Apically Repositioned Flap for crown lengthening

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Treatment options

Sufficient width of attached gingiva: gingivectomy/ APF

Insufficient width of attached gingiva: APF / FGG

The choice of therapies to increase the width of attached gingiva :

l. **Partial-thickness apically positioned flap surgery**

thick keratinized gingiva

oral vestibule has sufficient depth.

2. **Free gingival grafts or connective tissue grafts**

keratinized gingiva is completely absent

3. **Free gingival grafts**

1-2 mm of keratinized gingiva exists but underlying marginal alveolar bone is extremely thin.

Both partial-thickness, apically positioned flap surgery and free gingival grafts produce sufficient width;

however, free gingival grafts better prevent recession of the gingival margin than do partial-thickness, apically positioned flaps.

Apically Repositioned Flap

Definition:

Apically repositioned flap surgery, in which flaps are reflected and sutured apical to the preoperative position.

Advantages: maximizing the postoperative keratinized attached tissue, increased access to the alveolar bone, faster and more comfortable wound healing, and more predictable placement of the margin of gingiva.

History

Nabers introduced the concept of repositioning the attached gingiva; the full-thickness flap was displaced apically to increase the attached gingiva.

Friedman called the procedure the apically repositioned flap.

Apically positioned flap types

Full-thickness flap

In the case of an osseous defect, it is necessary to make a full-thickness flap to ensure the accessibility of instruments to the osseous defect area

Partial-thickness flap

partial-thickness is considerably limited clinically, so sufficient gingiva thickness is essential for good results.

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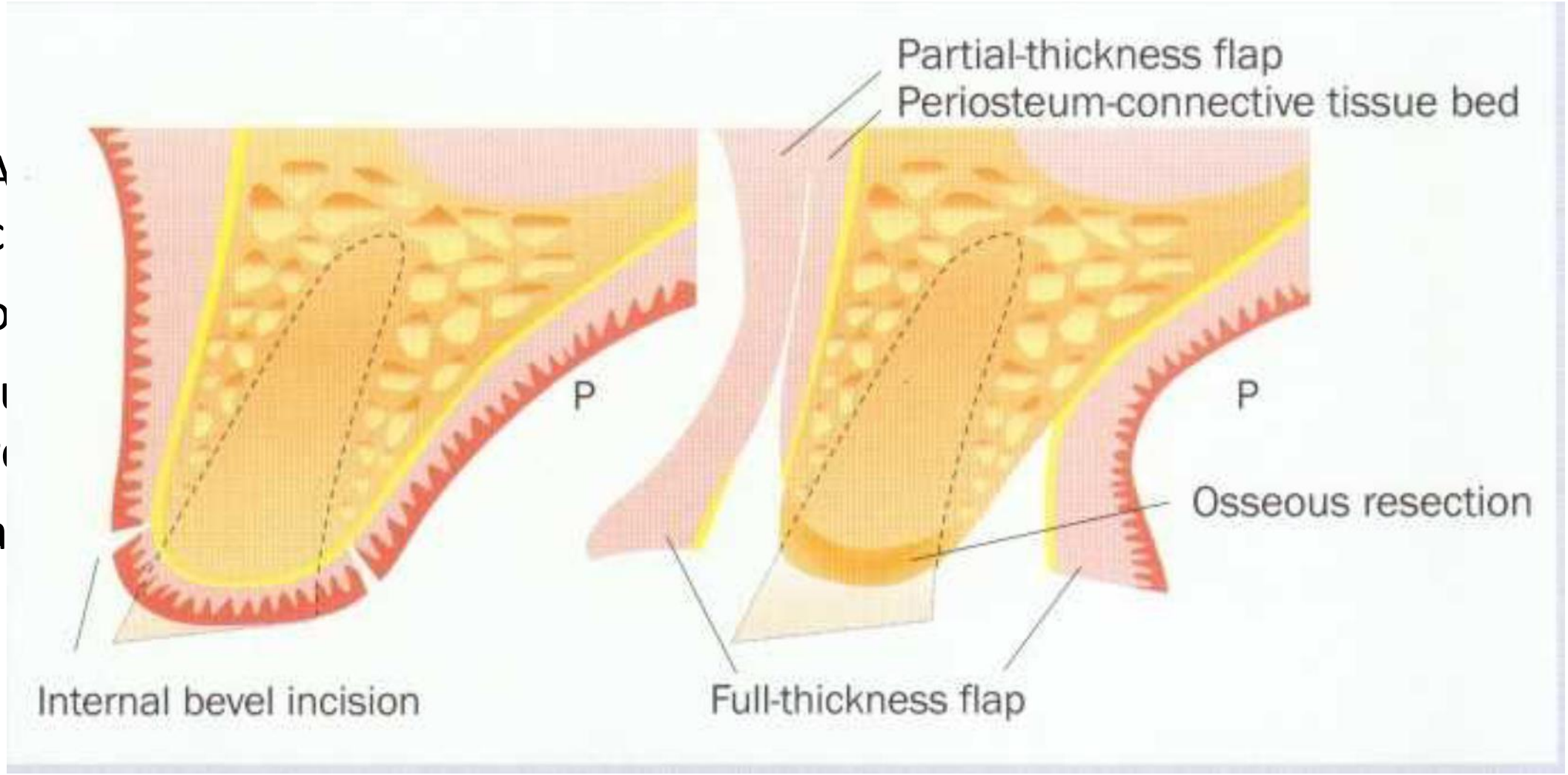
Partial-thickness flap
Periosteum-connective tissue bed
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Osseous resection
Internal bevel incision
Full-thickness flap

