Uyarı: Bu slaytlarda vaka fotoları çıkarıldığından derste anlatılan sunumdan büyük farklılıklar gösterecektir.

PERİODONTAL PLASTİK CERRAHİ

Doç.Dr. İlker KESKİNER

Mukogingival cerrahi (Friedman, 1957)

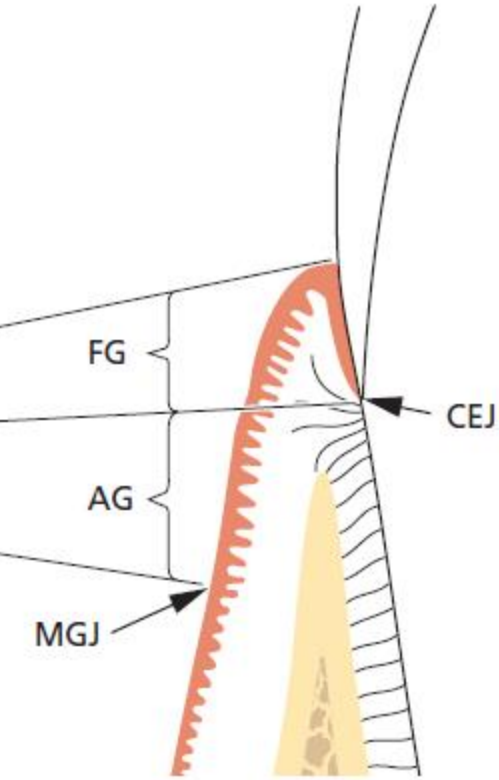
Dişetini korumak, yüksek fenulum, kas ataşmanlarını uzaklaştırmak ve vestibul derinliği artırmak amacı ile uygulanan cerrahi işlemlerdir.

Periodontal Plastik Cerrahi (Miller, 1993)

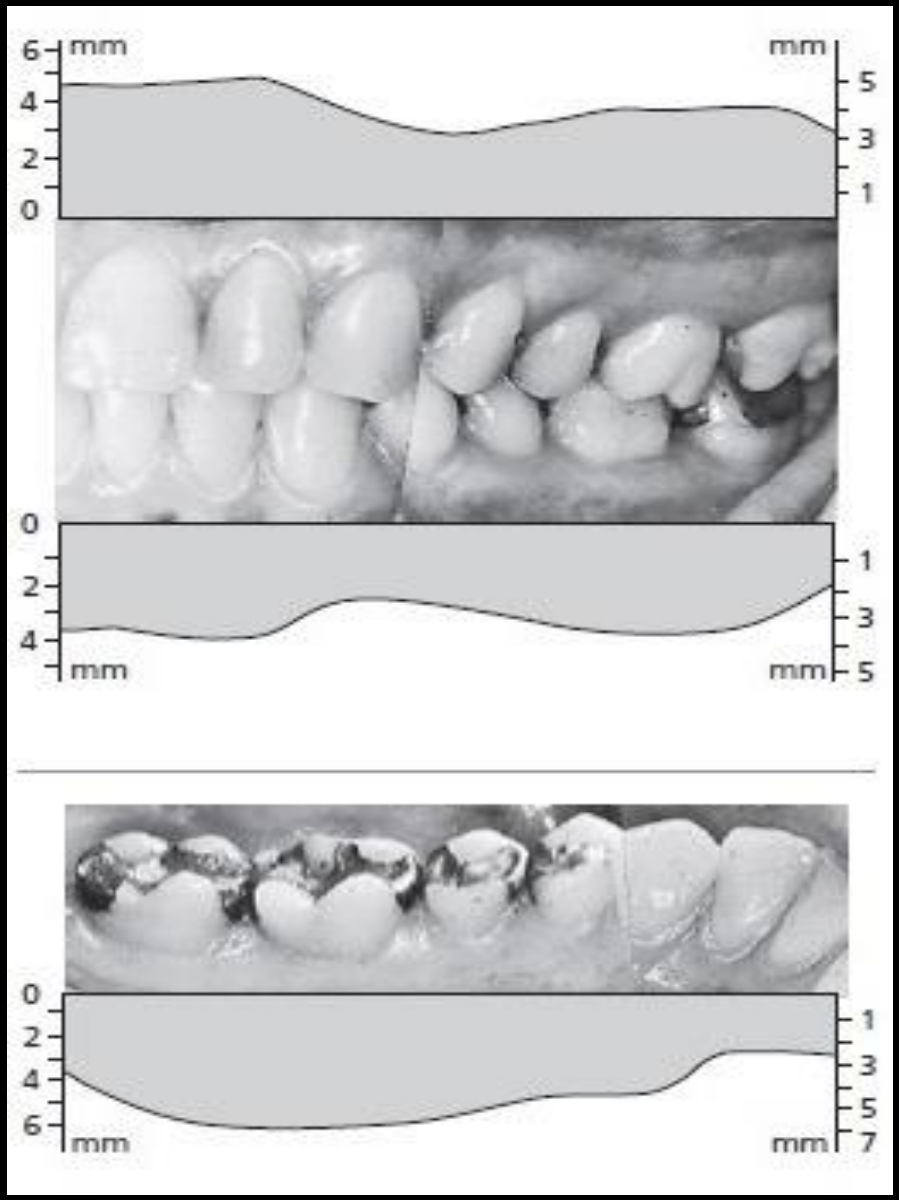
- Dişeti agumentasyonu
- Kök yüzeyi kapatma
- İmplantlar çevresinde mukozal defektlerin düzeltilmesi
- Kron boyu uzatma
- Ektopik diş erüpsiyonunda dişetinin korunması
- Yüksek frenulum uzaklaştırılması, vestibul derinliğin artırılması
- Diş çekimi sonrası kret rezorpsiyonunun engellenmesi
- Dişsiz kret agumentasyonu

DİŞLER VE İMPLANTLAR ETRAFINDA YAPIŞIK DİŞETİNİN VE MUKOZANIN ÖNEMİ

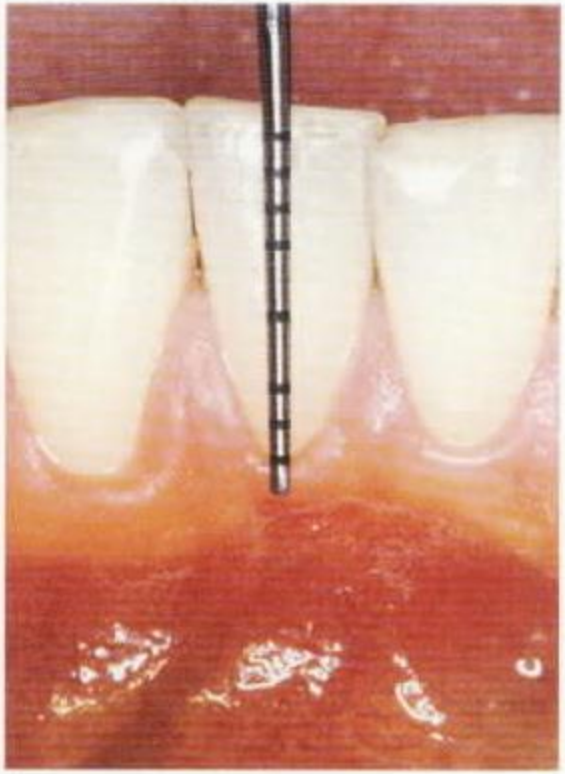
Mukogingival Bileşimin Yeri


FG
CEJ
AG
MGJ

Keratinize Dişetinin Ağzın Farklı Bölgelerinde Genişliği



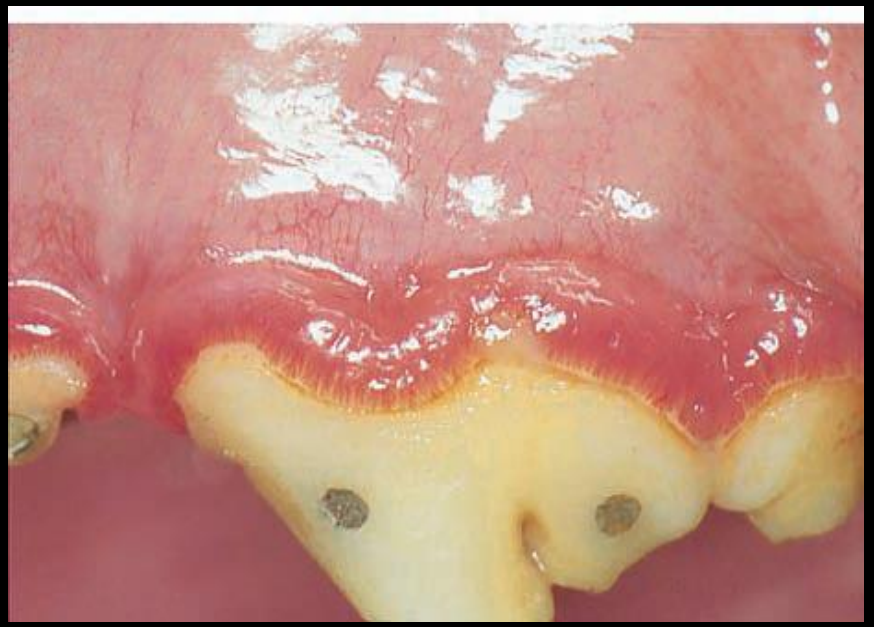




Gingival Boyutlar ve Periodontal Sağlık

Kaç mm keratinize doku olmalı?



Wenström, Lindhe 1983

JOURNAL OF DENTISTRY 38 (2010) 517–525

available at www.sciencedirect.com

ScienceDirect

journal homepage: www.intl.elsevierhealth.com/journals/jden

Review

The width of the attached gingiva—Much ado about nothing?

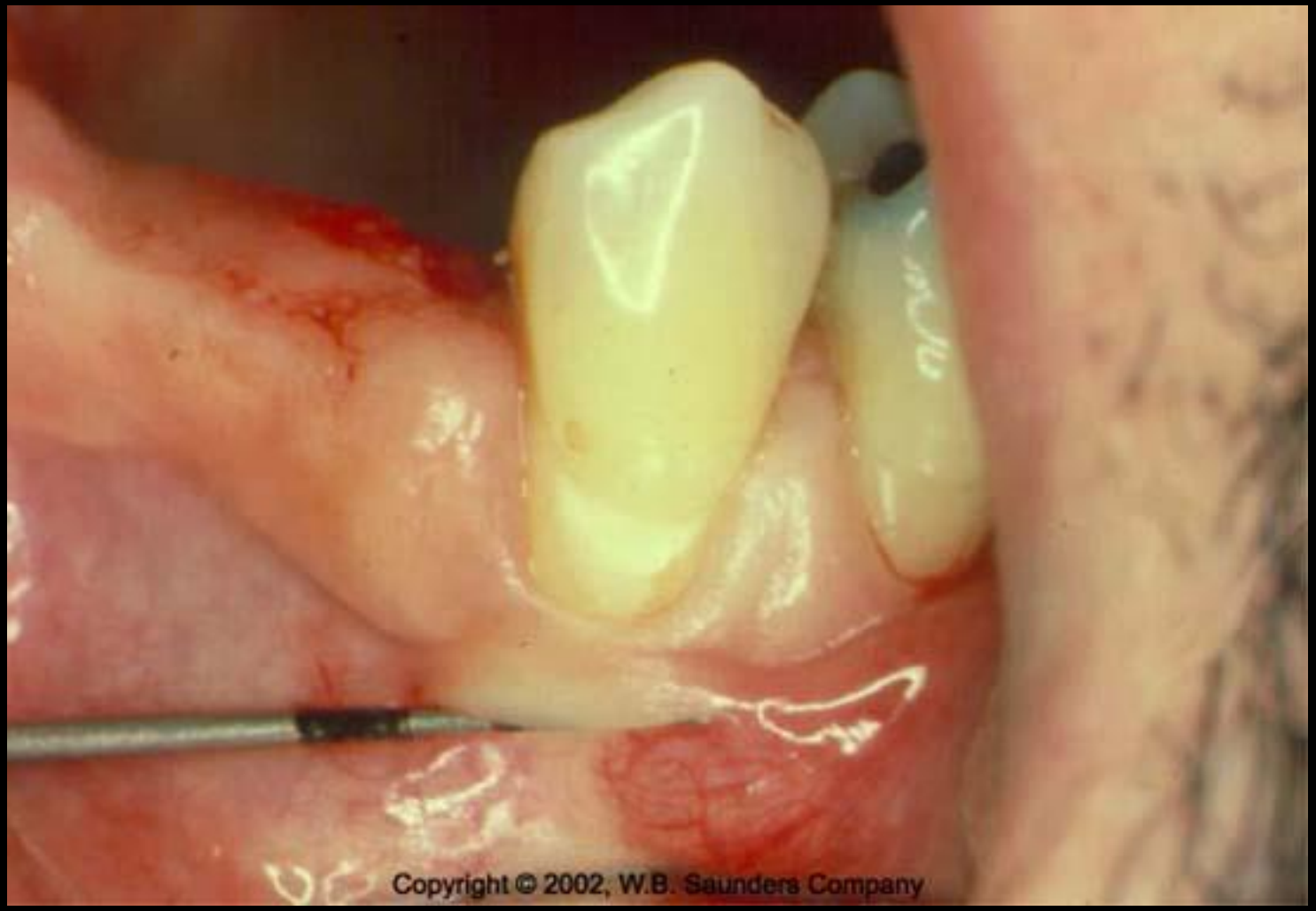
Payal Mehta[a], *Lim Lum Peng*[b,*]

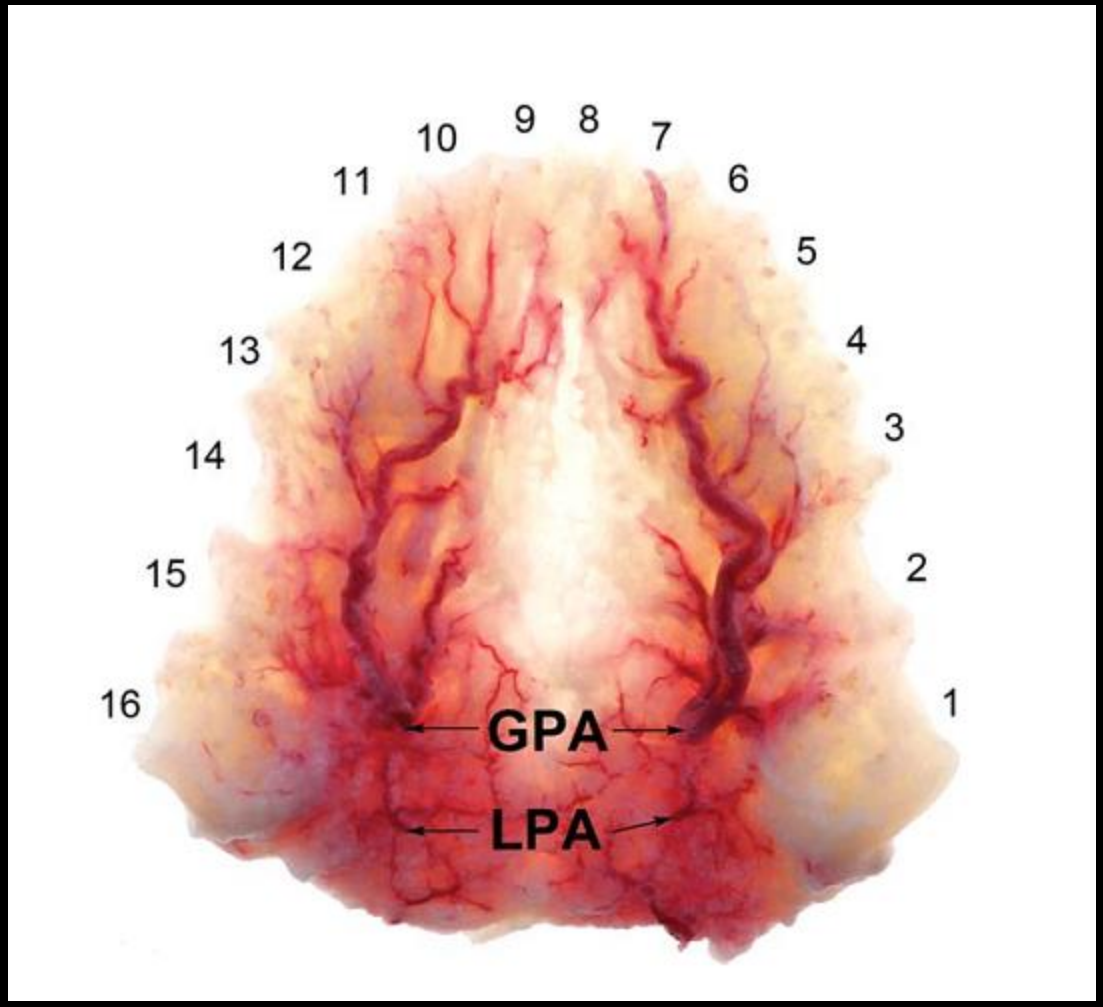
[a] *Department of Preventive Dentistry, Faculty of Dentistry, National University of Singapore, Singapore*
[b] *Faculty of Dentistry, National University of Singapore, 5 Lower Kent Ridge Road, Singapore 119083, Singapore*

Sonuç

Gingival sağlığın idamesi için gerekli belli bir yapışık dişeti genişliği varlığı bilimsel olarak kanıtlanmış değildir.

