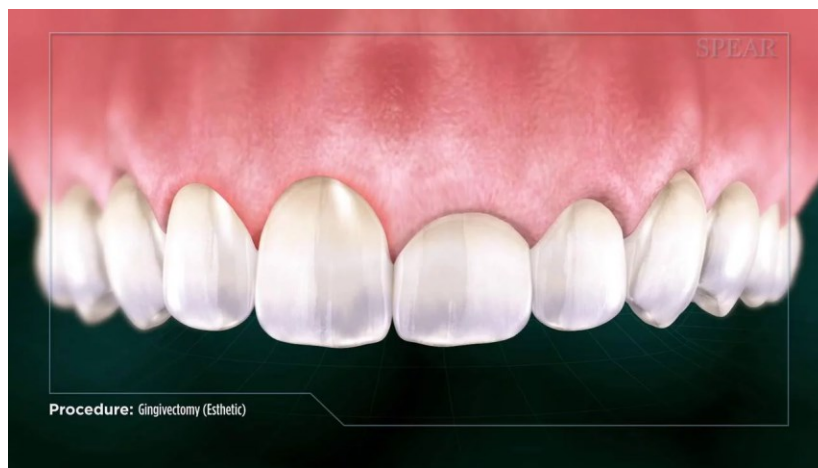
- There should be adequate zone of attached gingiva so that excision of part of it will still leave a functionally adequate zone.
- The underlying alveolar bone must be in normal or nearly normal form. ...
- There should be no infrabony defects or pockets.

Indications

- Elimination of suprabony fibrous and firm pockets. ...
- Elimination of **gingival enlargement**. ...
- Increase clinical crown height. ...
- Need for bone **surgery**.
- When bottom of the pocket is apical to the Mucogingival junction.



- Aesthetic **considerations**, particularly in anterior region of Maxilla. ...
- **Surgical gingivectomy**.

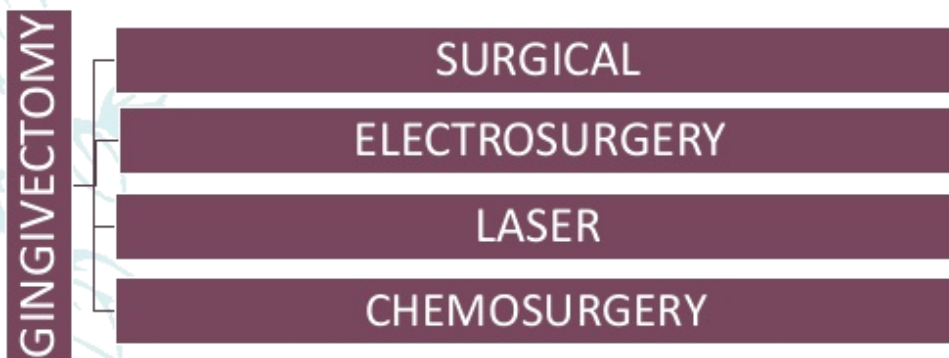


Contraindications

1. In the presence of thick alveolar edges, interdental craters.
2. Presence of infrabony pockets.
3. Situations in which the bottom of pocket is apical to mucogingival junction.
4. Inadequate oral hygiene maintenance by the patients.
5. Medically compromised patients.
6. Dentinal sensitivity before the surgical procedure.
7. Esthetic considerations, particularly in maxillary anteriors.



TYPES OF GINGIVECTOMY



Laser Gingivectomy

Laser gingivectomy is a dental procedure that recontours or scalpels the gingival tissue to improve long term dental health or aesthetics.

Compared to conventional scalpel surgery, soft-tissue dental lasers, such as Laser diode, Nd:YAG laser, Er:YAG laser, Er,Cr:YSGG laser, and CO2 lasers can perform this procedure, offering a precise, stable, bloodless, often less painful, and accelerated healing experience. However, the Laser diode gained more popularity due to its versatility, less interaction with hard tissue, ease of use, and the less expensive set up.

Medical uses

Where a patient presents with an unsightly gummy smile due to too much gingival coverage of tooth crown, especially the upper front incisors.



Where there is overgrowth of the gum due to oral hygiene issues, drug usage, or hereditary medical condition. Sometimes overgrowth of the gum can be seen during orthodontic treatment with fixed braces.