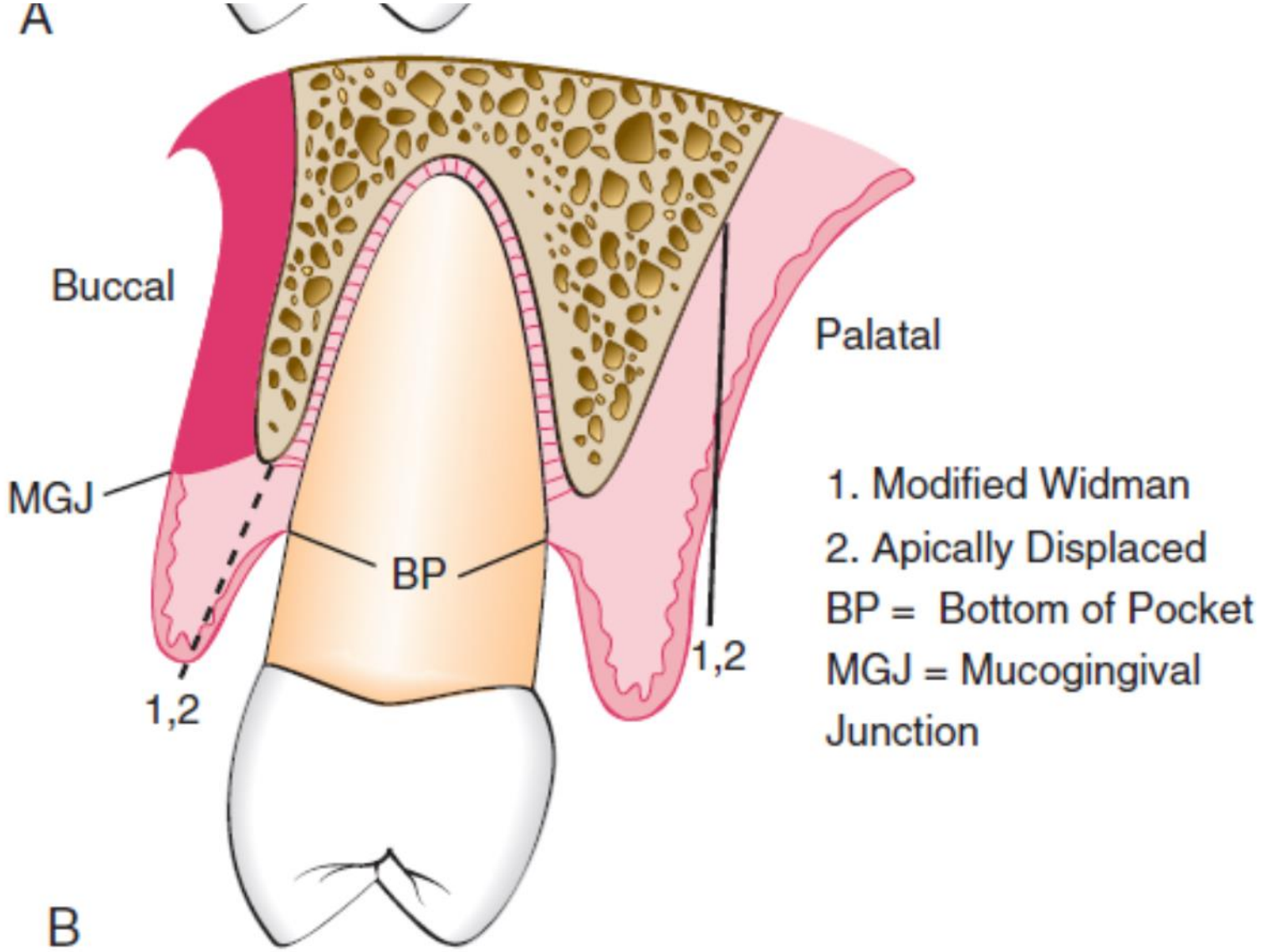
Technique: Accc

1- An internal bevel incis

2- Then Crevicular incisio

3- Vertical incisions are t
junction. to provide ade
displacement.

4. Reflection :full / partia



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6- If a full t he
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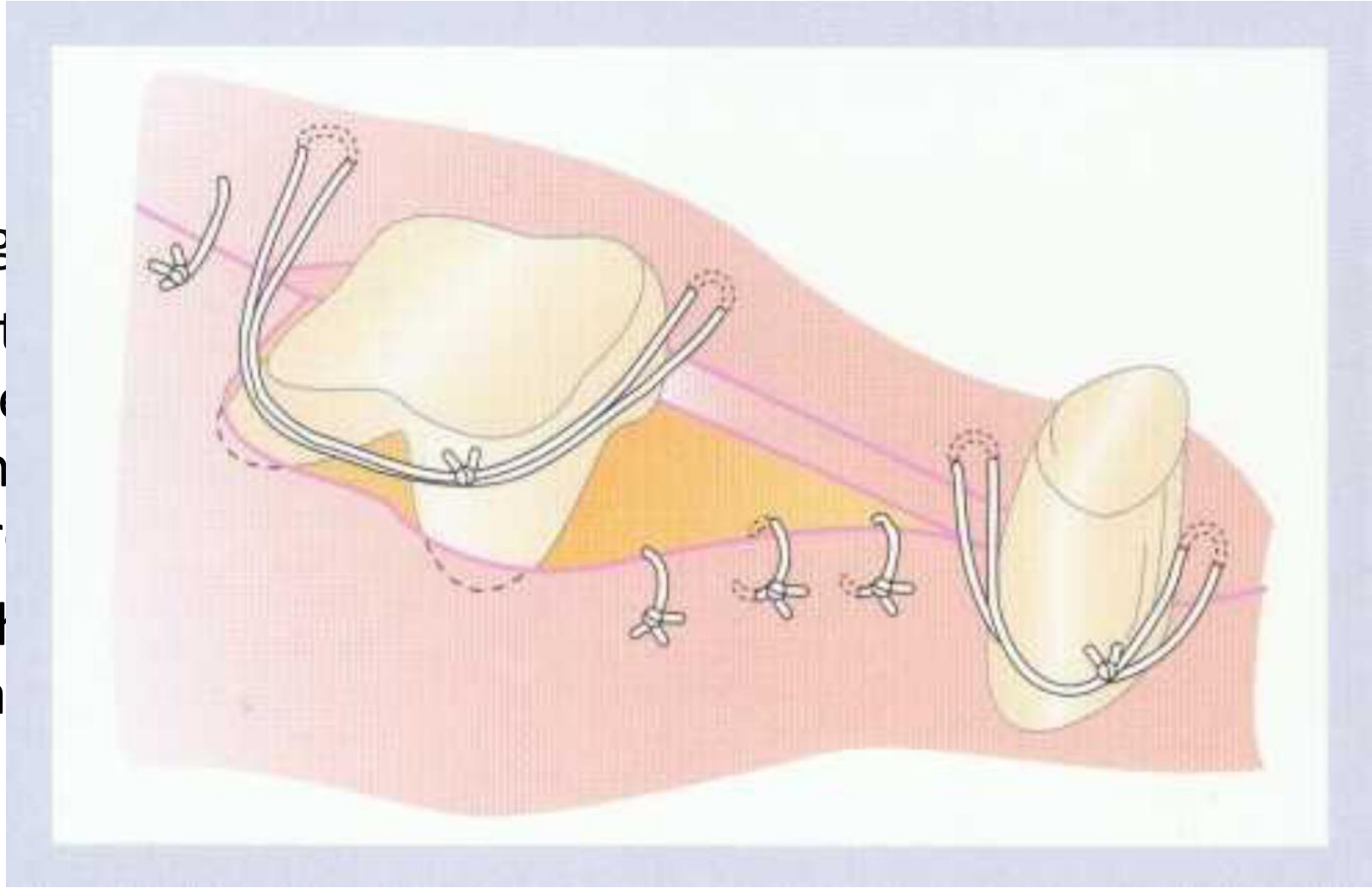