ROLL TEKNİĞİ

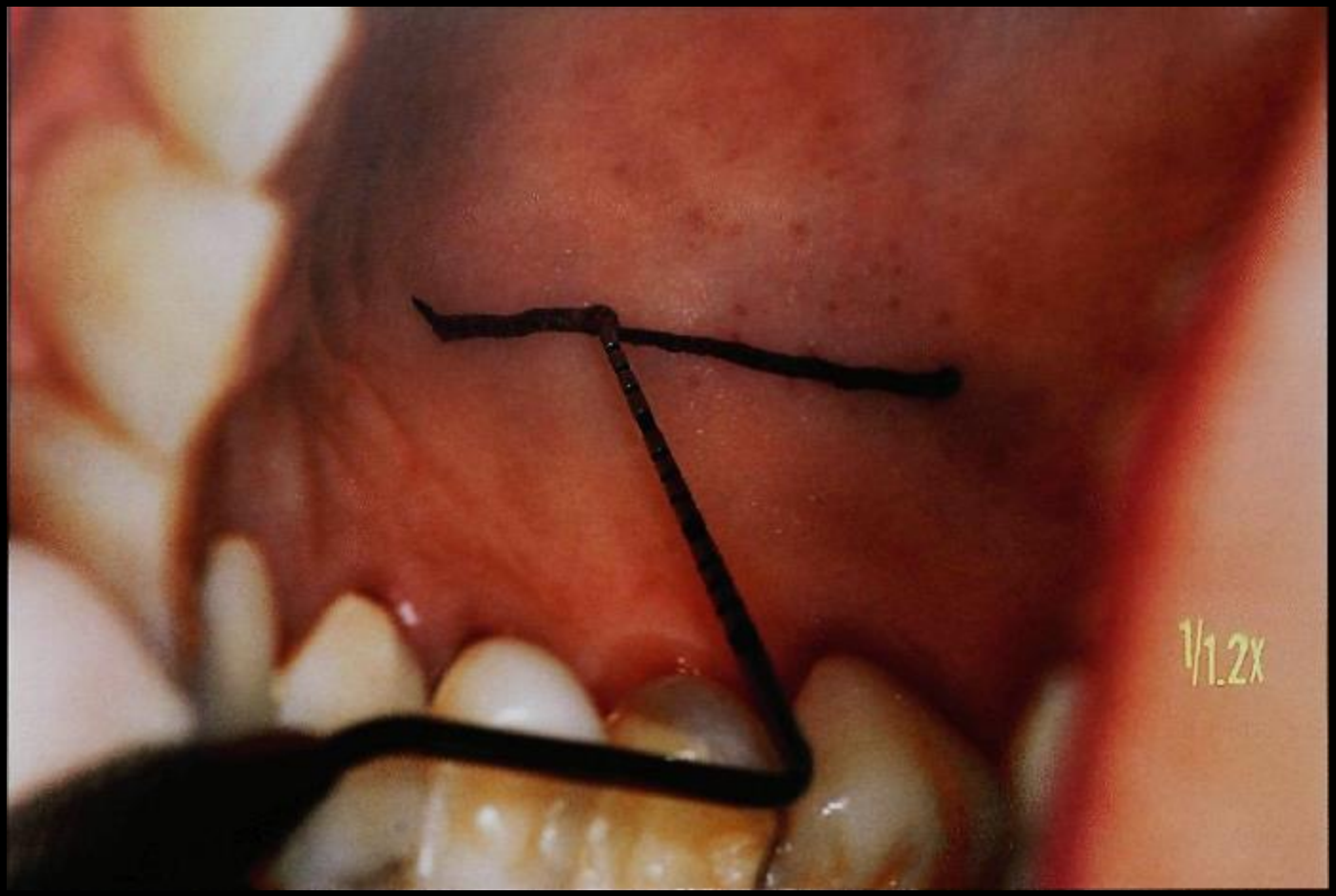


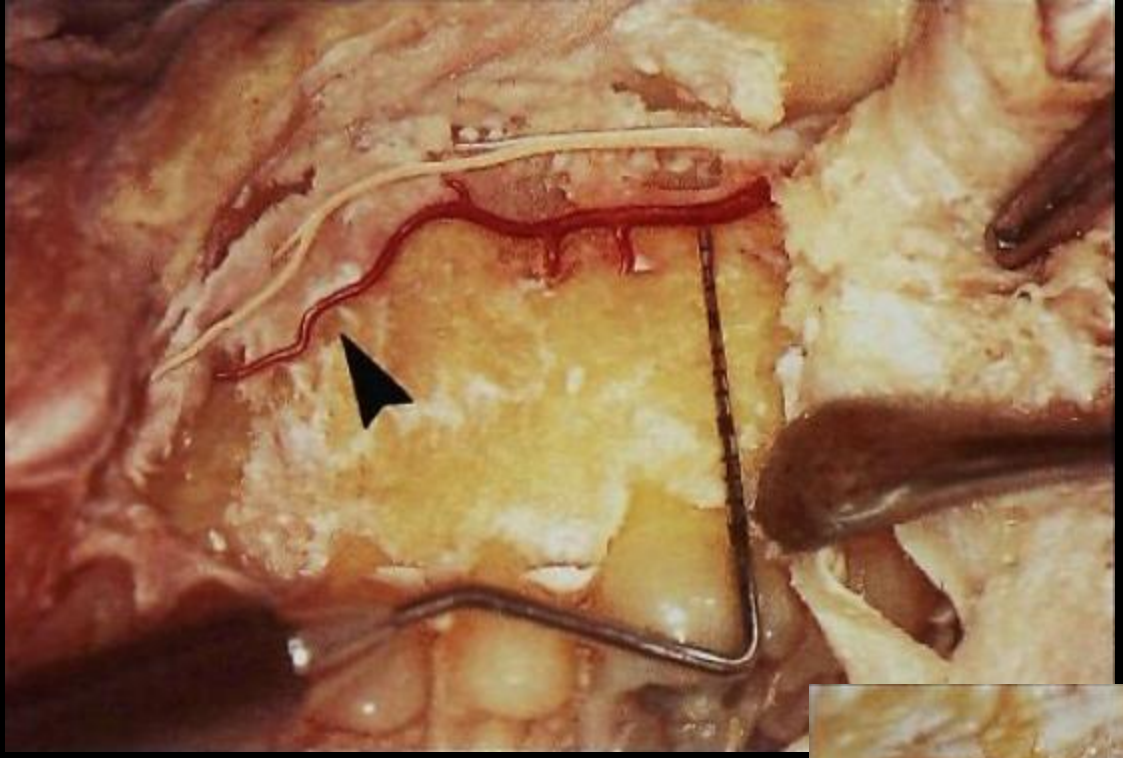

10
9
8
7
11
6
12
5
13
4
14
3
15
2
16
1
GPA
LPA

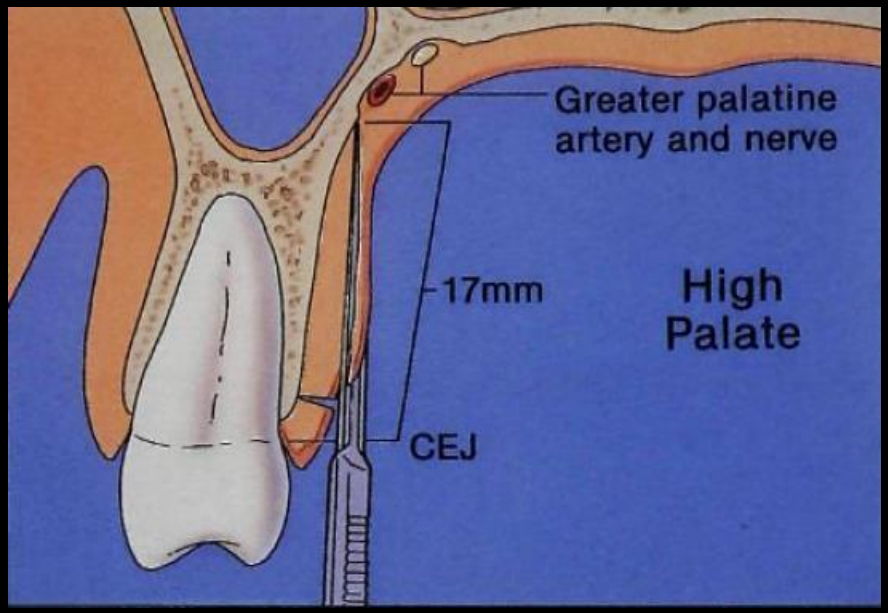
The Subepithelial Connective Tissue Graft Palatal Donor Site: Anatomic Considerations for Surgeons

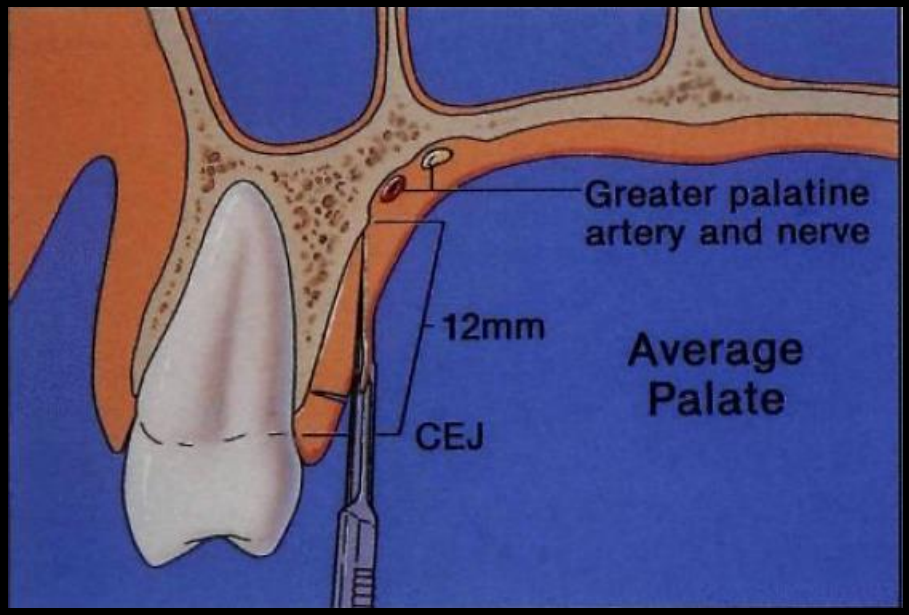
*Gary M. Reiser, DDS**
*John F. Bruno, DDS, MS***
*Parker E. Mahan, DDS, PhD****
*Lynn H. Larkin, PhD*****

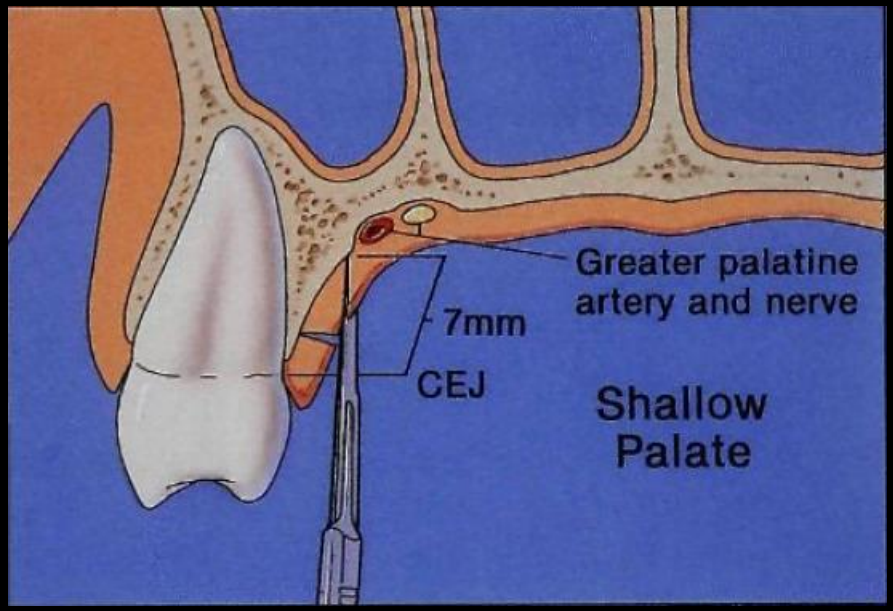
Surgeons must become completely familiar with the anatomy of the palatal donor site to feel confident in providing the subepithelial connective tissue graft procedure. Variations in the size and shape of the hard palate affect the dimensions of donor tissue harvested, as well as the location of the greater palatine neurovascular bundle. This article classifies palatal vaults according to height as high, average, and shallow. Illustrations and cadaver dissection are utilized to demonstrate that surgeons can gain substantial donor tissue specimens without encountering the neurovascular bundle. Actions to be followed in the unlikely event that the neurovasculature is encountered are reviewed. (Int J Periodont Rest Dent 1996;16:131–137.)

