



Mucogingival Surgery and Periodontal Aesthetics Part 2

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- ▶ Mucogingival Surgery means Plastic surgical procedures used to correct defects in the morphology, position and/or amount of gingiva.

Techniques to Increase Attached Gingiva

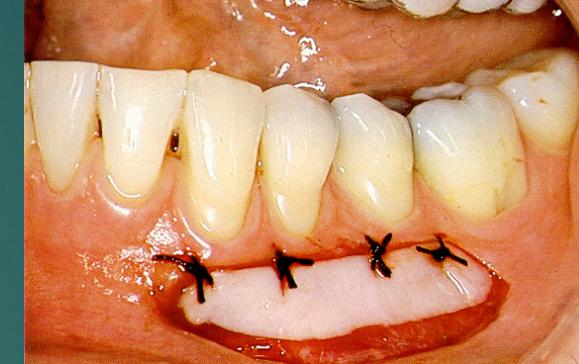
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- **Gingival augmentation apical to the area of recession.** A graft is placed on a recipient bed apical to the recessed gingival margin. (free gingival graft)

- **Gingival augmentation coronal to the recession (root coverage).**

A graft (either pedicle or free) is placed covering the denuded root surface.

Both the apical and the coronal widening of attached gingiva enhance oral hygiene procedures, but only the latter can correct an esthetic problem.



Management of Gingival Recessions

Free soft tissue grafts:

- a. **Epithelialised graft(free gingival graft)**
- b. **Subepithelial connective tissue graft**

Pedicle grafts:

- a. **Rotational flap: Lateral sliding flap, double papilla flap, oblique rotated flap.**
- b. **Advanced flap: Coronally repositioned flap, semilunar coronally repositioned flap.**

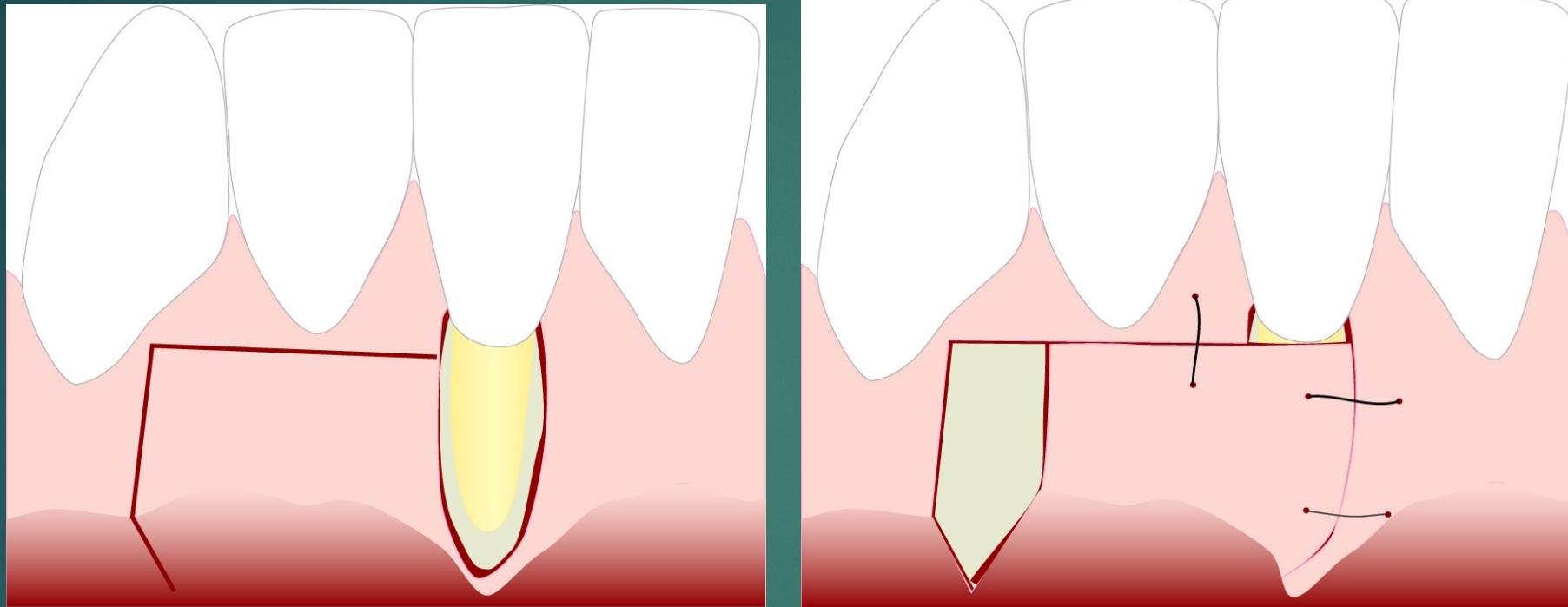
Management of Gingival Recessions

Connective tissue graft in conjunction with a coronally advanced flap

Acellular dermal matrix (ADM) :acellular connective tissue allograft derived from the skin of organ donors