The apically positioned flap technique for crown lengthening

Therapies for crown lengthening

Gingivectomy

Apically repositioning flap with/without osseous resection

Forced eruption with/without fibrotomy

Crown lengthening aim

The apically positioned flap technique for crown lengthening

The APF with bone recontouring (resection) may be used to expose sound tooth structure. As a general rule, at least 4 mm of sound tooth structure must be exposed at time of surgery. During healing the supracrestal soft tissues will proliferate coronally to cover 2-3 mm of the root

thereby leaving only 1-2 mm of supragingivally located sound tooth

structurezone.

Indication

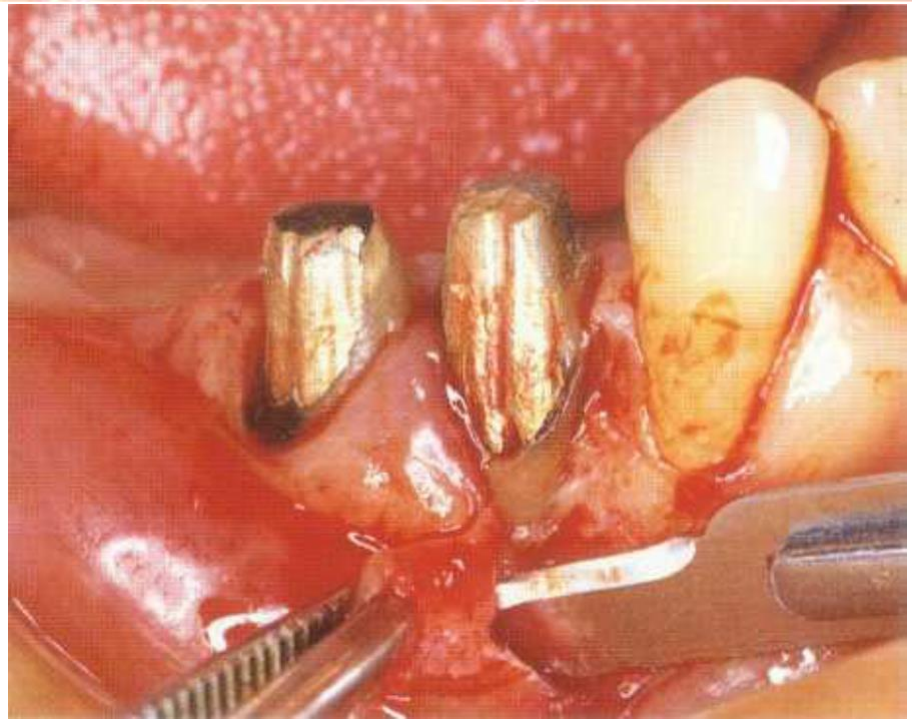
1- In sites where there is insufficient gingiva for reduction, the initial incision is placed intrasulcularly and a mucoperiosteal flap is raised and apically positioned to gain the needed crown length.

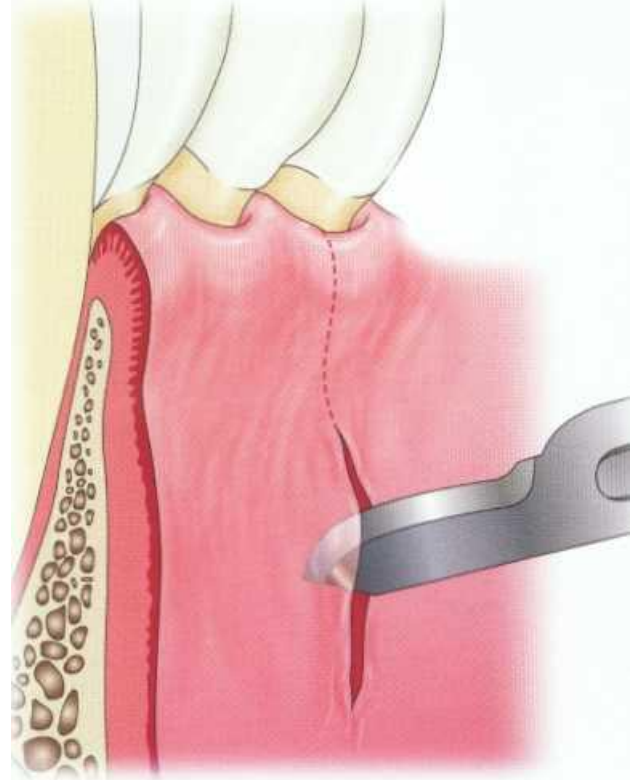
2- Crown lengthening of multiple teeth in a quadrant or sextant of the dentition.