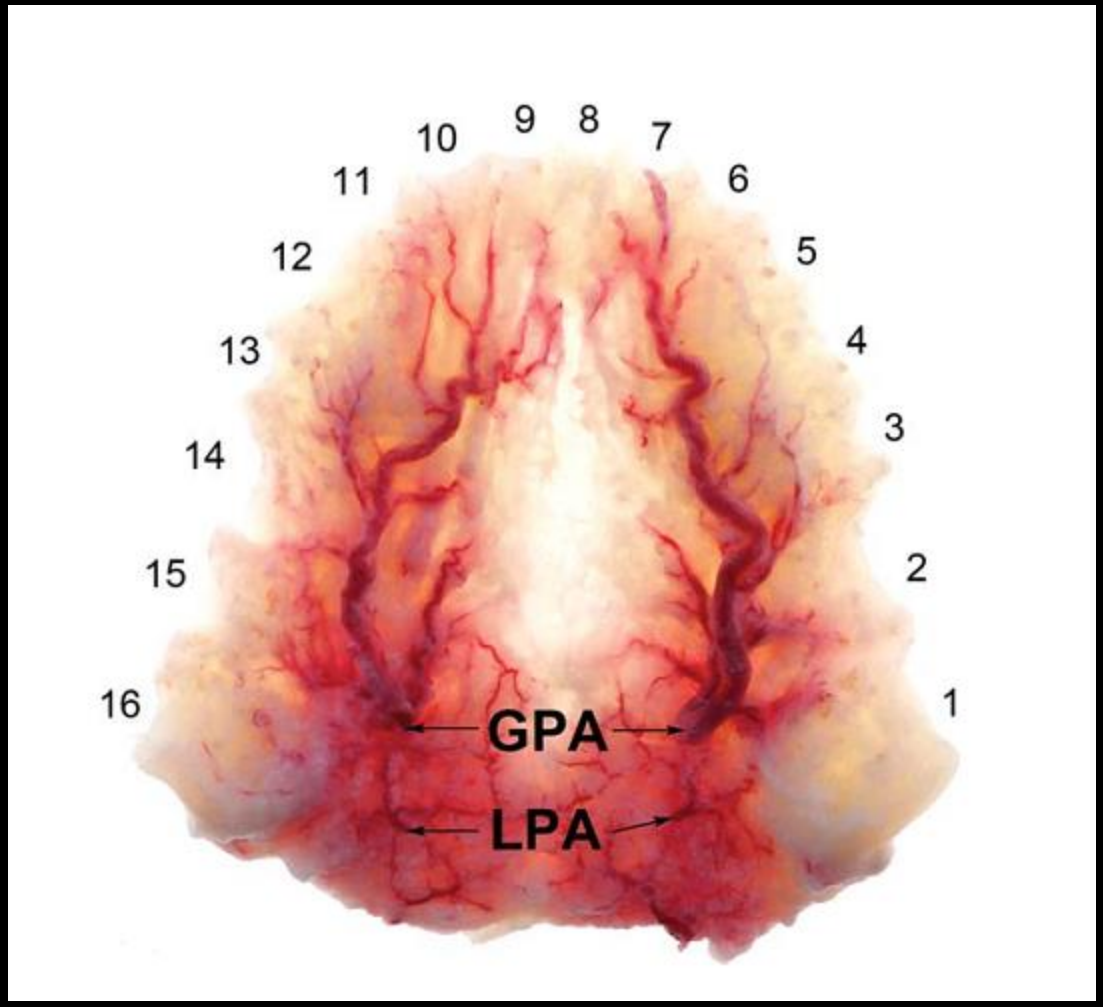

1/1.2x




Greater palatine
artery and nerve
17mm
High
Palate
CEJ


Greater palatine
artery and nerve
12mm
Average
Palate
CEJ


Greater palatine
artery and nerve
7mm
CEJ
Shallow
Palate


10
9
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16
1
GPA
LPA

The Subepithelial Connective Tissue Graft Palatal Donor Site: Anatomic Considerations for Surgeons

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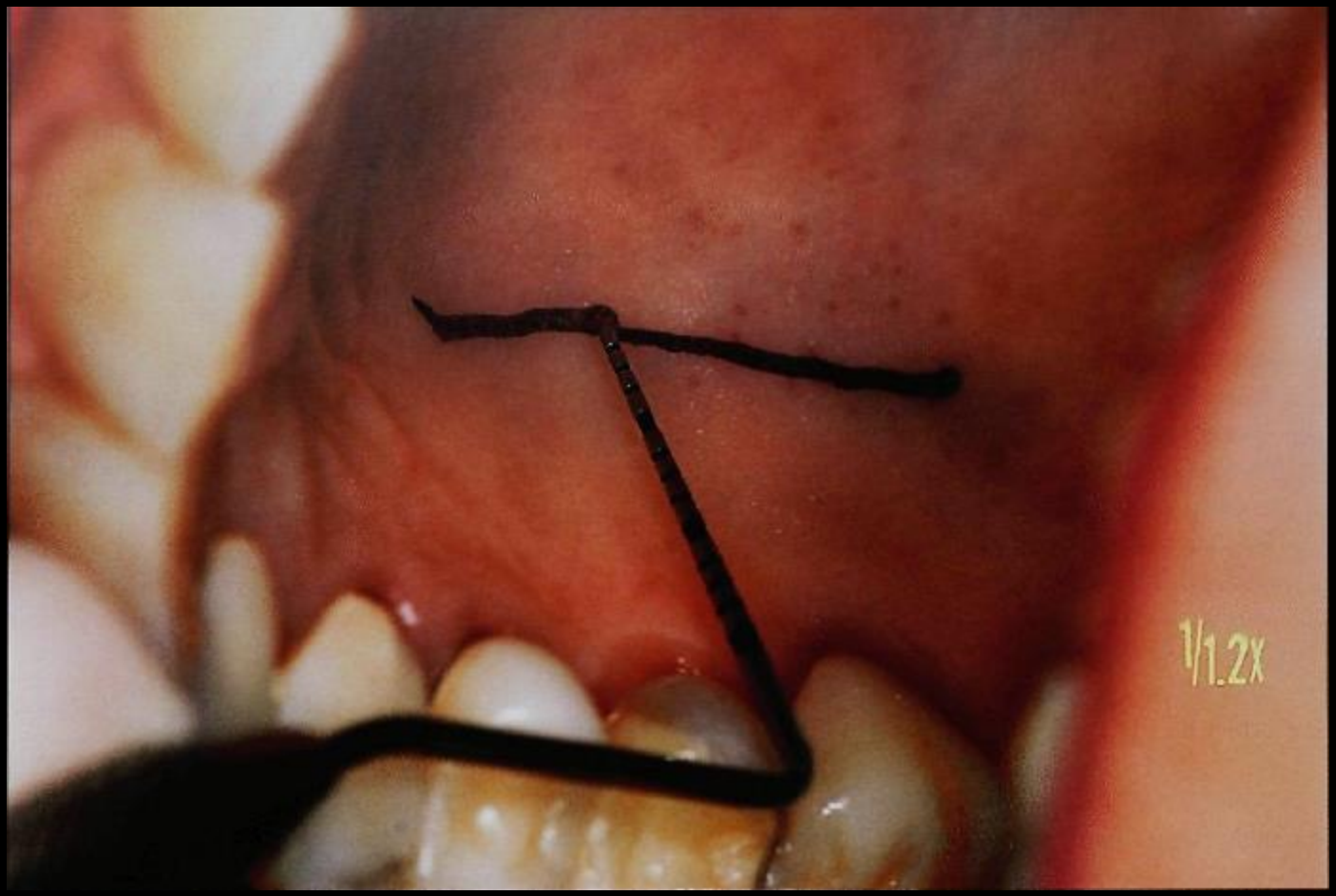
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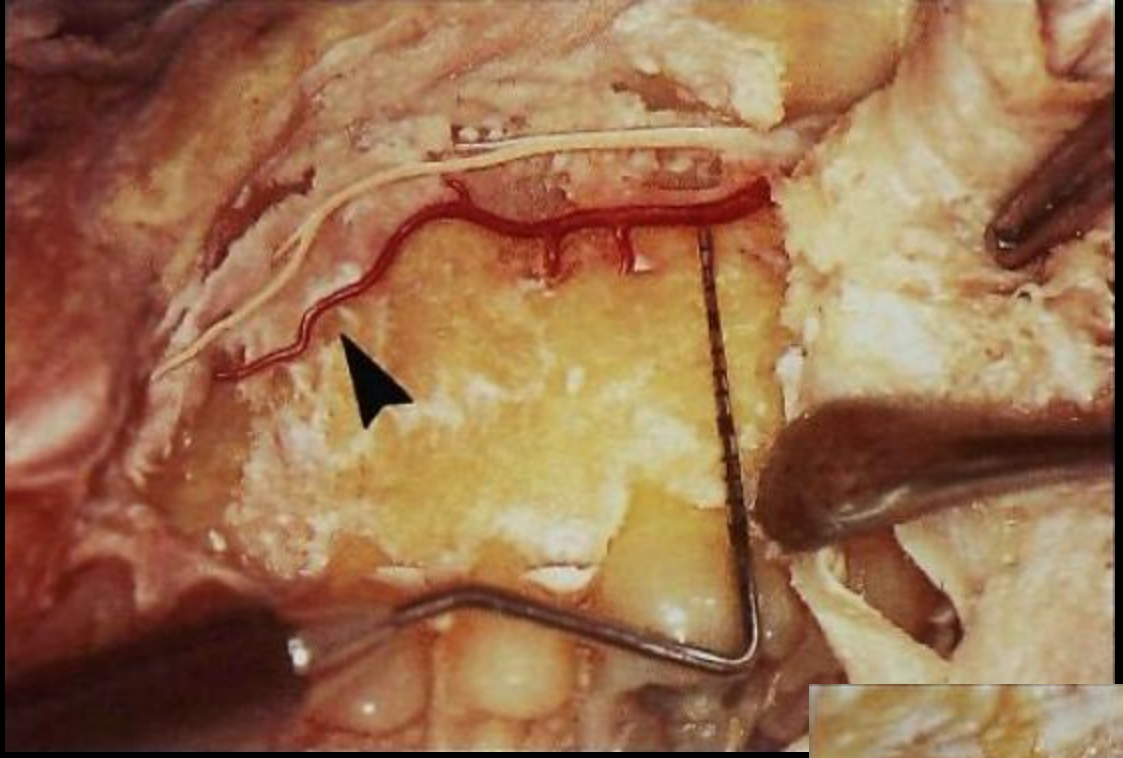
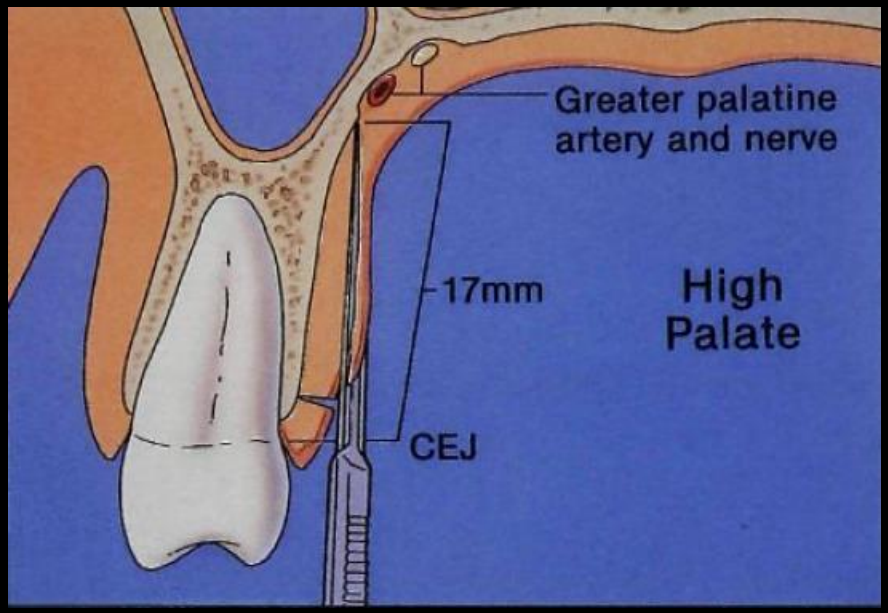
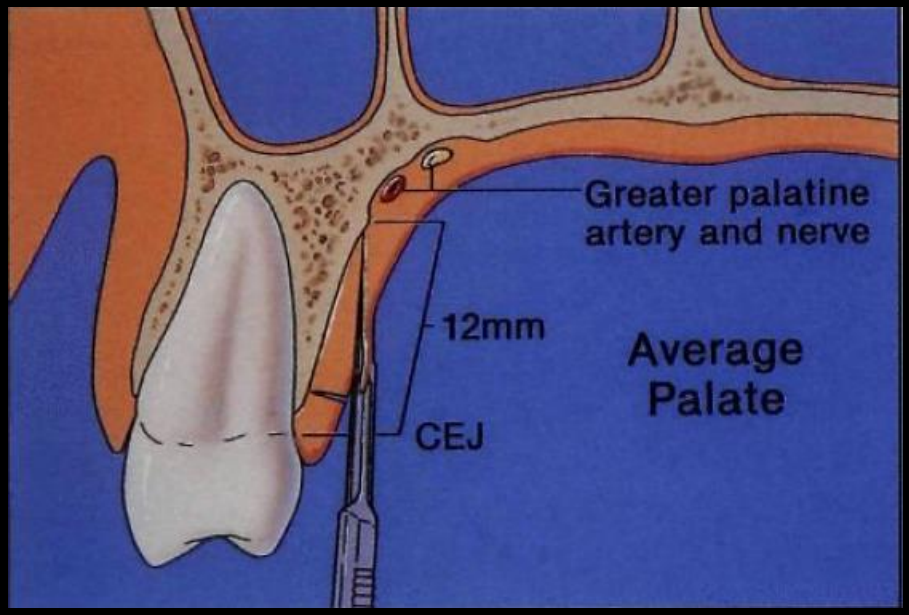
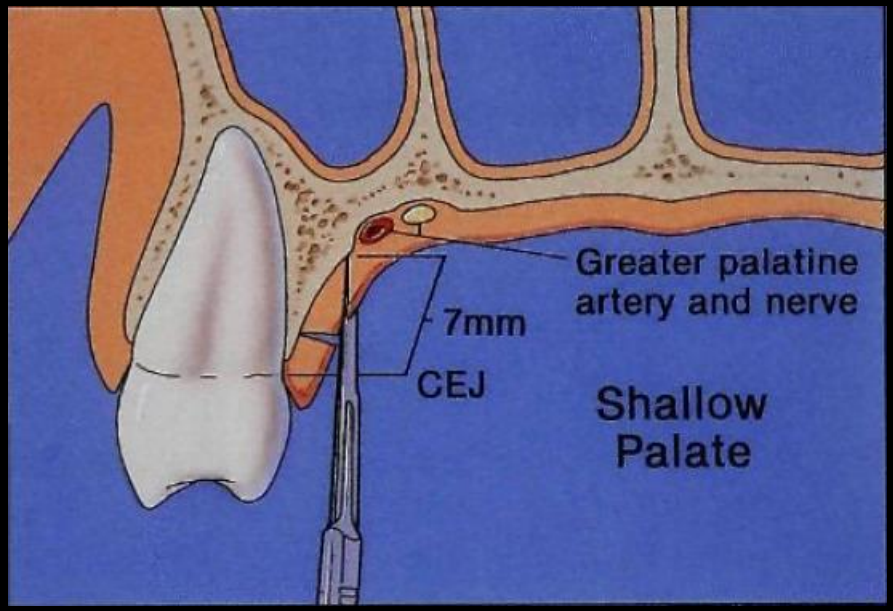



Greater palatine
artery and nerve
17mm
High
Palate
CEJ


Greater palatine
artery and nerve
12mm
Average
Palate
CEJ


Greater palatine
artery and nerve
7mm
CEJ
Shallow
Palate

CLINICAL ORAL IMPLANTS RESEARCH

Jan L. Wennström
Jan Derks

Is there a need for keratinized mucosa around implants to maintain health and tissue stability?

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Conflict of interest: The authors declare no personal conflict of interest.

Key words: attached mucosa, dental implants, keratinized mucosa, peri-implant disease, peri-implant soft tissue, soft-tissue recession

Abstract

Aim: The objective of the present review was to analyze the literature with regard to the need for keratinized mucosa around implants to maintain health and tissue stability.

Methods: Human and animal studies were identified through electronic and hand searches. Predetermined outcome measures were (i) implant loss, (ii) peri-implant health, (iii) oral hygiene, (iv) soft-tissue recession, (v) change in marginal bone level, and (vi) patient-centered outcomes. With respect to outcome variables, change in "attachment level", soft-tissue recession and change in peri-implant bone level were only retrieved from longitudinal studies. For remaining parameters, cross-sectional studies were also considered.

Results: Nineteen relevant publications were identified (17 human and 2 animal studies). Due to marked heterogeneity in study design and reported data, no statistical analysis of retrieved data was feasible. Twelve human studies reported plaque scores for sites with "adequate" ($\geq$2 mm) and "inadequate" (<2 mm) width of keratinized mucosa, and in five studies, an "inadequate" width was associated with a significant higher plaque score. Half of the studies showed significantly higher bleeding scores at implants with < 2 mm of keratinized mucosa, while the majority of publications (8 of 10) found no differences for probing depths. Two of three longitudinal studies reporting on recessions described no long-term differences with regard to the amount of keratinized mucosa. Evidence on the effect of keratinized mucosa on bone-level changes or implant loss was scarce, and no conclusions could be drawn. No article reporting patient-centered outcomes could be identified.

Conclusion: Collectively, the findings of this review show that evidence in support of the need for keratinized tissues around implants to maintain health and tissue stability is limited.