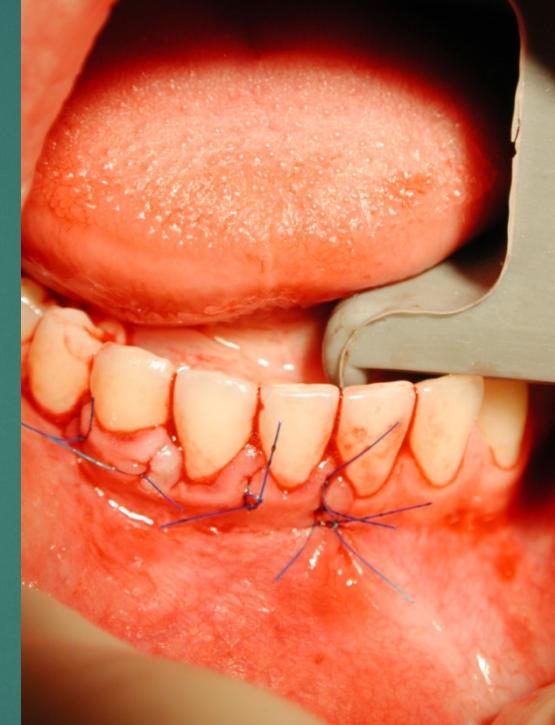
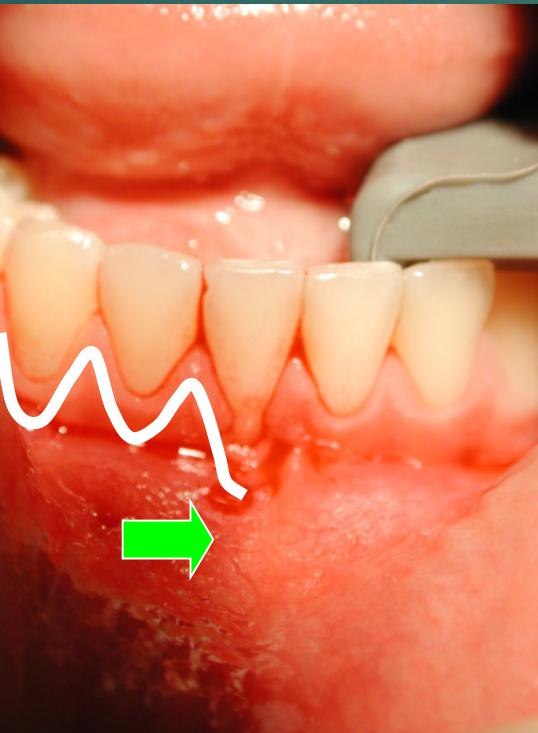
Mucogingival Surgery: Sliding Flaps

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The **sliding flap** (laterally positioned flap- pedicle graft) can be used to cover isolated, denuded roots that have adequate donor tissue laterally and adequate vestibular depth.

Lateral Sliding Flap



Lateral Sliding Flap



Lateral Sliding Flap



Lateral Sliding Flaps

- ▶ **Step 1: Prepare the Recipient Site.** Epithelium is removed around the denuded root surface. The exposed connective tissue will be the recipient site. The root surface will be thoroughly scaled and planed.
- ▶ **Step 2: Prepare the Flap.** The Periodontium of the donor site should have a satisfactory width of attached gingiva

Lateral Sliding Flaps

- ▶ With a #12 blade, make a vertical incision from the gingival margin to outline a flap adjacent to the recipient site. Incise to the periosteum, and extend the incision into the oral mucosa to the level of the base of the recipient site
- ▶ The flap should be sufficiently wider than the recipient site to cover the root .

Lateral Sliding Flaps

- ▶ The interdental papilla at the distal end of the flap, or a major portion of it, should be included to secure the flap in the interproximal space between the donor and the recipient teeth.
- ▶ Make a vertical incision along the gingival margin and interdental papilla, and separate a flap consisting of epithelium and a thin layer of connective tissue, leaving the periosteum on the bone.