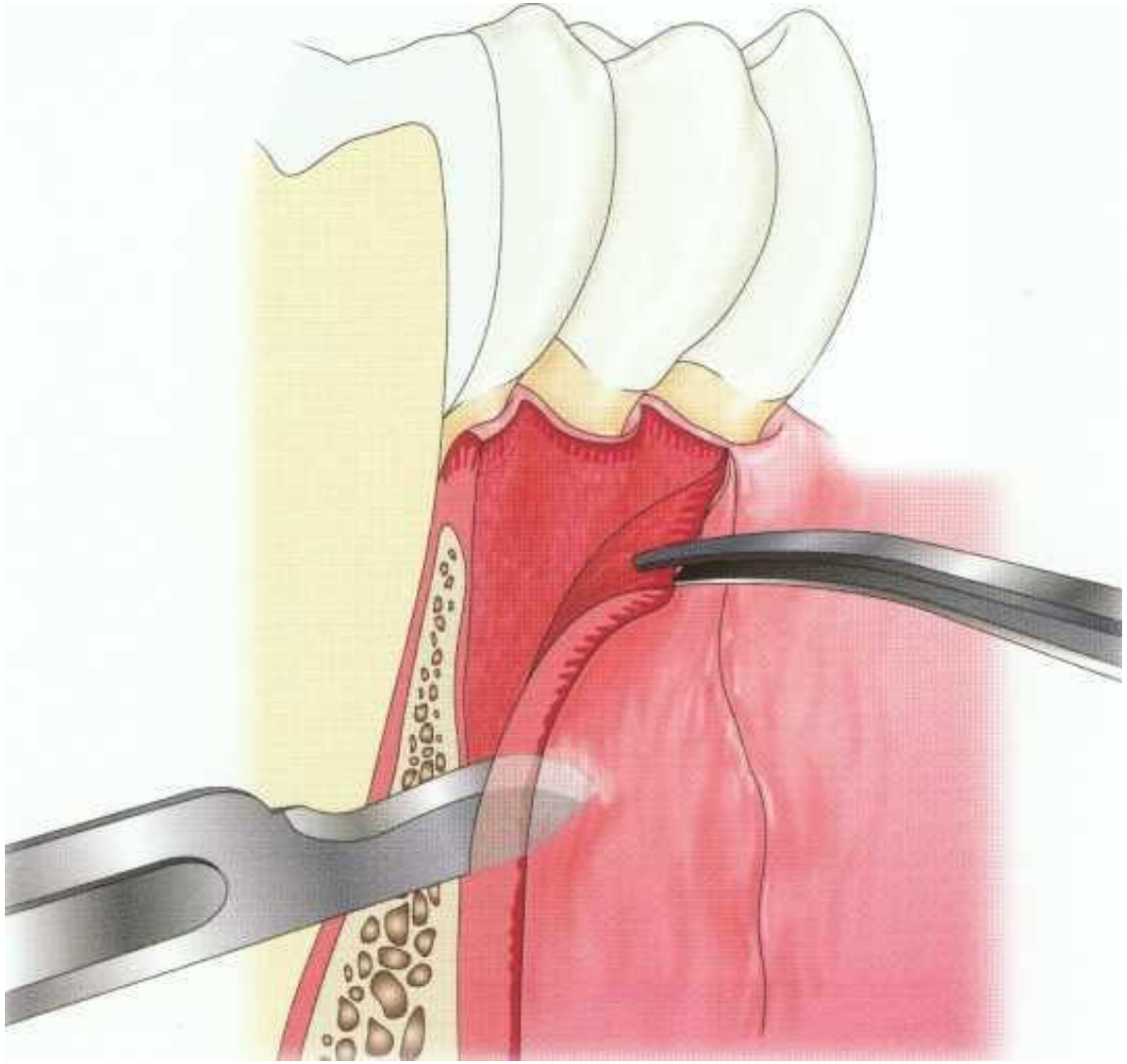
Contraindication:

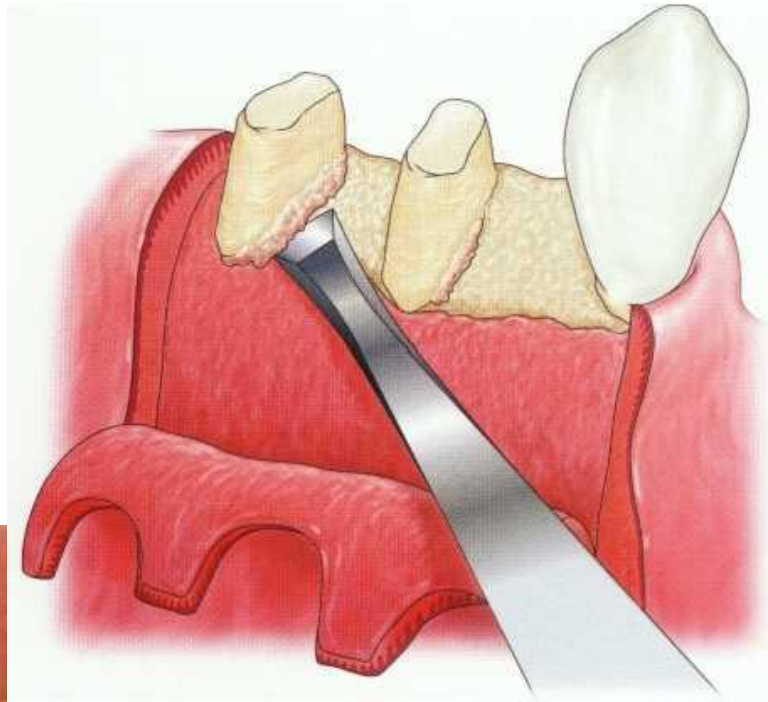
Surgical crown lengthening of single teeth in the esthetic