Review

The Significance of Keratinized Mucosa on Implant Health: A Systematic Review

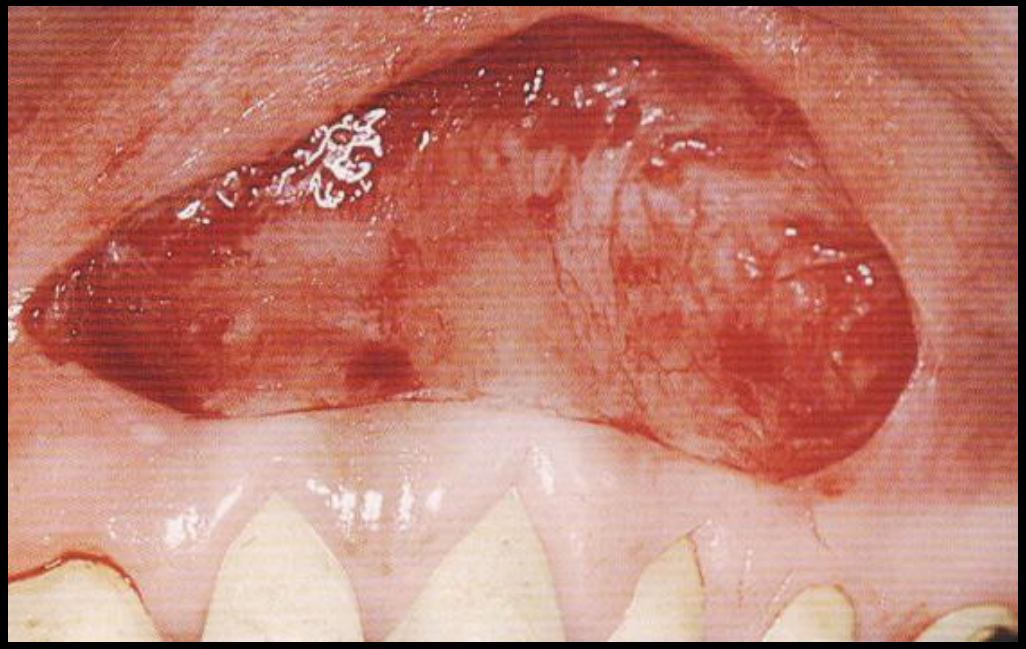
Guo-Hao Lin,*† Hsun-Liang Chan,‡ and Hom-Lay Wang‡

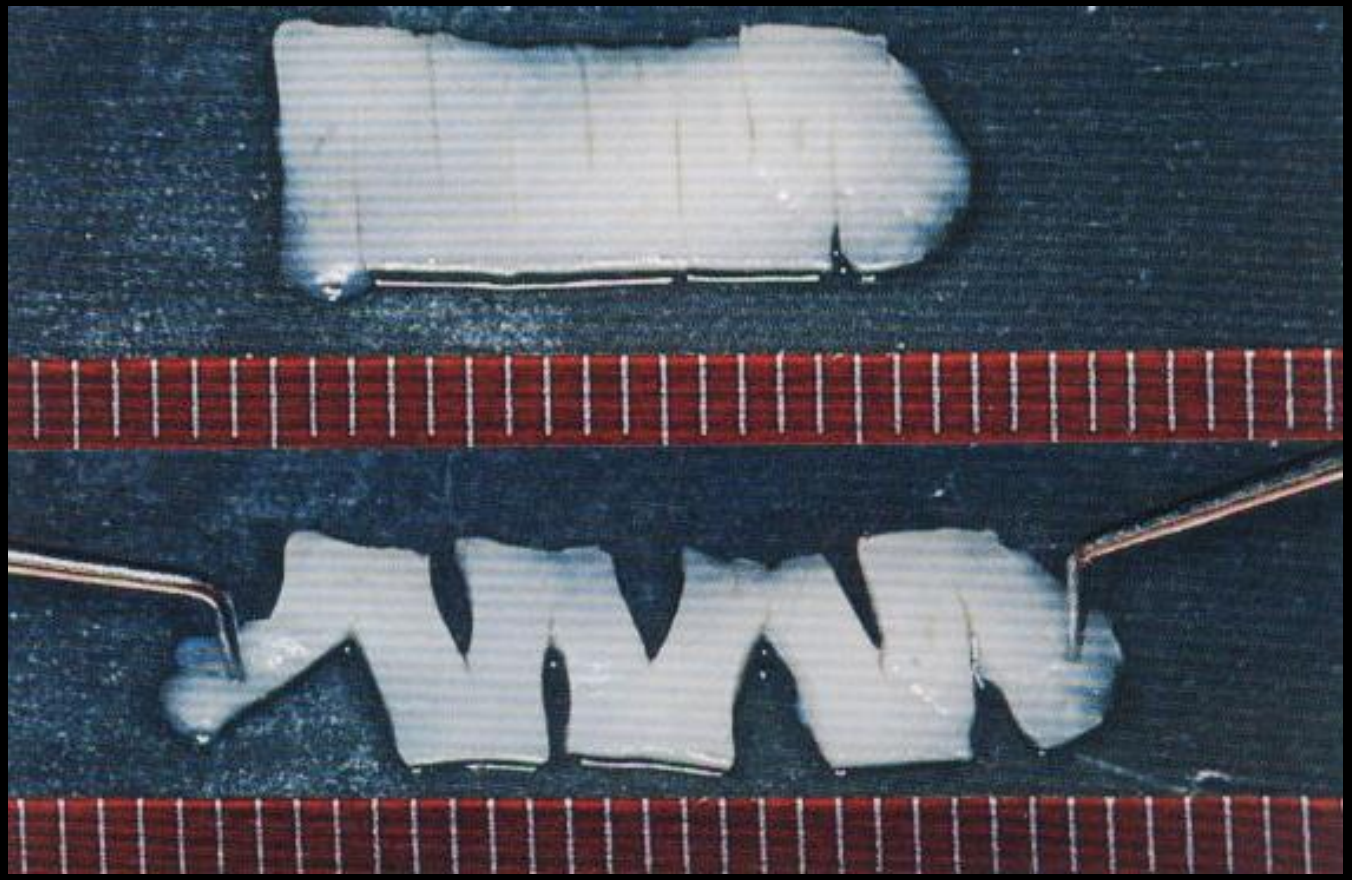
Background: Whether a minimal width of keratinized mucosa (KM) is required to maintain peri-implant tissue health has been a topic of interest. This systematic review and meta-analysis aims to investigate the effect of KM on various peri-implant health-related parameters.

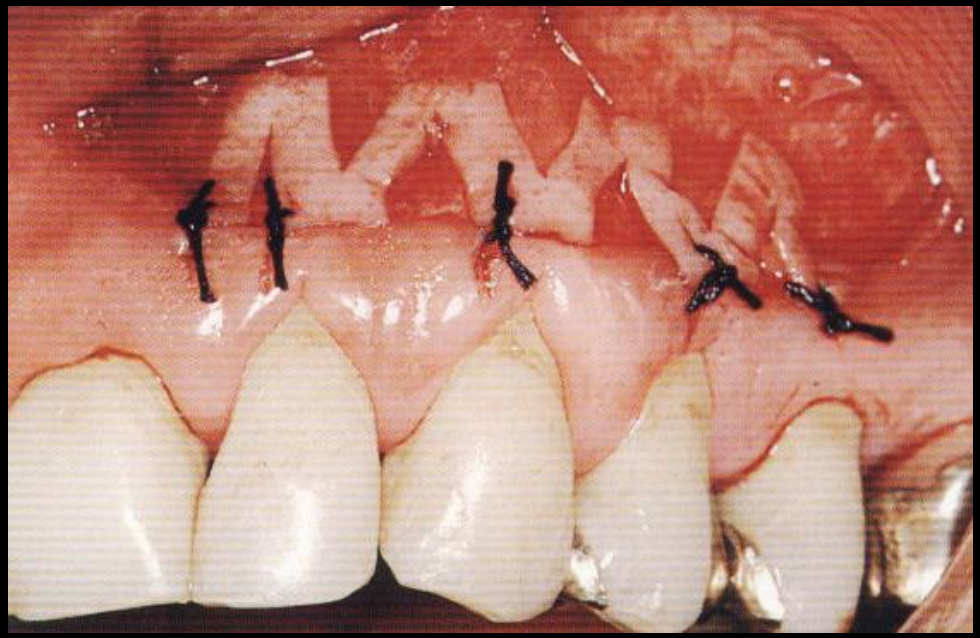
Methods: An electronic search of five databases (from 1965 to October 2012) and a hand search of peer-reviewed journals for relevant articles were performed. Human cross-sectional or longitudinal studies with data on the relationship between the amount of KM around dental implants and various peri-implant parameters, with a follow-up period of at least 6 months, were included.

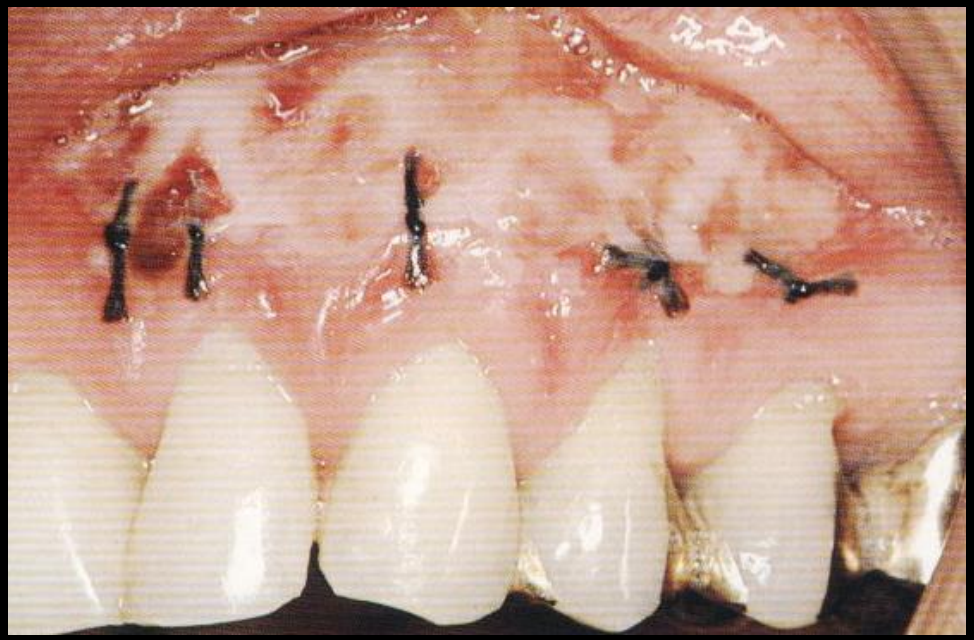
Results: Eleven studies, seven cross-sectional and four longitudinal, were included. Weighted mean difference (WMD) and confidence interval (CI) were calculated with meta-analyses for each clinical parameter. The results showed statistically significant differences in plaque index (PI) and modified PI (WMD = –0.27, 95% CI = –0.43 to –0.11), modified gingival index (mGI) (WMD = –0.48, 95% CI = –0.70 to –0.27), mucosal recession (MR) (WMD = –0.60 mm, 95% CI = –0.85 to –0.36 mm), and attachment loss (AL) (WMD = –0.35 mm, 95% CI = –0.65 mm to –0.06 mm), all favoring implants with wide KM. However, comparisons of other parameters (bleeding on probing, modified bleeding index, GI, probing depth, and radiographic bone loss) did not reach statistically significant differences. The result of heterogeneity test showed only one parameter (AL, *P* value for the χ^2 test = 0.30 and I^2 test = 18%) had a low degree of heterogeneity among analyzed studies; meta-analyses of other parameters presented moderate-to-high degree of heterogeneity. Limitations of the present review include limited number of selected studies (n = 11), existence of heterogeneity and publication bias, and only English-written articles searched.

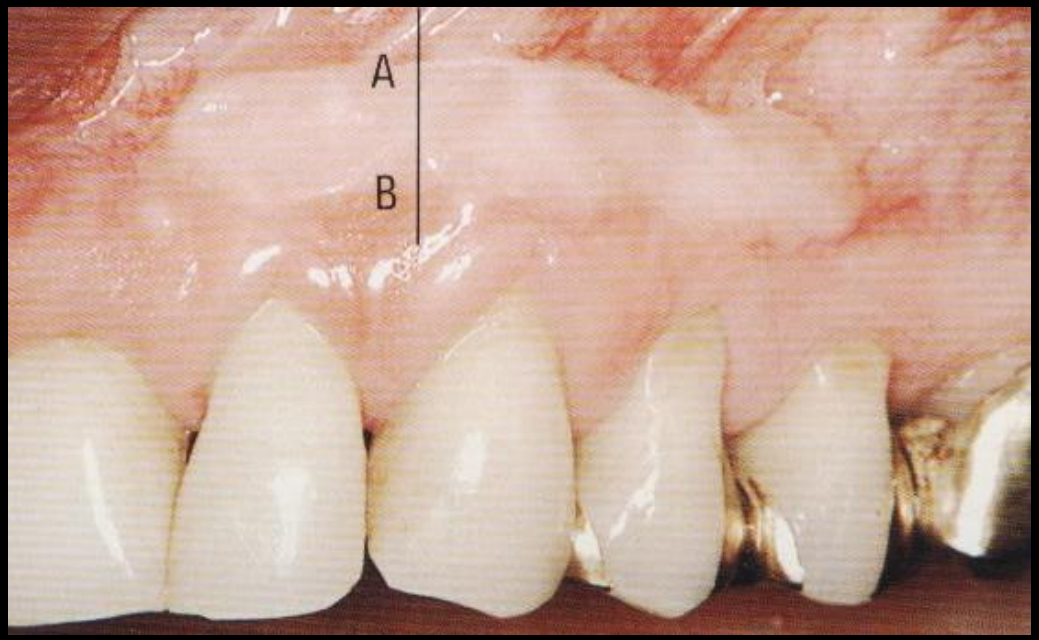
Conclusion: Based on current available evidence, a lack of adequate KM around endosseous dental implants is associated with more plaque accumulation, tissue inflammation, MR, and AL. *J Periodontol 2013;84:1755-1767.*