Lateral Sliding Flaps

- ▶ **Step 3:** Transfer the Flap. Slide the flap laterally onto the adjacent root, making sure that it lies flat and firm without excess tension on the base. Fix the flap to the adjacent gingiva and alveolar mucosa with interrupted sutures.
- ▶ **Step 4:** Protect the Flap and Donor Site. Cover the operative field with aluminum foil and a soft periodontal pack, extending it interdentally and onto the lingual surface to secure it. Remove the pack and sutures after 1 week.

Mucogingival Surgery: Sliding Flaps

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Watch the video: Periodontal Surgery
– Lateral sliding flap

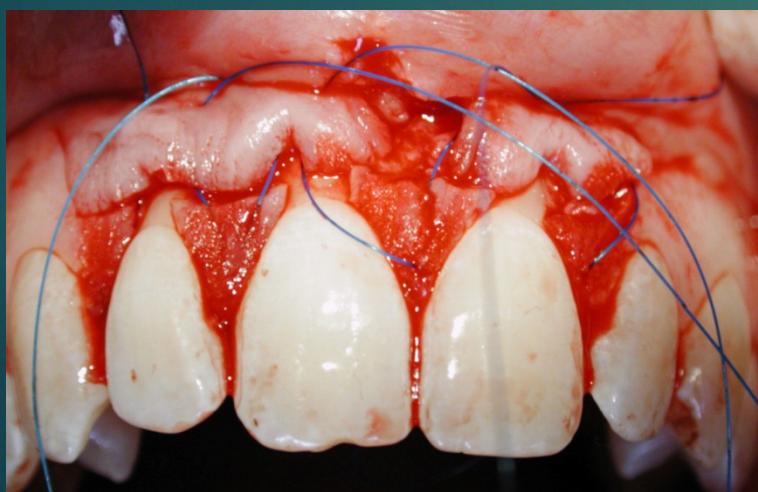
Length 8.11 minutes

Dr Soukoulis and Dr Kardachi

Coronally Repositioned Flap



Coronally Repositioned Flap



Semi Lunar Flap



Garg A.K.; Funakoshi E; Misch C; Shanelec D; Tibbits L.S. Atlas of Cosmetic & Reconstructive Periodontal Surgery, 2007

Semilunar flap

Indication

- Areas in which gingival recession is only 2 to 3 mm

Advantages

1. No vestibular shortening as occurs with the coronally positioned flap
2. No esthetic compromise on interproximal papillae
3. No need for sutures