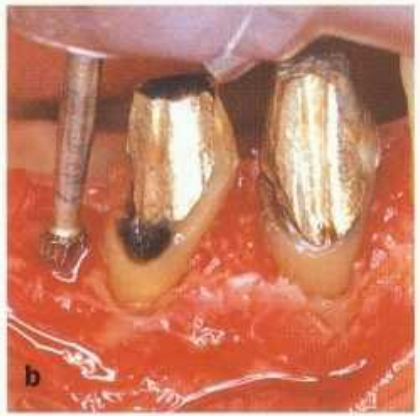
Root hypersensitivity , deep infrabony defects, anatomic limitation,







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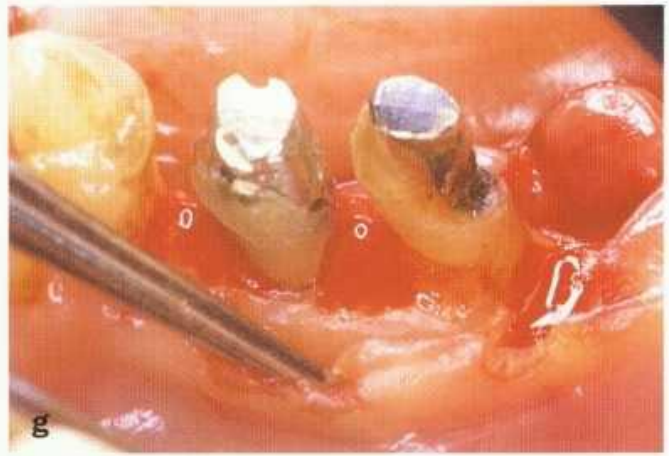