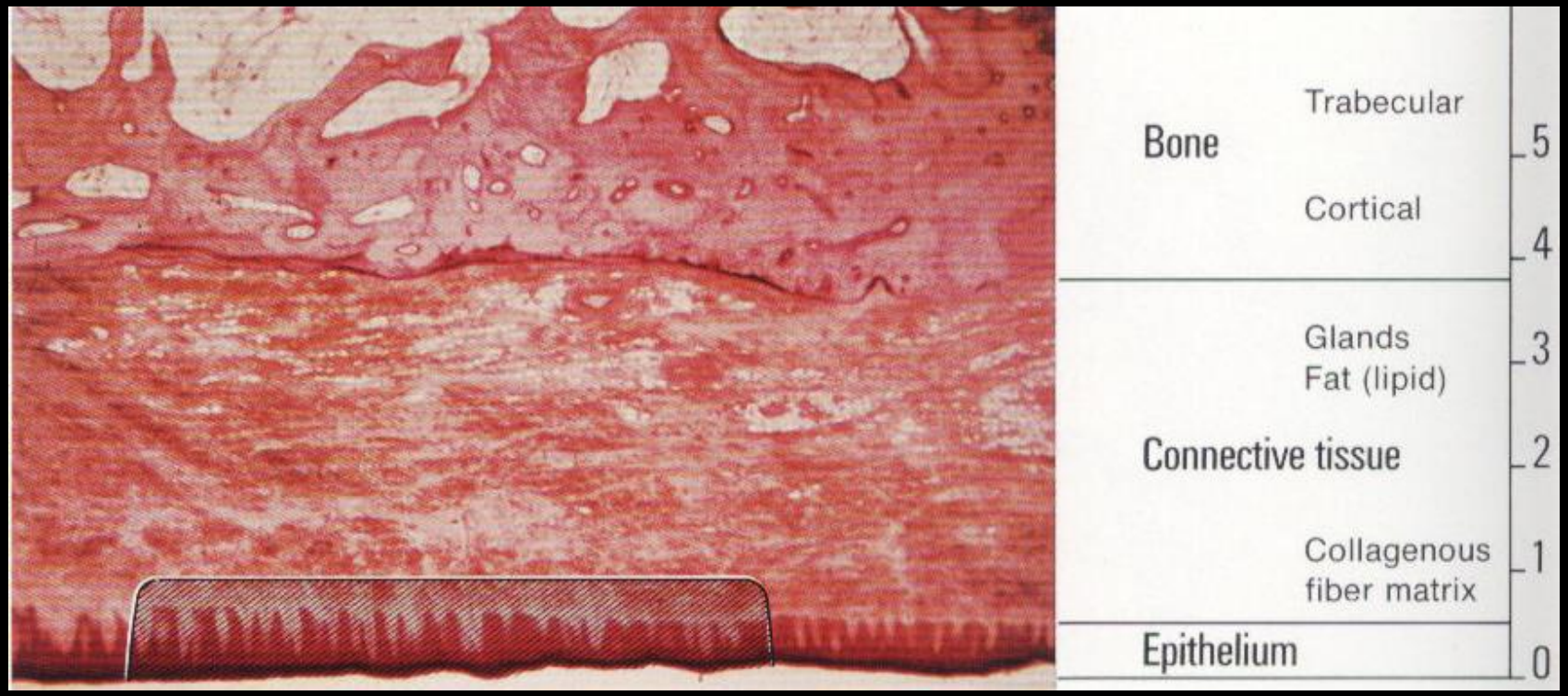


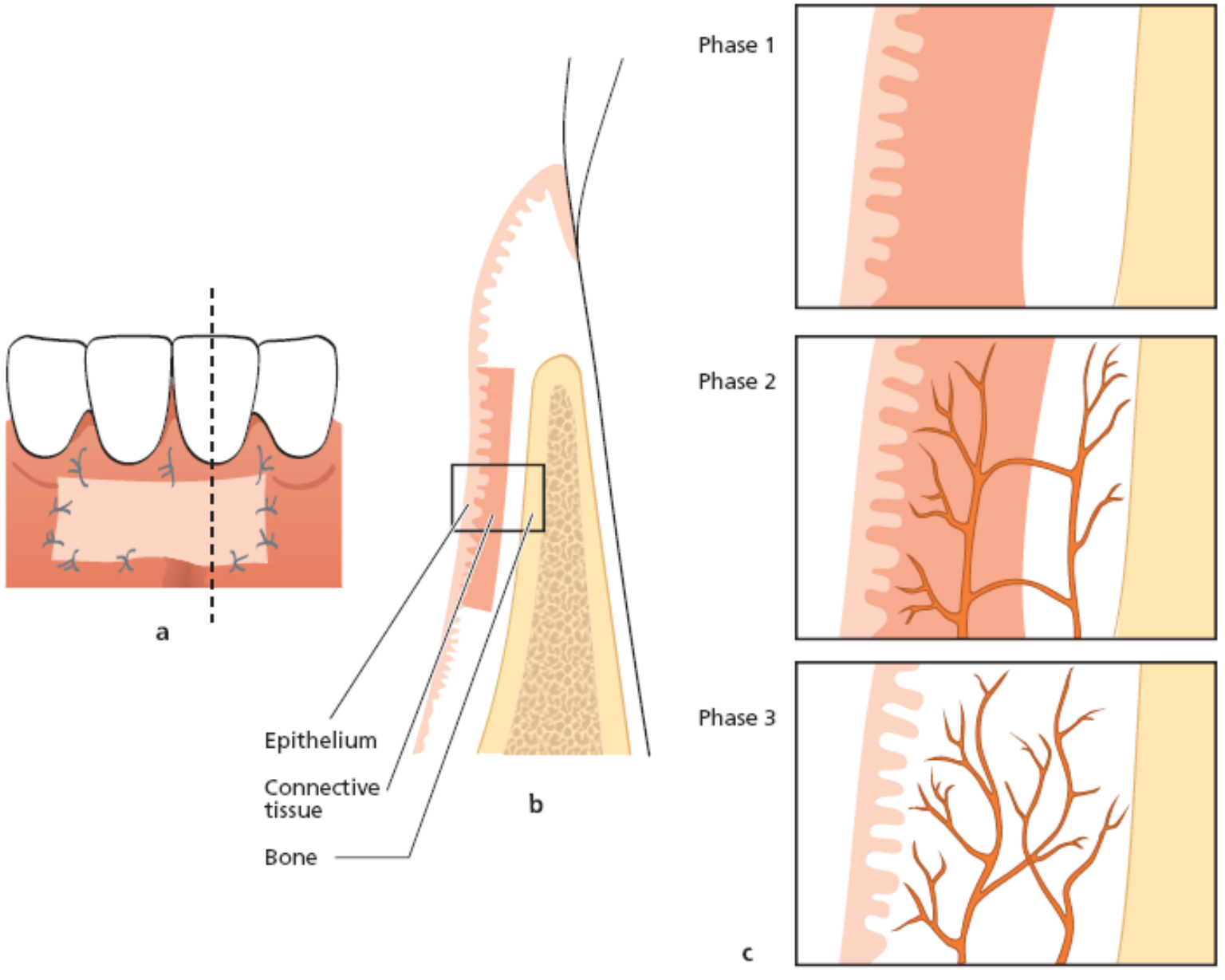







A
B


Bone
Trabecular
Cortical
Connective tissue
Glands
Fat (lipid)
Collagenous
fiber matrix
Epithelium
5
4
3
2
1
0


a
Epithelium
Connective tissue
Bone
b
Phase 1
Phase 2
Phase 3
c

Başlangıç Fazı (0-3 gün)

- Greft ve alıcı yatak arasında İnce bir eksuda tabakası oluşur
- Bu aşamada plazmatik sirkülasyon ile beslenir.
- Epitel dejenere olmaya başlar ve deskuame olur.

Revaskülarizasyon Fazı (2-11 gün)

- 4-5 günde anastamozlar başlar.
- Greft ve alıcı yatak arasında fibröz bir birleşme oluşmaya başlar.
- Komşu dokulardan epitel göçü görülür.
- Kök yüzeyine yerleştirilmiş ise uzun birleşim epiteli oluşmaya başlar.

Matürasyon Fazı (11-42 gün)

- 14. günde vaskülarizasyon büyük oranda normale döner.
- Keratinizasyon ile epitel tabakası mature olur.

Oliver *et al*. (1968) and Nobuto *et al*. (1988).

KÖK YÜZEYİ KAPATMA OPERASYONLARI

Miller Dişeti Çekilmesi Sınıflaması (1985)