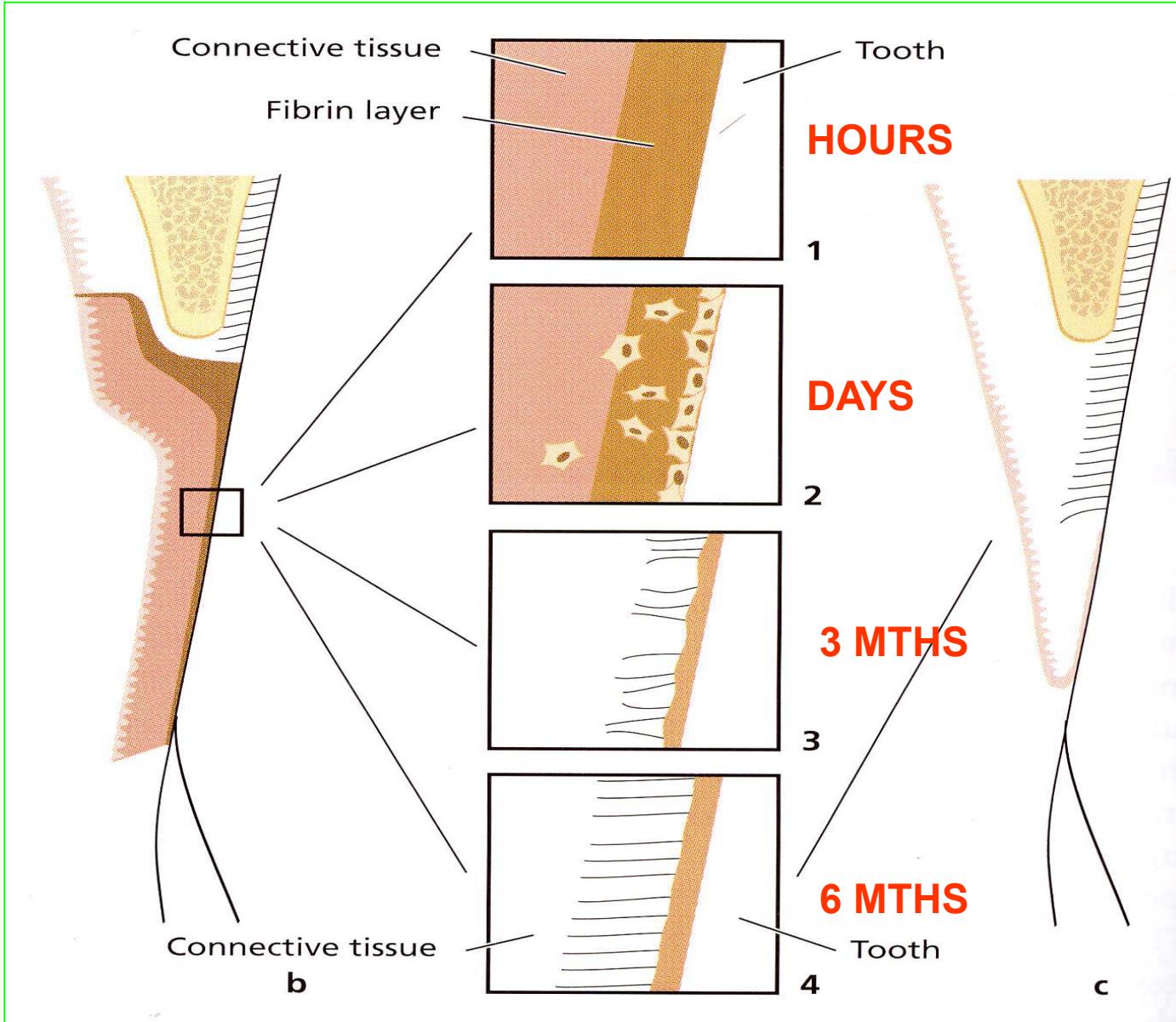
Disadvantages

1. Inability to treat large areas of gingival recession
2. The need for an FGG if there is an underlying dehiscence or fenestration