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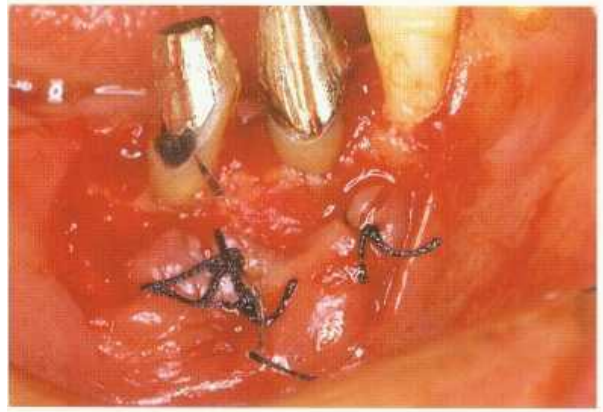
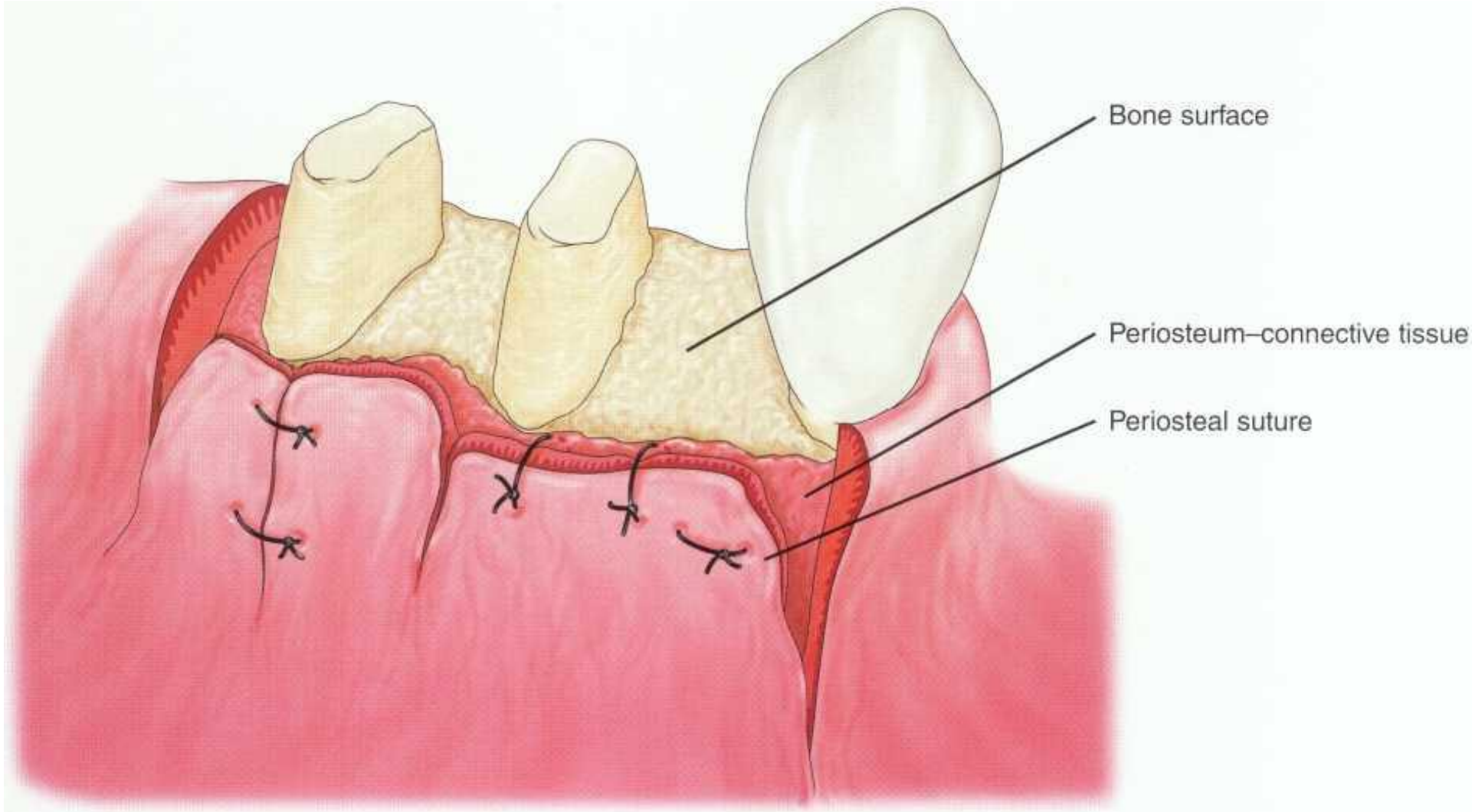
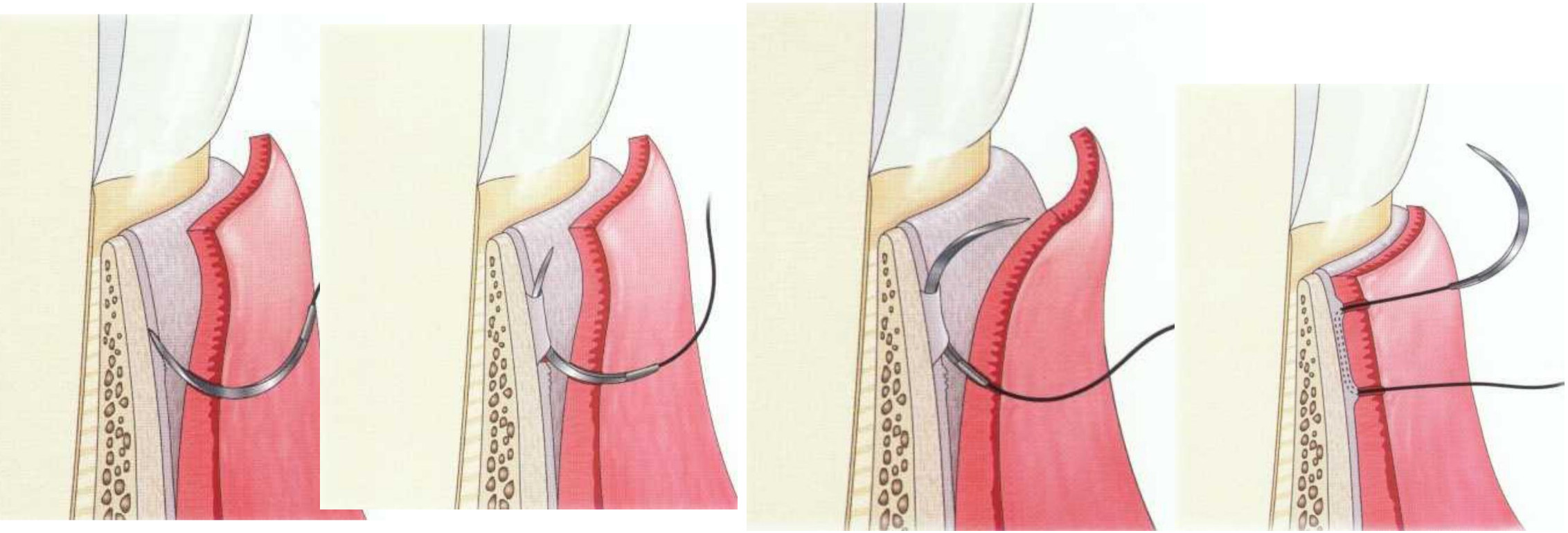
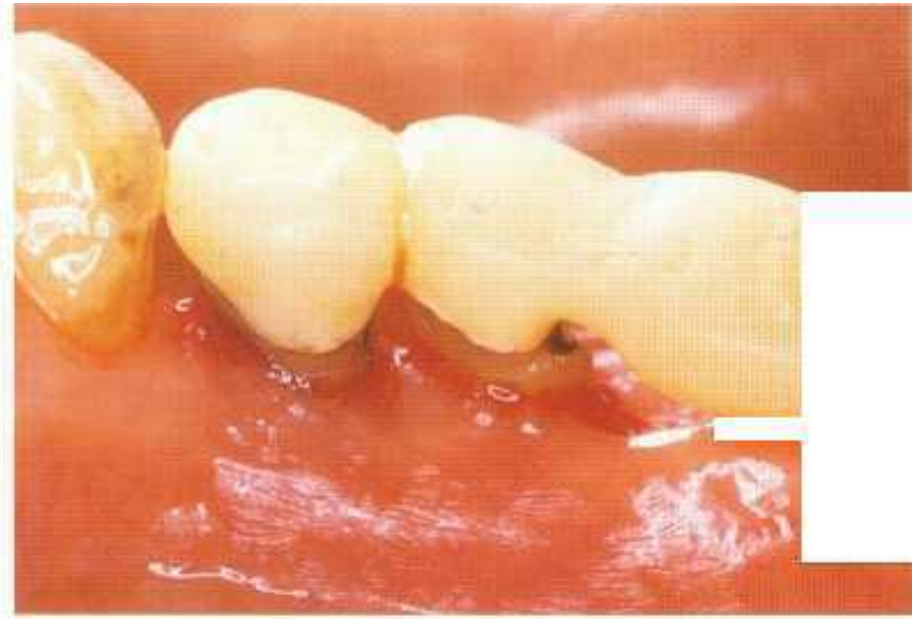
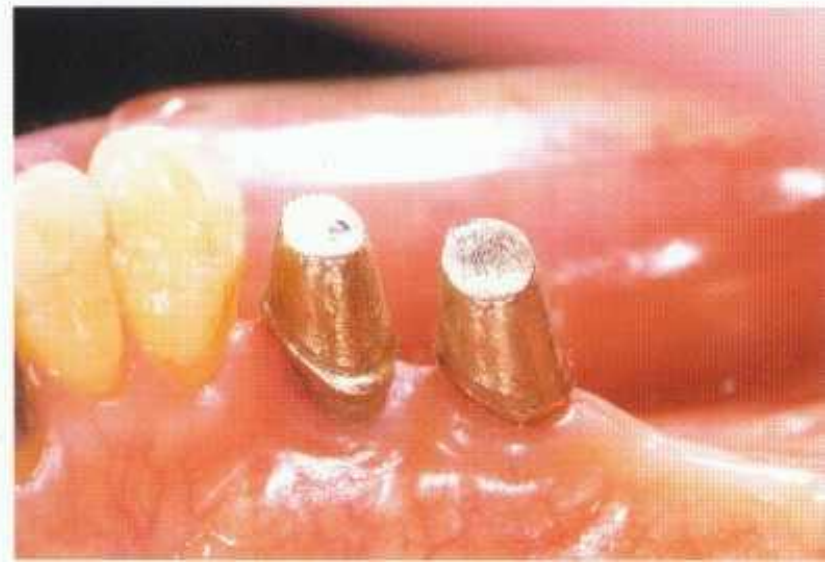