1- Saplı (Pedicle) Dişeti Greftleri

a- Rotasyonel Flep Operasyonları

i- Laterale Pozisyone (Sliding, Kaydırılan) Flep

ii- Çift (Double) Papil Flep

iii-Oblik Rotasyonel Flep

b- Advanced Flep Operasyonları

i- Koronale Repozisyone Flep

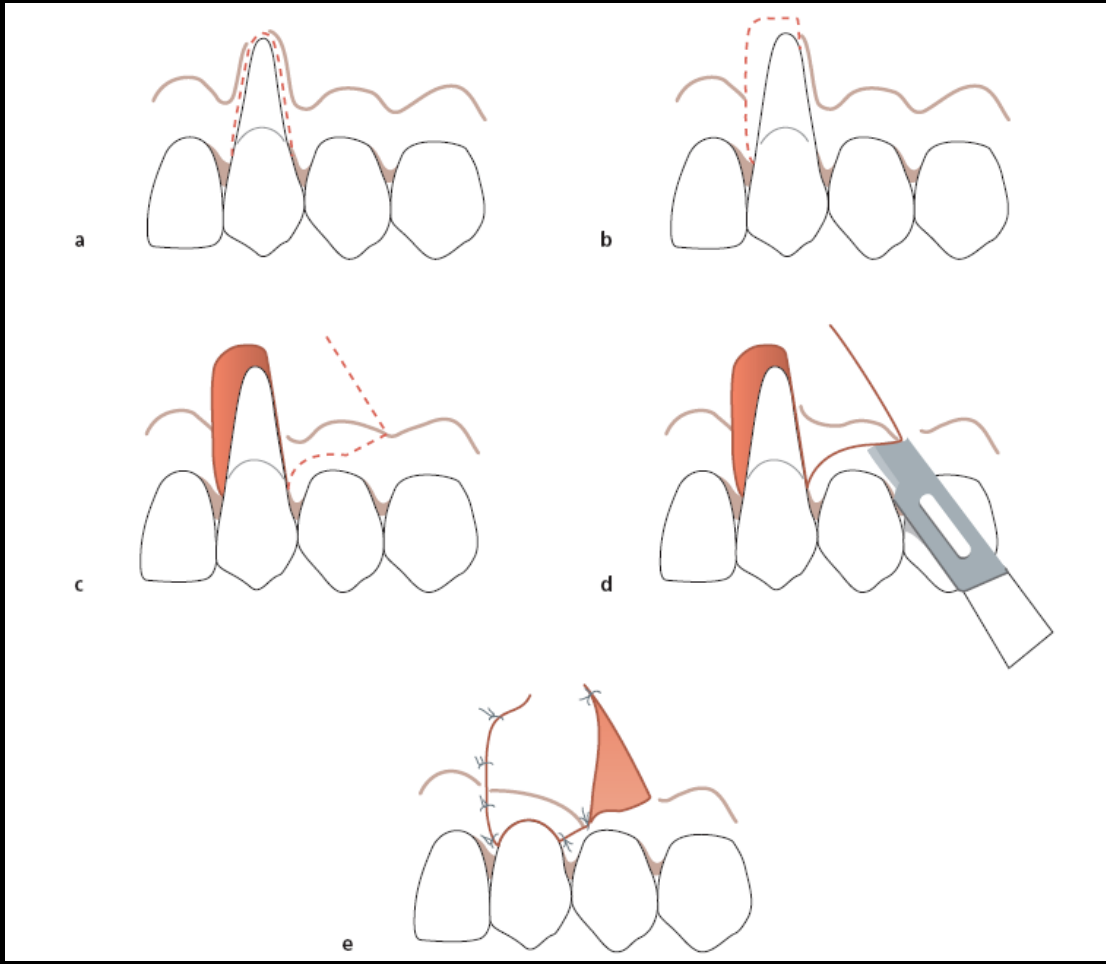
ii- Semilunar Koronale Repozisyone Flep

2- Serbest Otogen Yumuşak Doku Greftleri

a- Serbest Dişeti Grefti

b- Subepitelyal Bağ Dokusu Grefti

LATERALE POZİSYONE FLEP




a


3mm
3mm
3mm
x
x
Split
Split
Full
Split
Split
Split
Split
b


c


d


a


3mm
3mm
3mm
x
x
Split
Split
Full
Split
Split
Split
Split
b

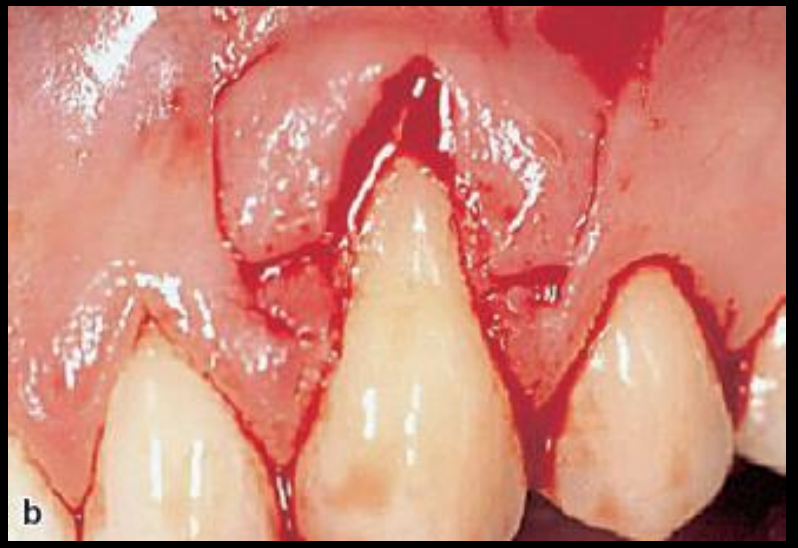

c

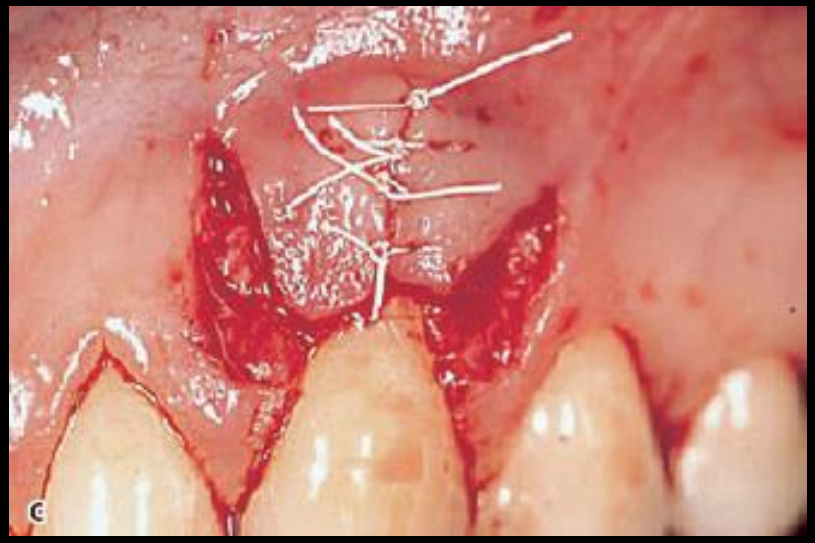

d


a

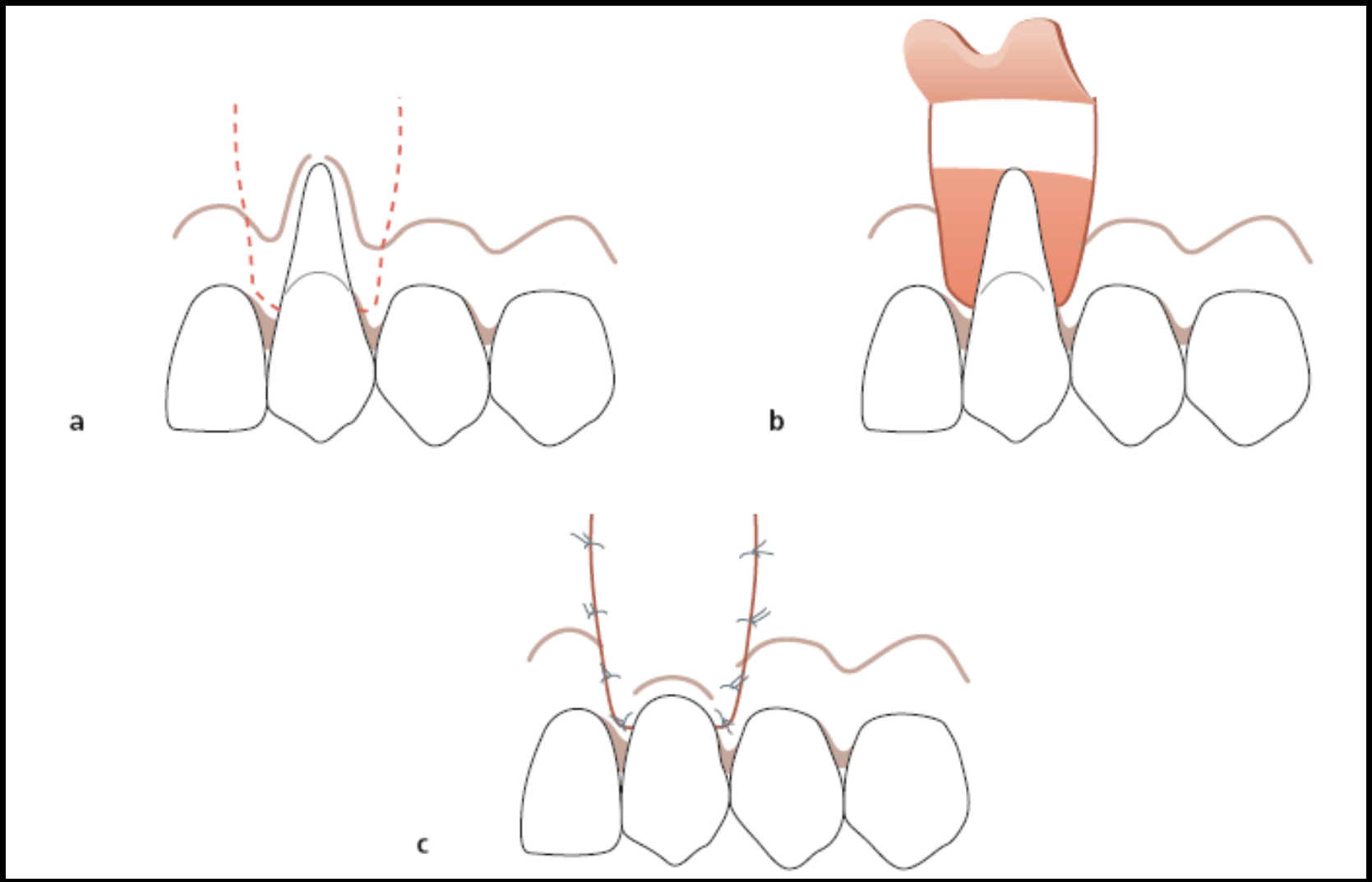

e

Çift (Double) Papil Flep

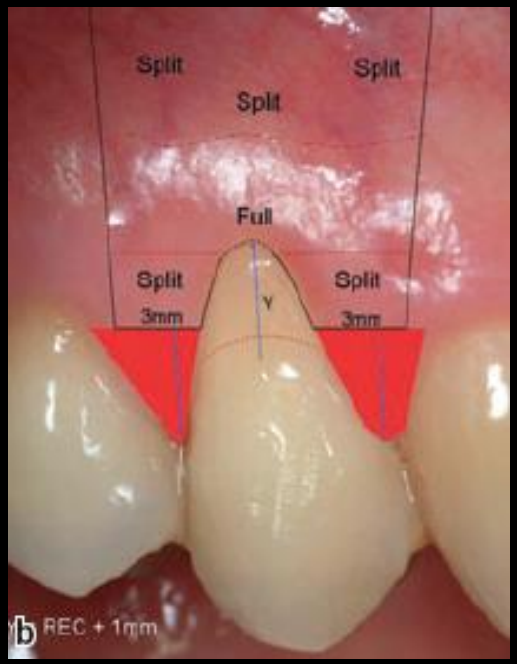




Koronale Repozisyone Flep




a

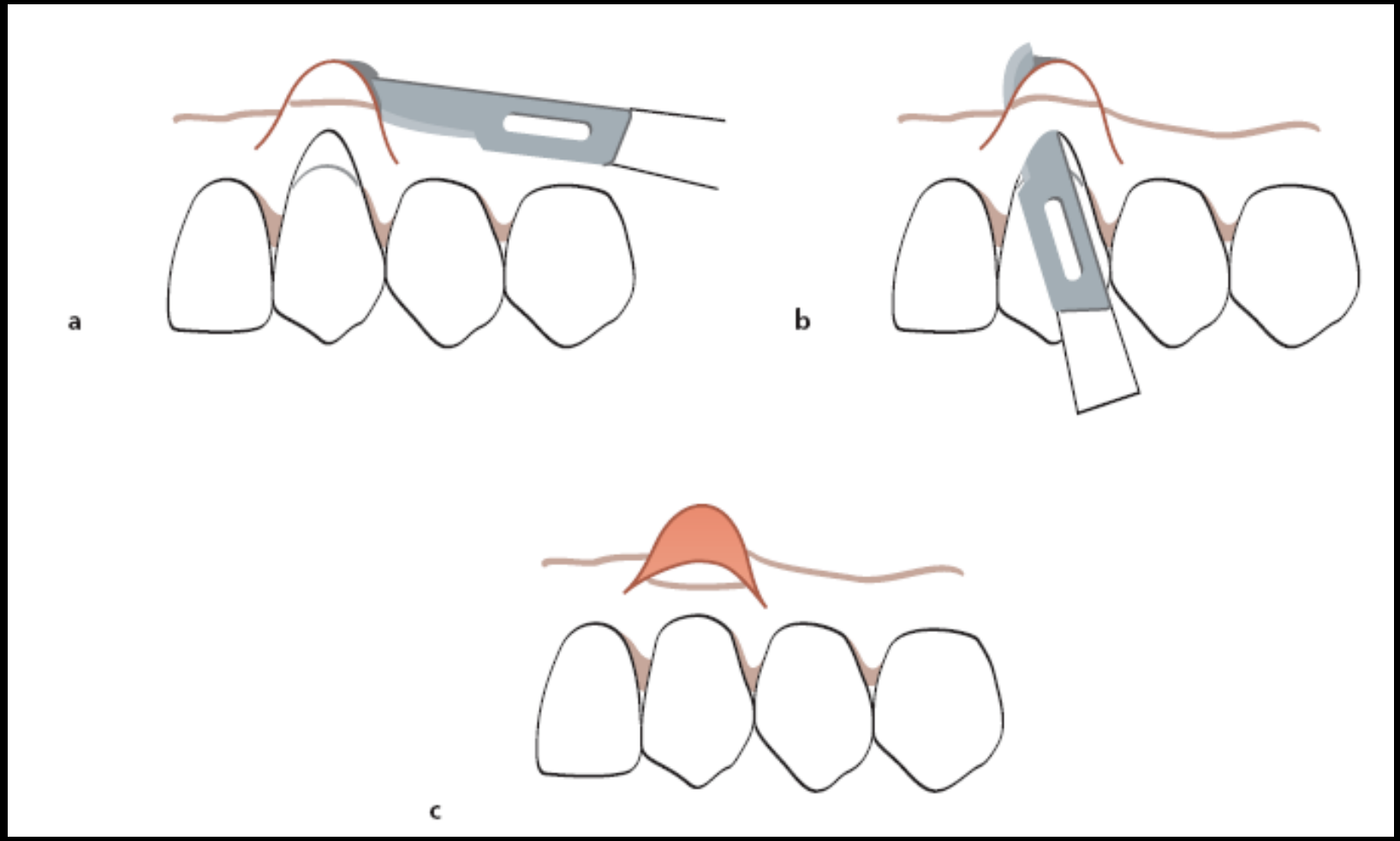

Split
Split
Split
Full
Split
3mm
Split
3mm
b
REC + 1mm


c

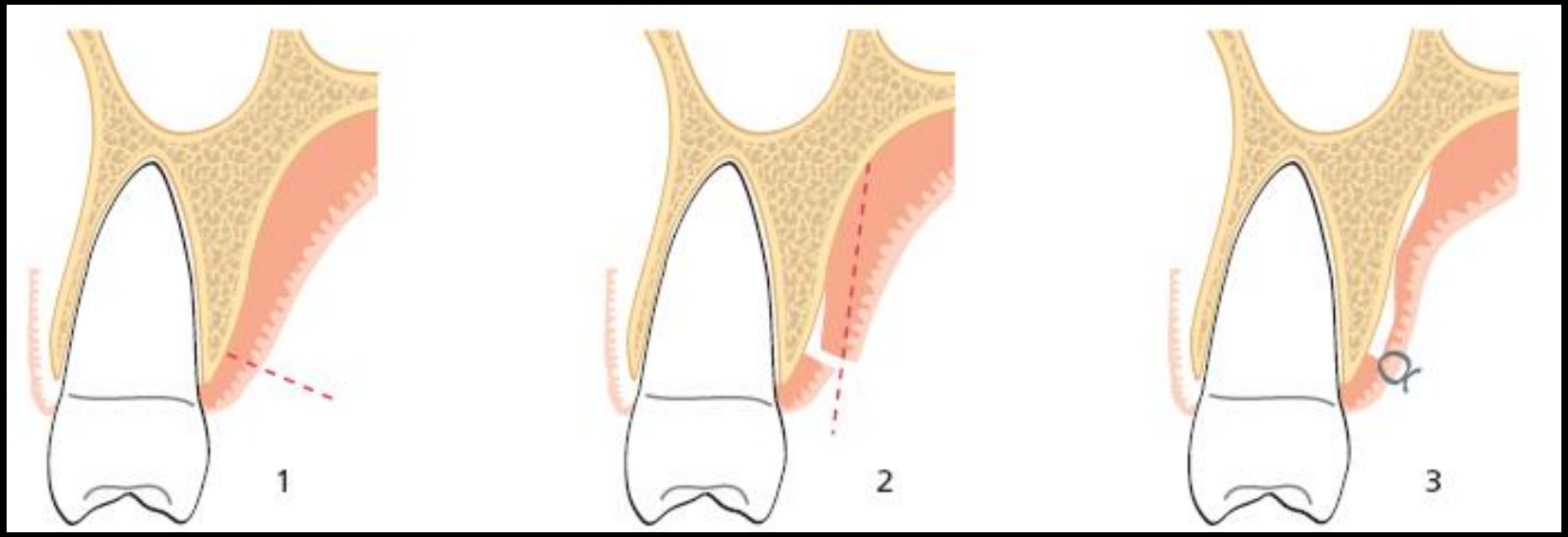

d


e

Semilunar Koronale Repozisyone Flep



Subepitelyal Bağ Dokusu Grefti

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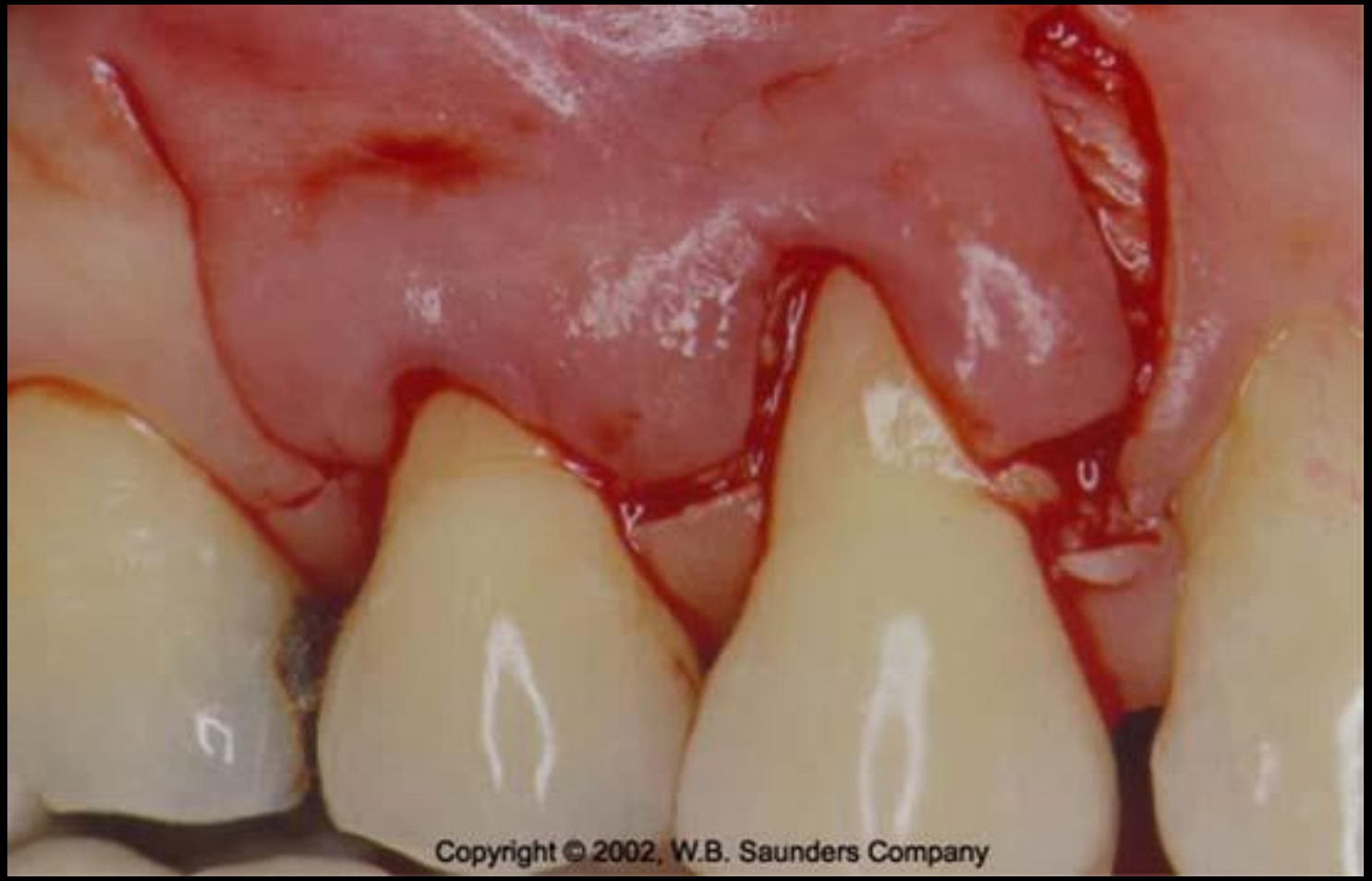
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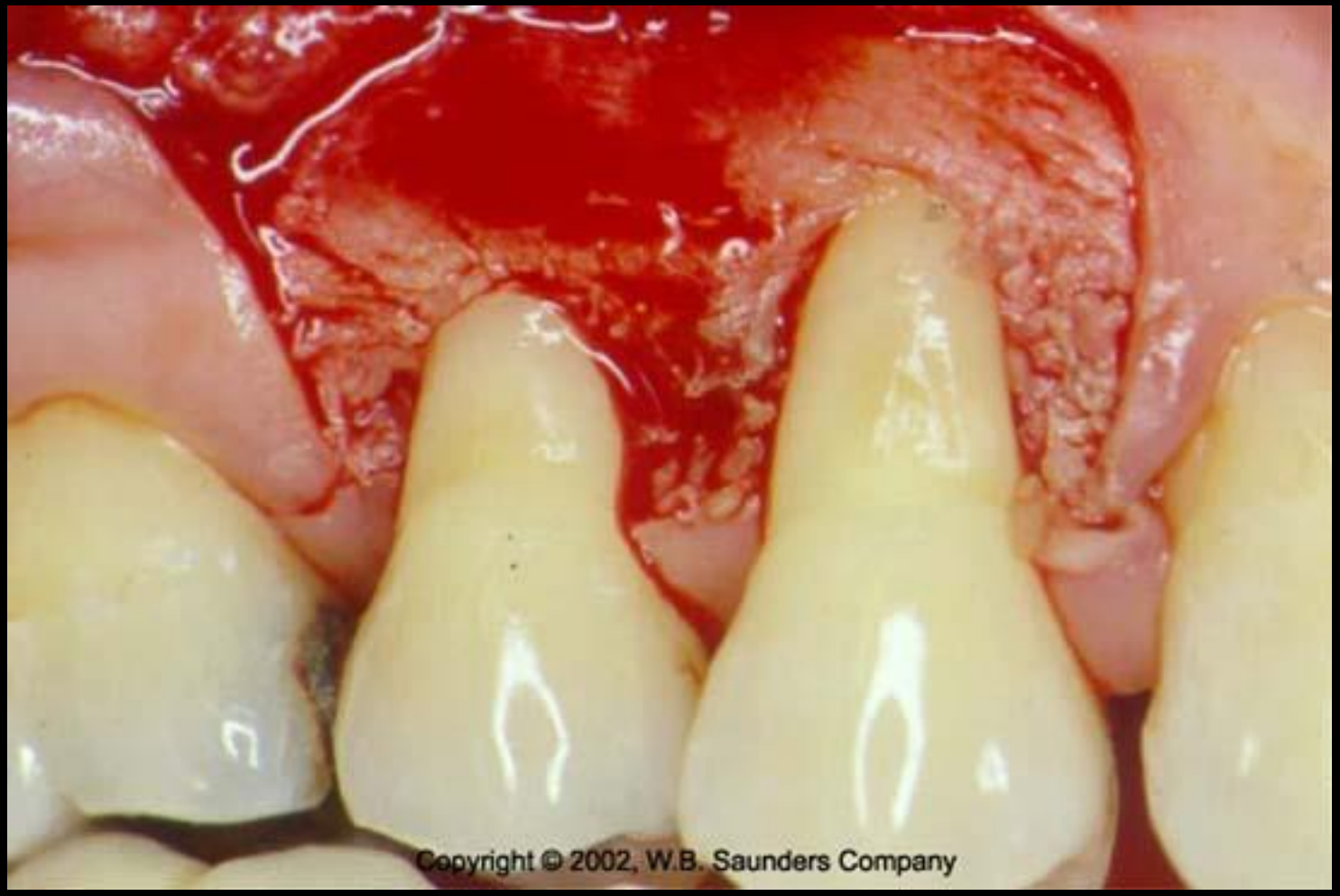
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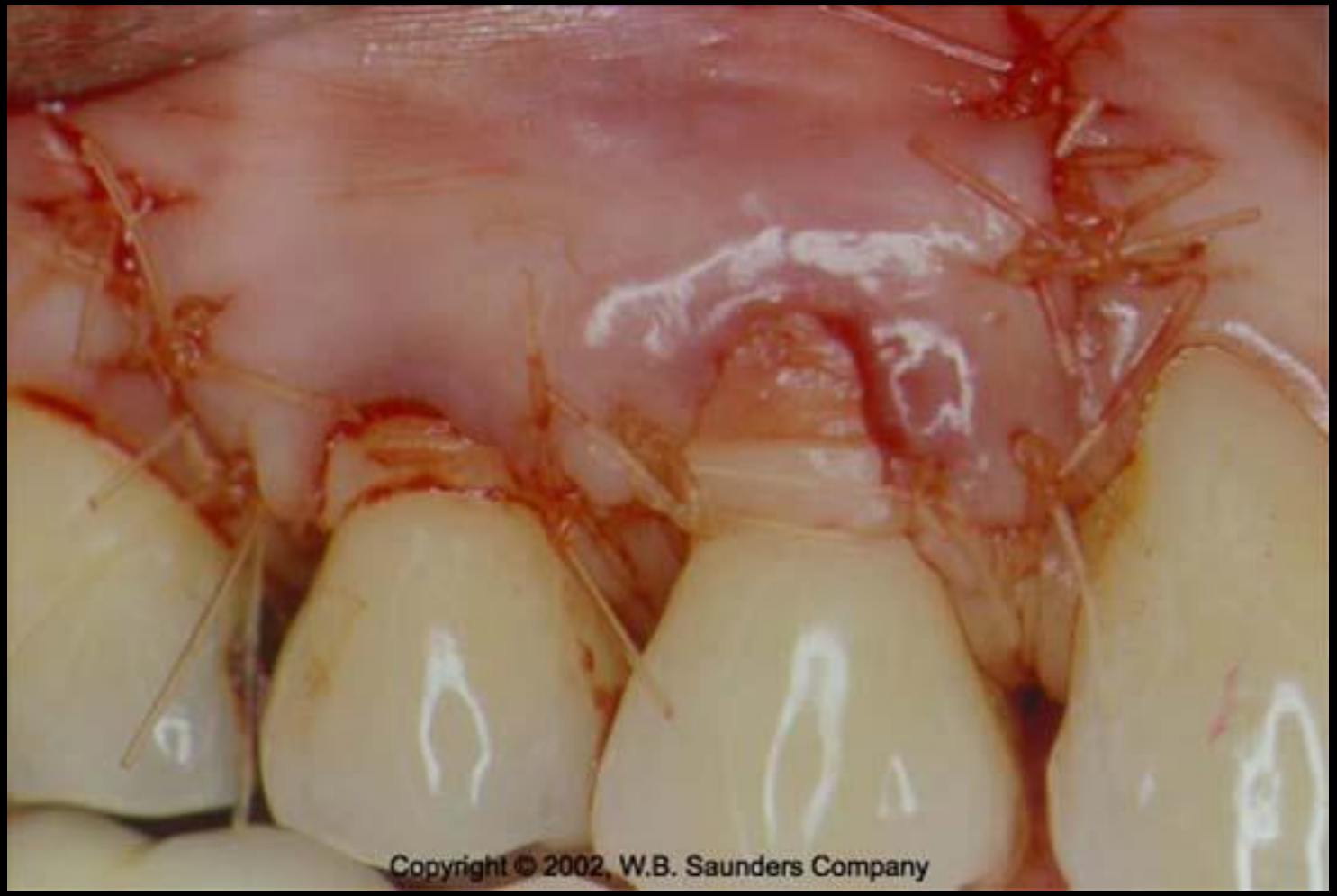
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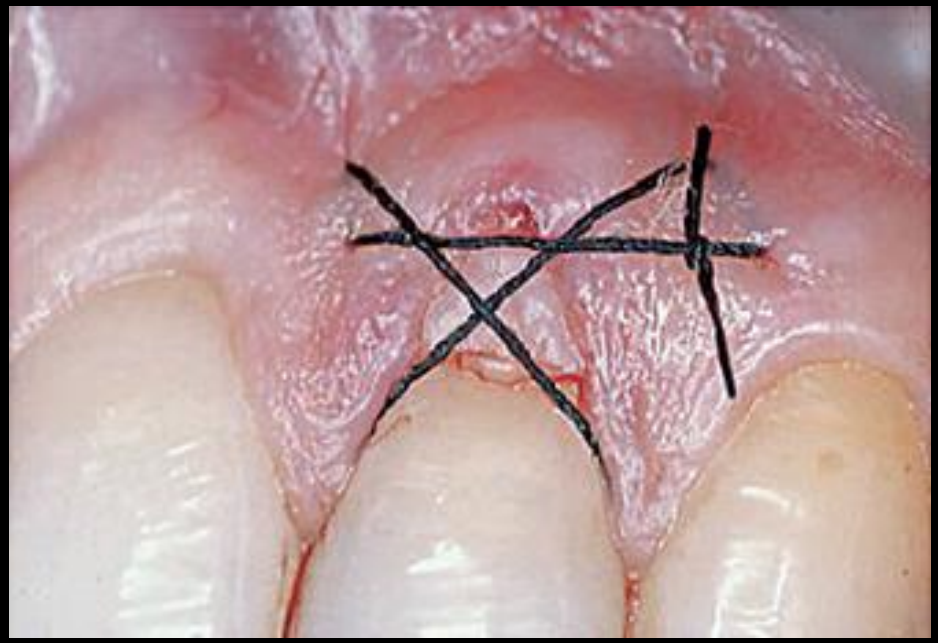
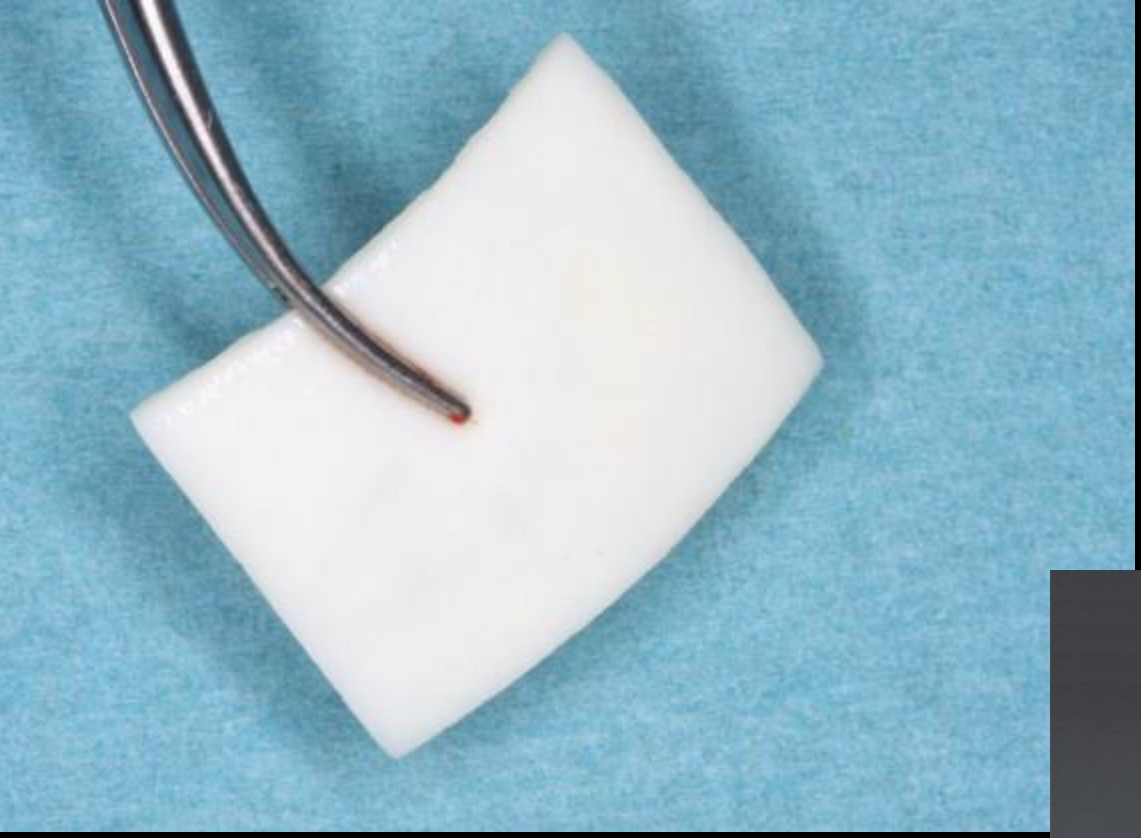
ZARF TEKNİĞİ



TÜNEL TEKNİĞİ


LifeCell
AlloDerm®
REGENERATIVE TISSUE MATRIX
FRAGILE



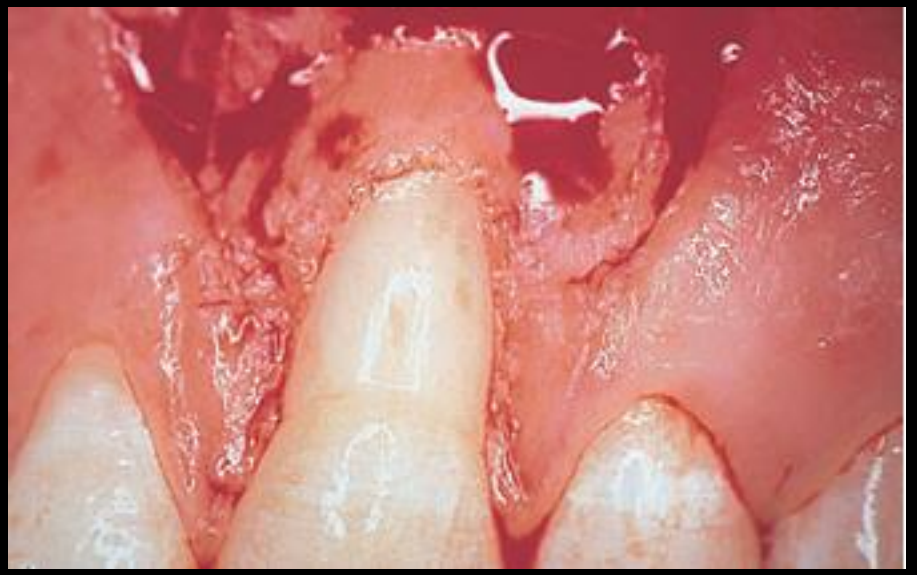

mucoderm®