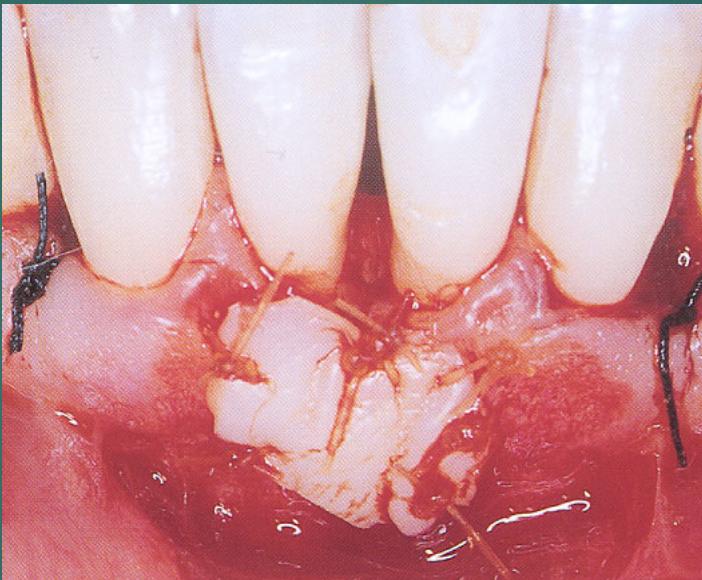
Requirements

1. Lack of tissue inflammation
2. Minimal pocket depth labially

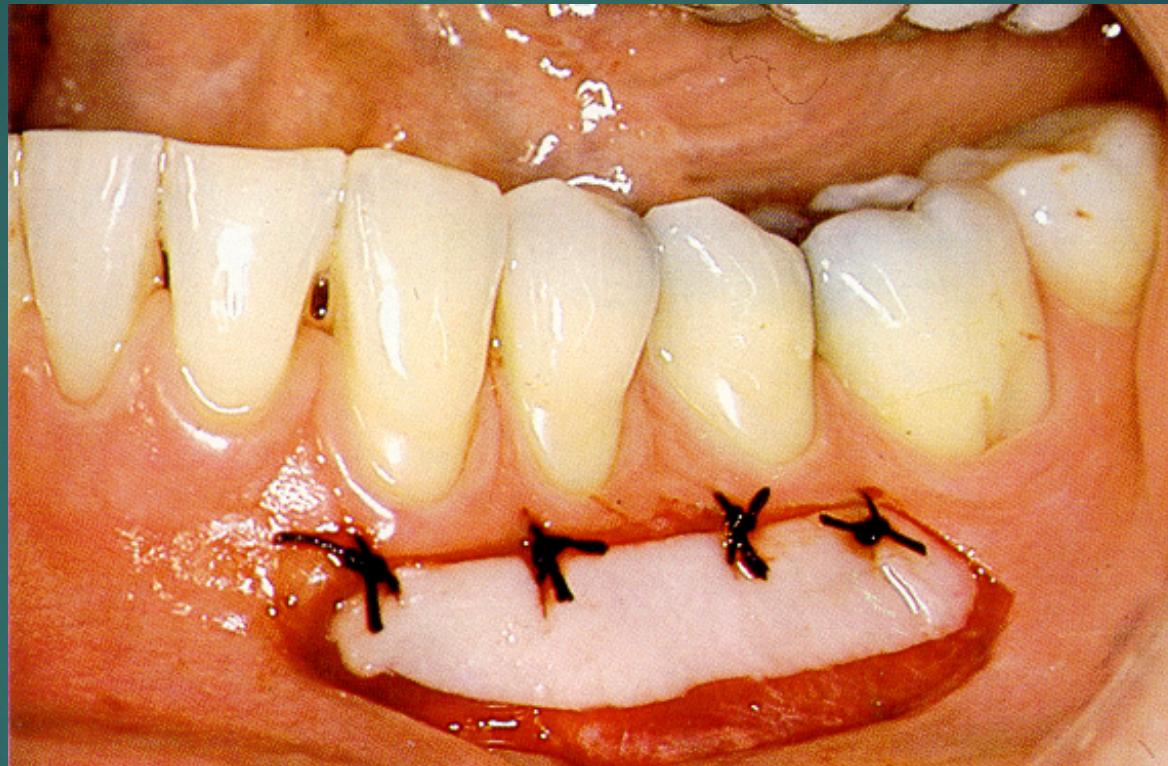