Surgical exposure of superficially impacted teeth to facilitate orthodontic treatment and tooth eruption



Gingivectomy by Electrosurgery



ADVANTAGES

- Adequate contouring of tissue and controls haemorrhage



DISADVANTAGES

- Poor or noncompatible pacemaker
- Unpleasant odour
- Bone touching causes irreplaceable damage
- Heat causes periodontal damage and tissue loss
- On touching cementum burns are produced

INDICATIONS – Superficial procedures like Gingival enlargements Gingivoplasty
Relocation of muscle and frenum Incision of periodontal claps and pericoronal abscess

TECHNIQUE –

1. Removal of gingival enlargements and gingivoplasty is performed with the needle electrode.
2. Fully rectified current is used .
3. Small, ovoid loop or the diamond shaped electrodes are used for festooning.
4. In all reshaping procedures, electrode is activated and moved in a concise “shaving” motion. – For hemostasis, the ball electrode is used.
5. Firstly controlled by direct pressure then coagulating current is used – For Acute Periodontal Abscess
6. Drainage with needle electrode without exerting painful pressure is done .
7. Followed by regular procedure – Frenum and muscles can be relocated using Loop electrode – Acute Pericorinitis – Bent needle electrode is used for incision

HEALING AFTER ELECTROSURGERY

1. Delayed healing
2. Greater reduction in gingival height
3. Bone injury
4. Necrosis



5. Sequestration and Loss of bone height
6. furcation exposure
7. tooth mobility not as favourable as that in surgical gingivectomy

Types of Electrosurgical Techniques

1. **Electrosection** : Incising, Excising and Planing
2. **Electrocoagulation** : Used to prevent hemorrhage
3. **Electrofulguration** : Uses high voltage current. It has limited application.
4. **Electrodesiccation** : Uses dehydrating current & least used, dangerous technique

GINGIVECTOMY BY CHEMOSURGERY

Chemicals used for gingivectomy are 5 % paraformaldehyde & Pottasium hydroxide

Disadvantages:

1. Depth of action cannot be controlled hence healthy tissue maybe injured
2. Gingival remodelling cannot be accomplished
3. Epithelialization & reformation of JE along with reestablishment of alveolar crest fibre system occurs slowly –
4. Not recommended
5. Healing is delayed

SURGICAL GINGIVECTOMY

ARMAMENTARIUM • Pocket marking forceps • Gingivectomy knives : 1. Kirkland knives (incisions on facial and lingual surfaces on those distal to the terminal tooth in arch) 2. Orban periodontal knives (interdental incisions) 3. Bard parker blades (12 and 15) • Scissors (auxillary)

STEPS IN SURGICAL GINGIVECTOMY



STEP 1

- Explore the pockets
- Pocket marking using a pocket marker

STEP 2

- Interrupted or continuous incisions ,beveled at 45 degrees to tooth surface are made starting apically to marked points and directed coronally to a point between the base of the pocket and crest of the bone.
- Incision should be close to the bone but not exposing it .
- Removal of soft tissue coronal to the bone

. STEP 3

- Remove excised pocket wall , clean the area , examine root surface.
 - Apically : a band like zone where tissues were attached is seen
 - Coronally :calculus remnants , root caries , resorption pattern is seen
- Granulation tissues seen on excised soft tissue.



STEP 4

- Curette the granulation tissue
- Remove the calculus remnants , necrotic cementum

STEP 5

- Cover with surgical pack

HEALING AFTER SURGICAL GINGIVECTOMY

Initial response

1. blood clot formation
2. underlying tissue is acutely inflamed and necrotic and soon replaced by the granulation tissue – 24 hours later - increased CT cells (mainly angioblasts)
3. epithelial cells at the margins of the wound start migrating over the granulation tissue. Epithelial activity reaches a peak in 24 to 36 hours. – 3 days later - Young fibroblasts are seen
4. highly vascular granulation tissue grows coronally creating free gingival margin and sulcus –

After 2 weeks - Capillaries from vessels of periodontal ligament migrate into connective tissue and connect with gingival margins

After 5 to 14 days, surface epithelialization is generally complete.

Complete repair takes about 1 month. – Connective tissue repair in 7 weeks and the pigmentation is diminished .