Soft Tissue Graft
Weichgewebe-Implantat
botiss
dental

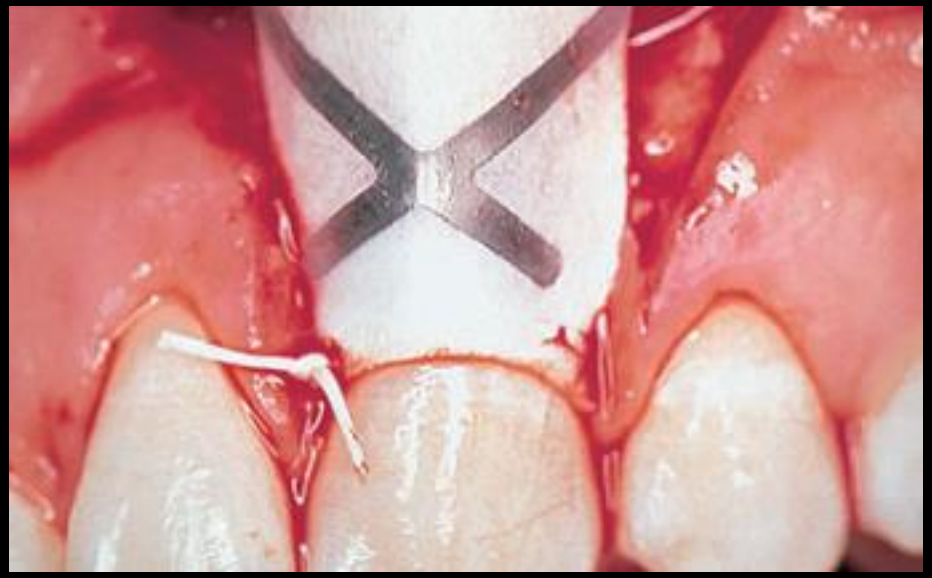

Geistlich Mucograft®
collagen matrix
1 matrix 15 mm x 20 mm
15 x 20 mm
LEADING REGENERATION
MATRIX

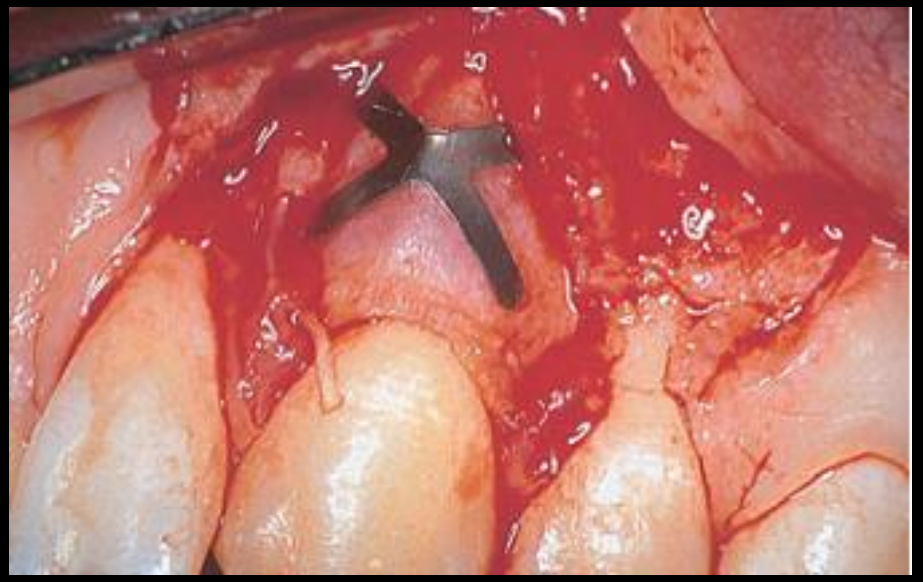

Straumann®
Emdogain
0.7 ml (30 mg/ml)
Straumann®
PrefGel
0.6 ml


straumann
EMDOGAIN™
COMMITTED TO
SIMPLY DOING MORE
FOR DENTAL PROFESSIONALS™

YÖNLENDİRİLMİŞ DOKU REJENERASYONU







Root coverage procedure	No. of studies	No. of patients/teeth	Root coverage	
			Mean % of initial recession	Range
Rotational flaps	10	222/235	68	41–74
Coronally advanced flap	17	315/527	79	55–99
Guided tissue regeneration	35	589/695	75	48–94
Enamel matrix proteins	10	207/219	86	72–94
Free connective tissue graft	33	683/890	86	53–98
Epithelialized free soft tissue graft	16	335/491	63	11–87

Root coverage procedure	No. of studies	No. of patients/teeth	Complete root coverage	
			Mean % of teeth	Range
Rotational flaps	1	30/30	43	–
Coronally advanced flap	15	287/499	48	9–95
Guided tissue regeneration	24	357/453	36	0–75
Enamel matrix proteins	7	138/150	72	53–90
Free connective tissue graft	26	549/732	61	0–93
Epithelialized free soft tissue graft	10	253/380	28	0–90

Pagliaro ve ark. (2003). Evidence-based mucogingival therapy. Part 1: A critical review of the literature on root coverage procedures. *Journal of Periodontology*

KÖK YÜZEYİ KAPATMADA ETKİLİ FAKTÖRLER

- Hastaya bağlı faktörler
  - Oral hijyen
  - Hatalı fırçalama
- Sigara
- Bölgeye ait faktörler
  - İnterdental periodontal destek
  - Çekilmenin derinlik ve genişliği
- Tekniğe ait faktörler
  - Flep kalınlığı
  - Flep gerilimi