Healing phases



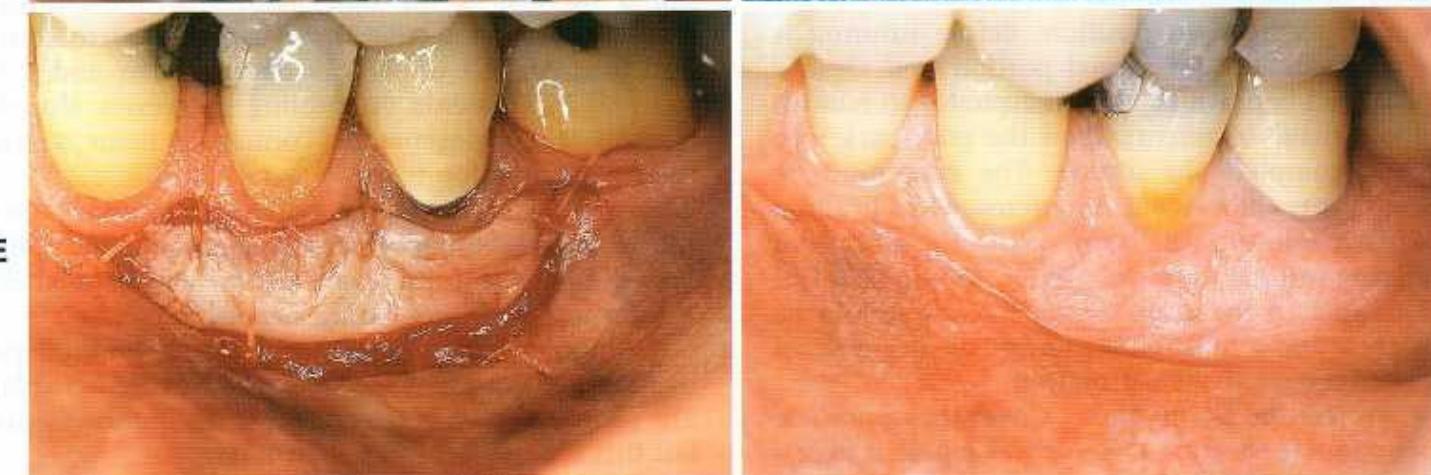
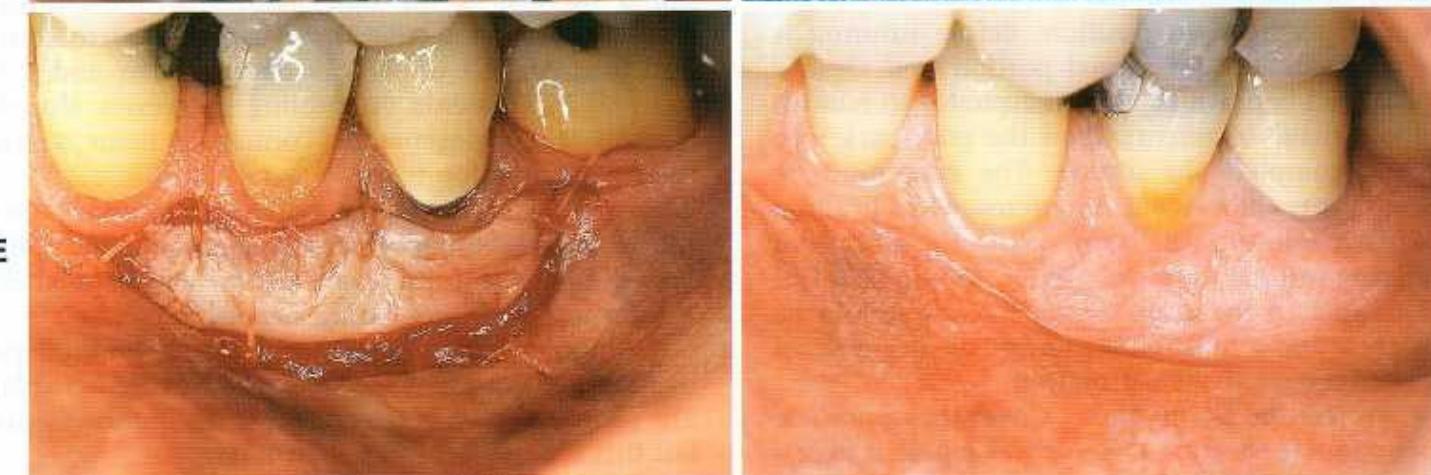
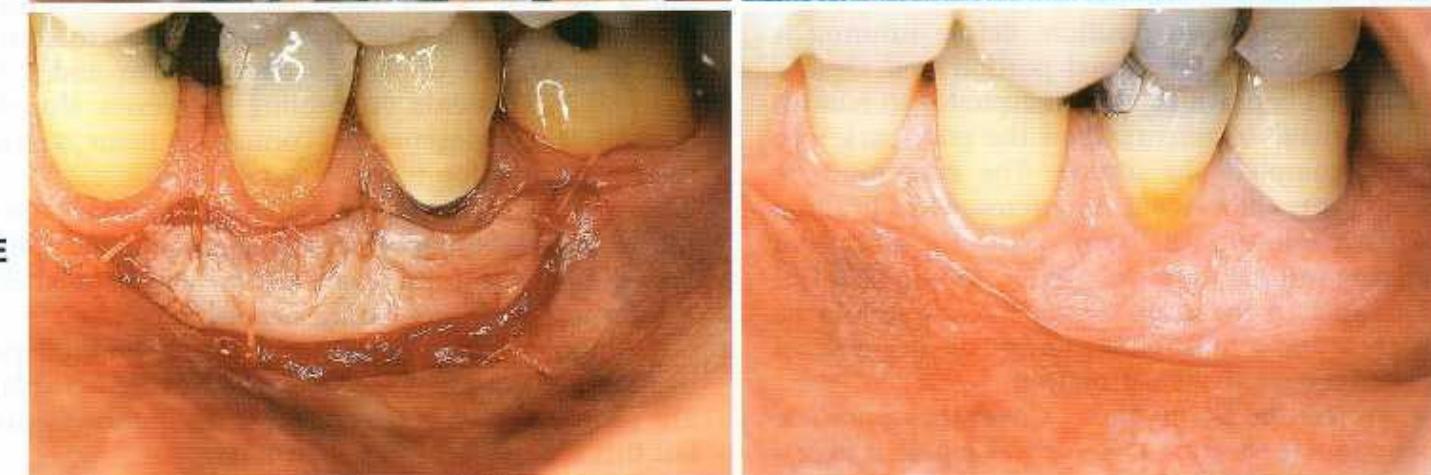
Free Gingival Graft