Bone surface
Periosteum–connective tissue
Periosteal suture







After osseous resection, displace the buccal flap edges apically to cover the alv

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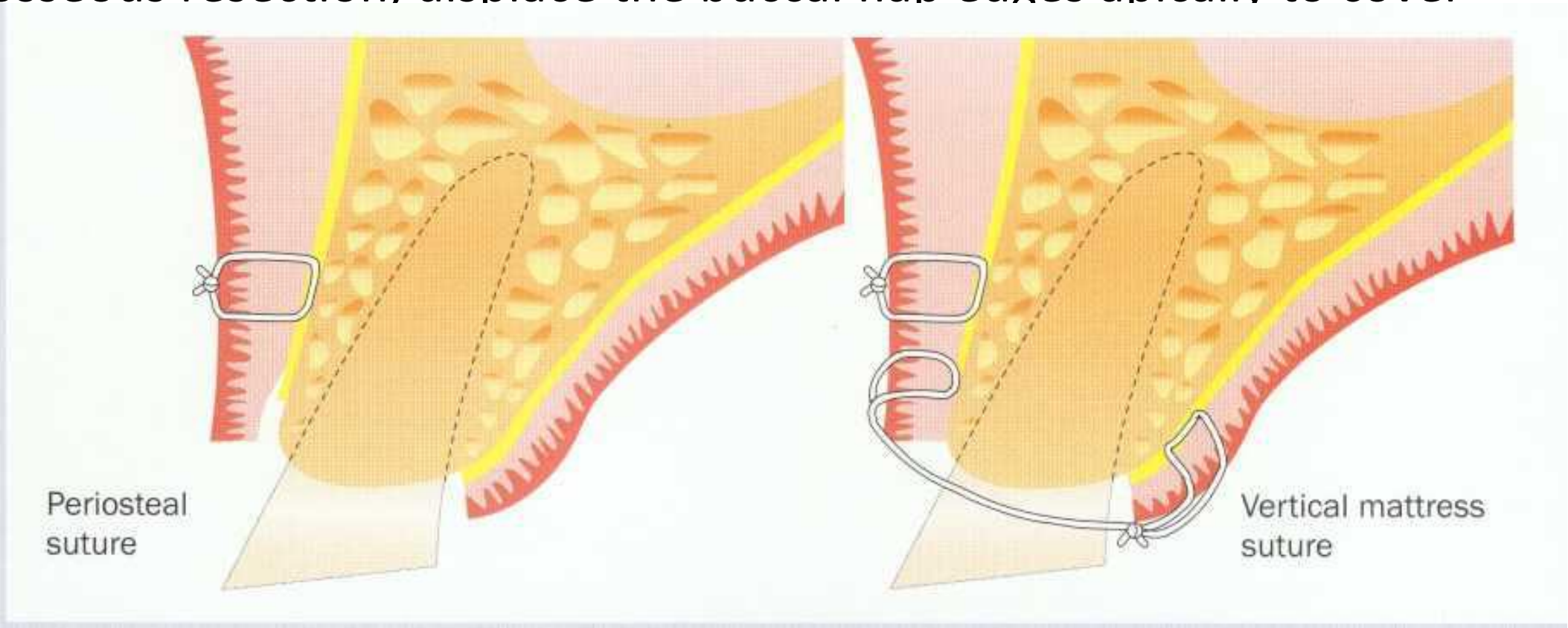

Fig. 44-63 (a) Pretreatment view. The patient, a dentist, requested crown lengthening to lessen his "gummy smile" and give him

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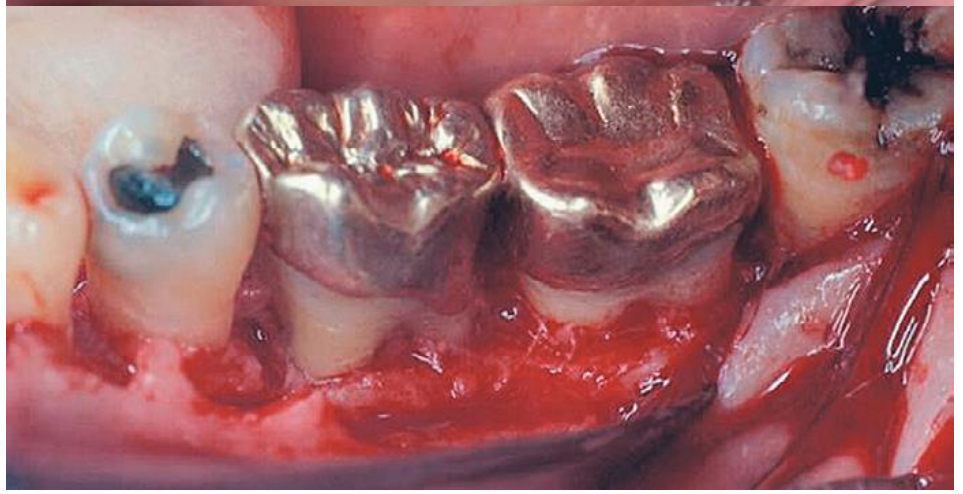