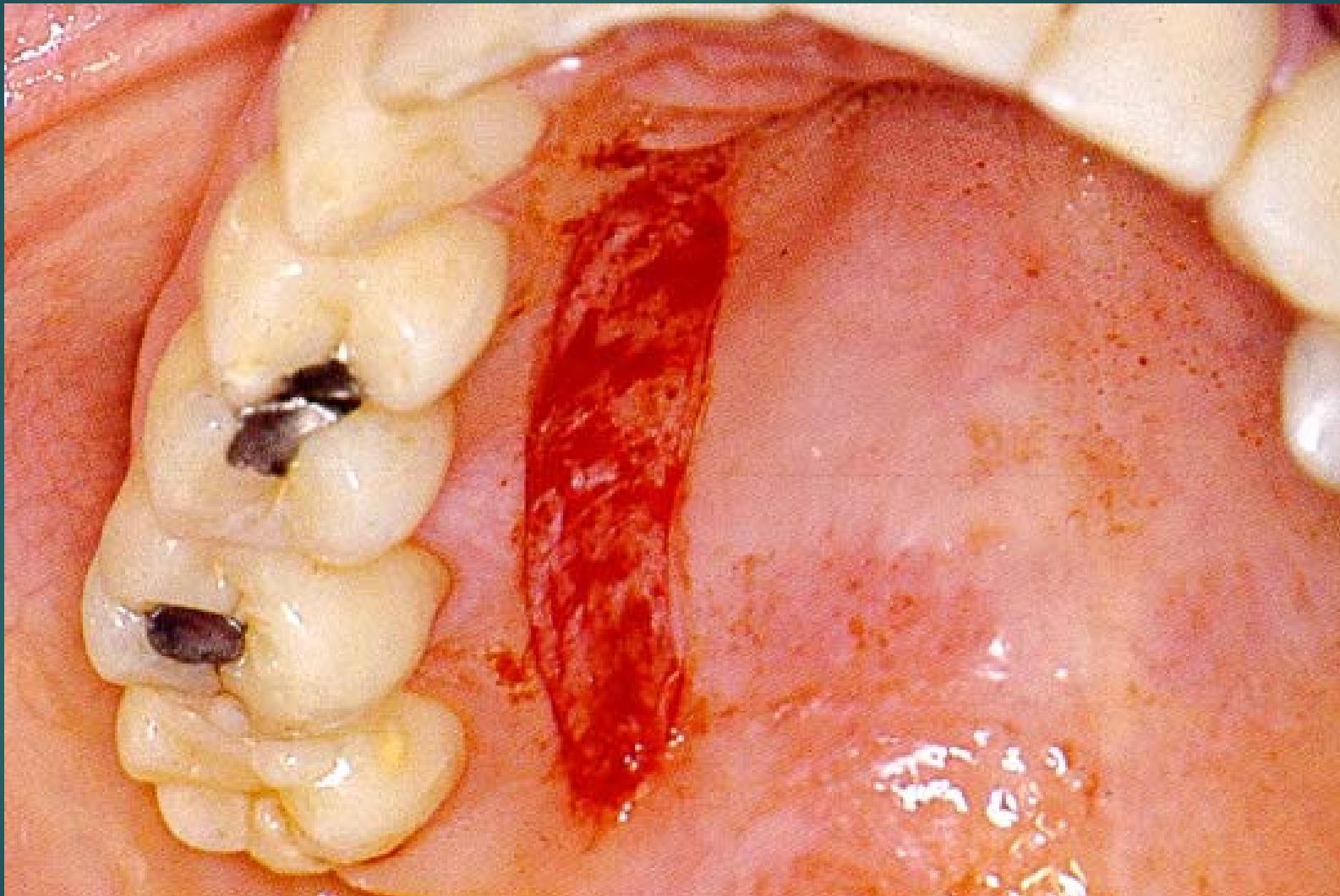
Free gingival grafts



Free gingival graft augmenting the width of the attached gingiva- no evidence that this increases tooth longevity



Free gingival grafts



Free gingival grafts

Surgical Procedure

- ▶ **Step 1: Prepare the Recipient Site.** The purpose of this step is to prepare a firm connective tissue bed to receive the graft.
- ▶ The recipient site can be prepared by incising at the existing mucogingival junction with a #15 blade to the desired depth, blending the incision on both ends with the existing mucogingival line. Periosteum should be left covering the bone.
- ▶ Suture the flap where the apical portion of the free graft will be located.
- ▶ Make an aluminum foil template of the recipient site to be used as a pattern for the graft.

Free gingival grafts

- ▶ **Step 2: Obtain the Graft from the Donor Site.** The palate is the usual site from which donor tissue is removed. The graft should consist of epithelium and a thin layer of underlying connective tissue.
- ▶ Place the template over the donor site, and make a shallow incision around it with a #15 blade. Insert the blade to the desired thickness at one edge of the graft. Continue to separate the graft with the blade, lifting it gently as separation progresses to provide visibility.
- ▶ The ideal thickness of a graft is between 1.0 and 1.5 mm. After the graft is separated, remove loose tissue tabs from the undersurface.

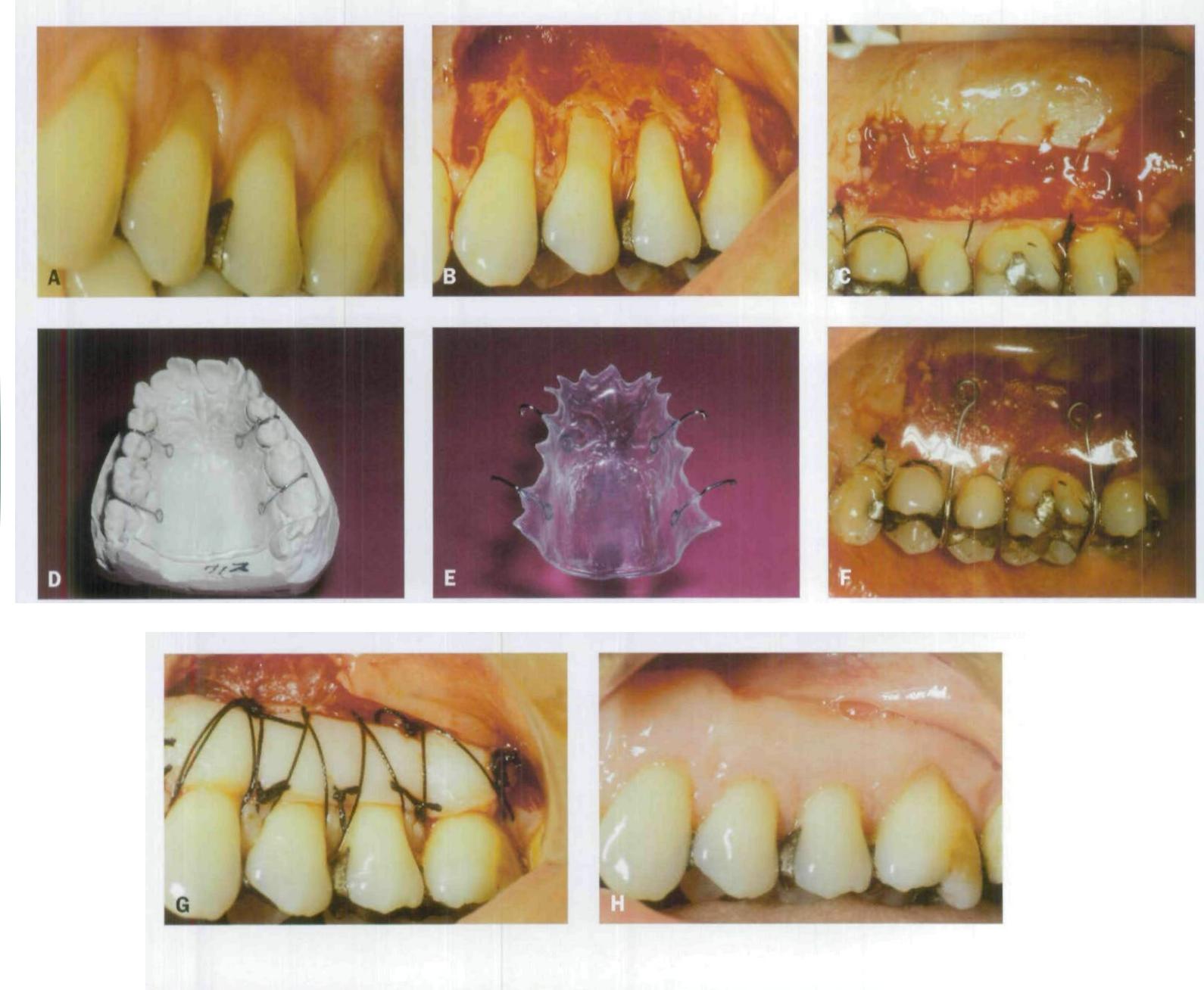
Free gingival grafts

- ▶ **Step 3: Transfer and Immobilize the Graft.** Remove the gauze from the recipient site; reapply it, with pressure if necessary, until bleeding is stopped. Remove the excess clot. A thick clot interferes with vascularization of the graft.
- ▶ Position the graft and adapt it firmly to the recipient site. A space between the graft and the underlying tissue (dead space) impairs vascularization and jeopardizes the graft.
- ▶ Suture the graft at the lateral borders and to the Periosteum to secure it in position. The area is then covered with aluminum foil and surgical pack.

Free gingival grafts

- ▶ **Step 4: Protect the Donor Site.** Cover the donor site with a periodontal pack for 1 week, and repeat *if* necessary.

Free gingival grafts for root coverage



Free gingival grafts for root coverage