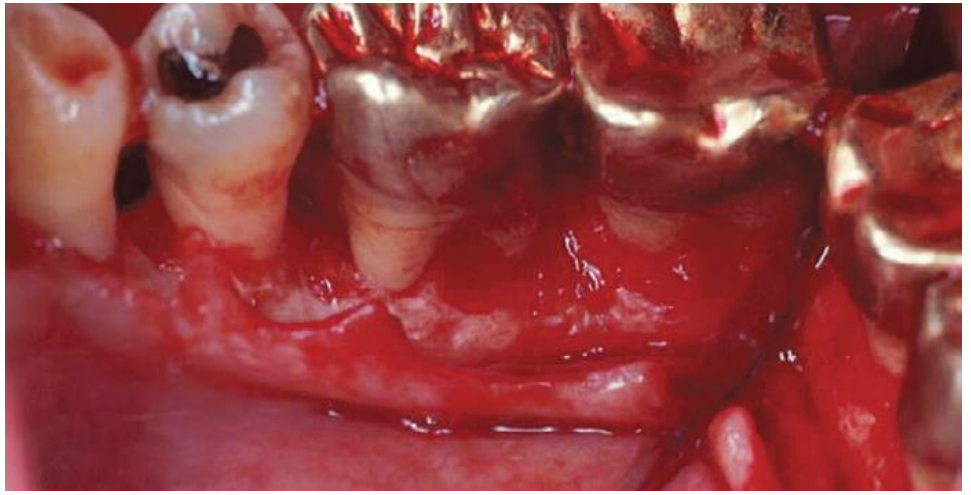

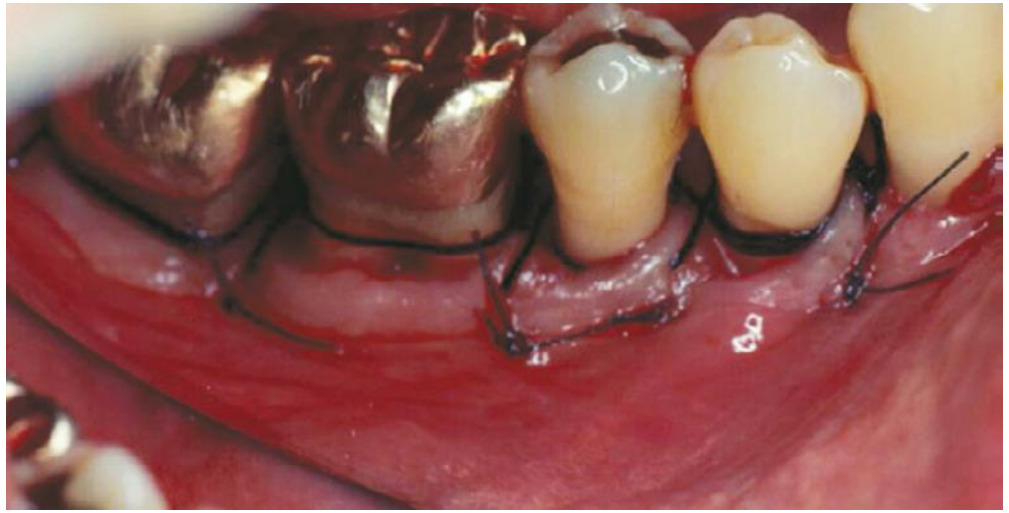

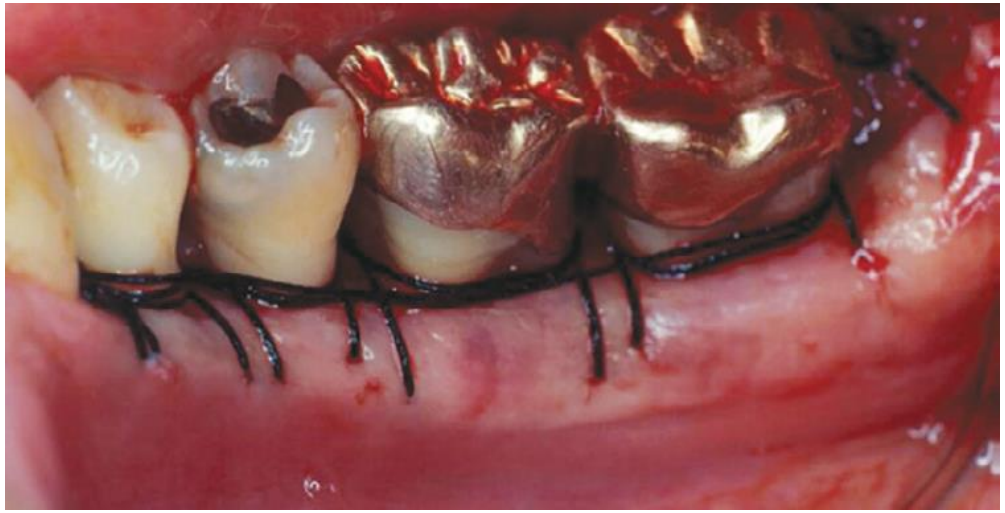

Wound healing

After the surgical procedure concludes, the healing phase begins. Research has shown that when the clinician creates an apically

positioned flap with an osseous resection procedure,

the biological width reestablishes itself at an apical level. Researchers have observed that if the margin of the flap is positioned at the level of the osseous crest, a postoperative vertical gain or rebound in supracrestal soft tissues occurs that averages 3 mm.

If the flap margin is placed at a level more coronal to the

newly established osseous crest, less vertical gain or rebound in supracrestal soft tissues has been observed

Healing period

In areas where margins will be supragingival and tissue is reasonably thick, restorative treatment may be performed 2 months postsurgically, though it must be kept in mind that coronal migration of the gingival margin may occur during subsequent months.

In cases with a very thin periodontium it is reasonable to expect some apical

migration of the gingival margin during healing.

These changes may also be related to age, with younger patients showing a greater tendency for coronal migration of the gingival margin postsurgically.

In areas where aesthetics is critical, a healing period of at least 6 months is recommended following periodontal surgery

In cases with extremely thin gingival tissue, soft tissue grafting procedures may be used to increase the thickness of keratinized tissue 6 to 8 weeks prior to surgical crown lengthening

References:

Caranza2019

Clinical Periodontology and Implant Dentistry, Lindhe

Periodontal surgery Sato

Atlas of periodontal surgery Cohen