3 mm< geniş ve 5 mm< derin çekilmelerde daha olumsuz sonuçlar

Pini-Prato ve ark., 1992, Trombelli ve ark., 1995

5 mm< derin çekilmelerde ; %50 tam kapanma

Daha sığ çekilmelerde; %96 tam kapanma

Wenström&Zucchelli, 1996

Flep kalınlığında kritik değer; 1 mm

Hwang&Wang, 2006

Flep gerilimi;

ort. 6.5 g gerilim 3. ay

%78 kök yüzeyi kapanma
%18 tam kapanma

gerilimsiz

%87 kök yüzeyi kapanma
%45 tam kapanma

Pini-Prato ve ark.2000

Suturlama sonrası dişeti kenarının CEJ göre konumu; 2 mm koronalde

Pini-Prato ve ark, 2005

Koronale Pozisyone Flep Sonrası Yapışık Dişeti Genişliğinde Artış

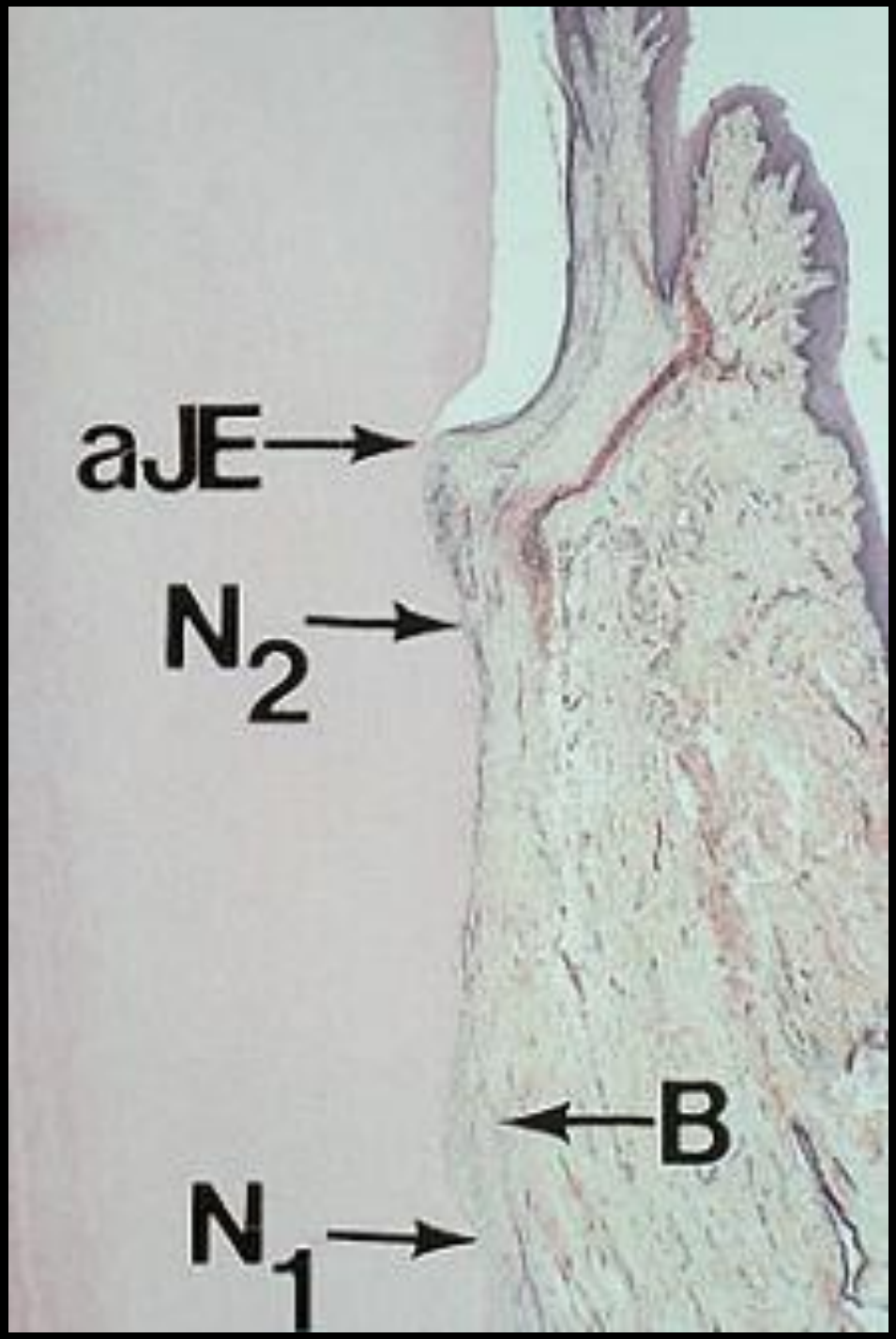
GÖRÜŞLER

1. Periodontal ligamentten köken alan granülasyon dokusu dişetine benzer bağ dokusu oluşturur ve üzerindeki dişetinin keratinizasyonunu sağlama potansiyeli vardır.

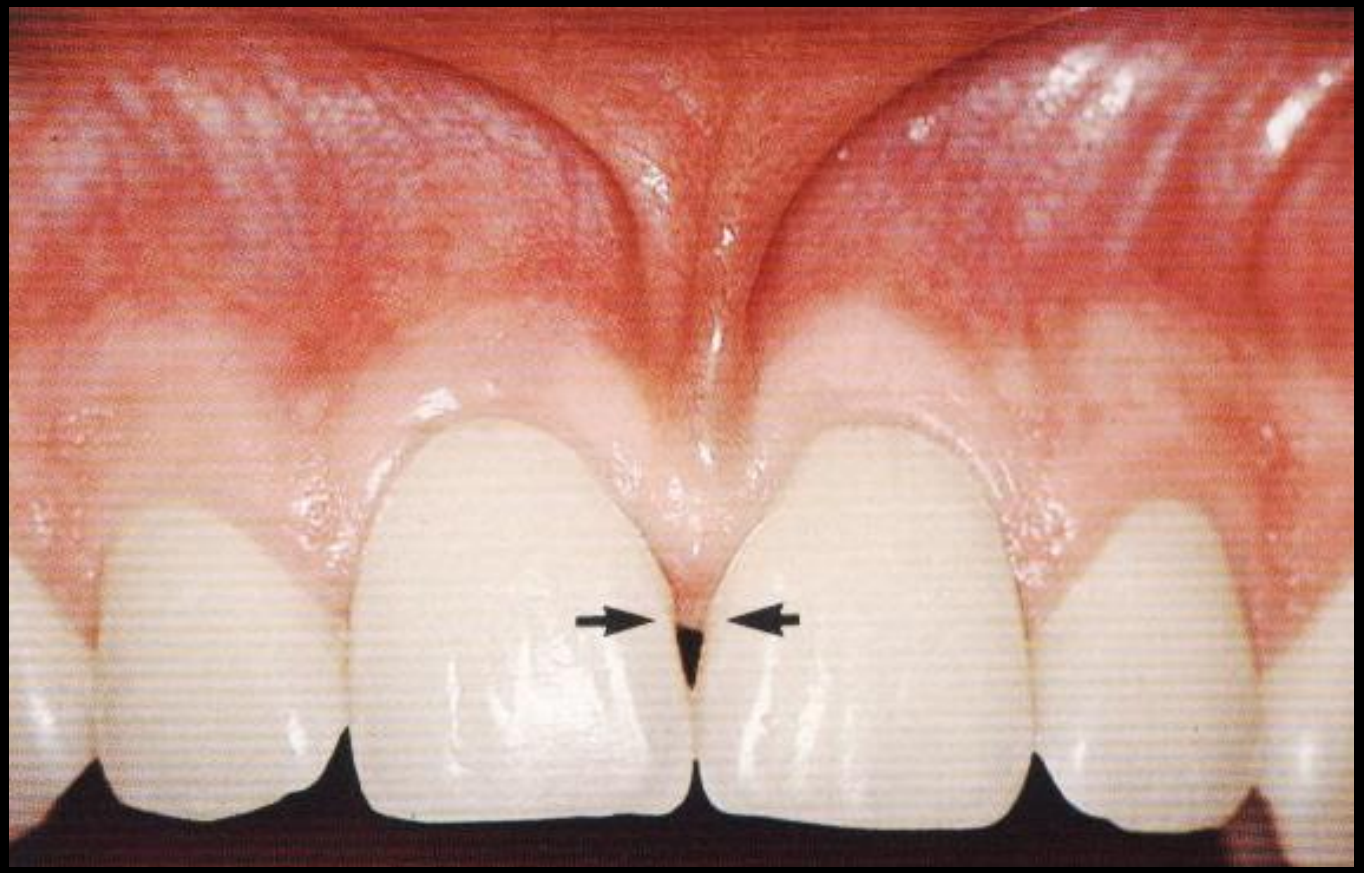
   Karring ve ark., 1971

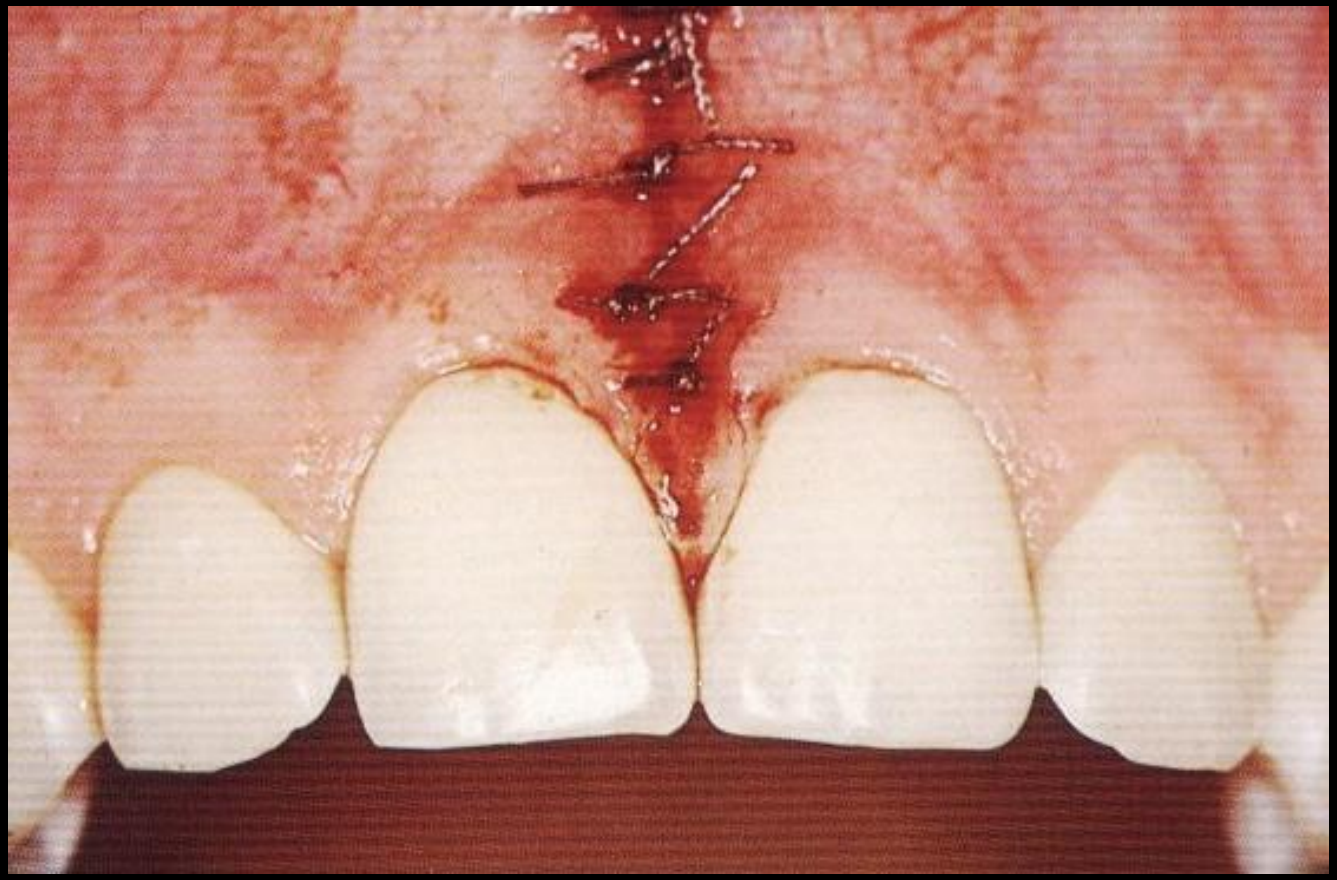
2. Mukogingival hattın genetik olarak belirlenmiş çizgisine ulaşması

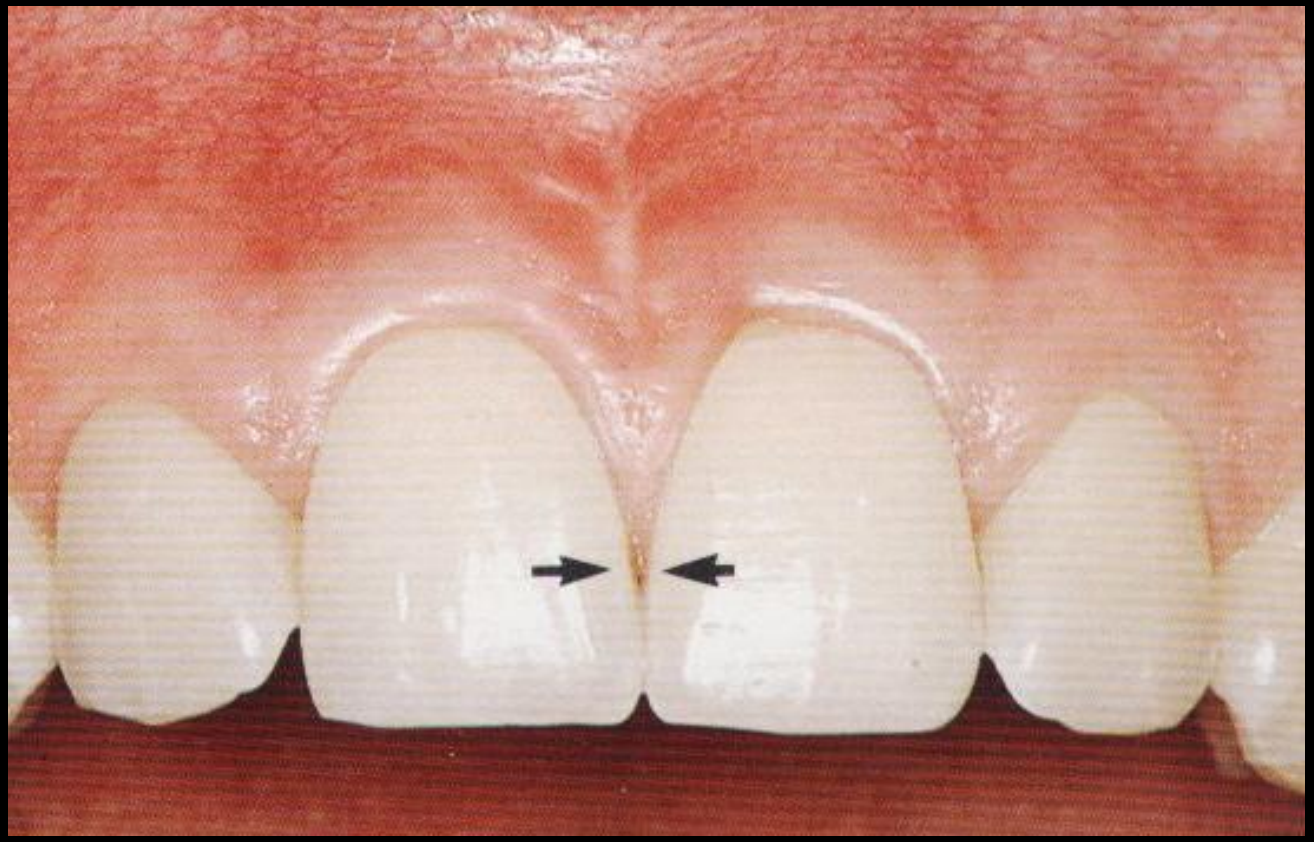
   Ainamo ve ark., 1992

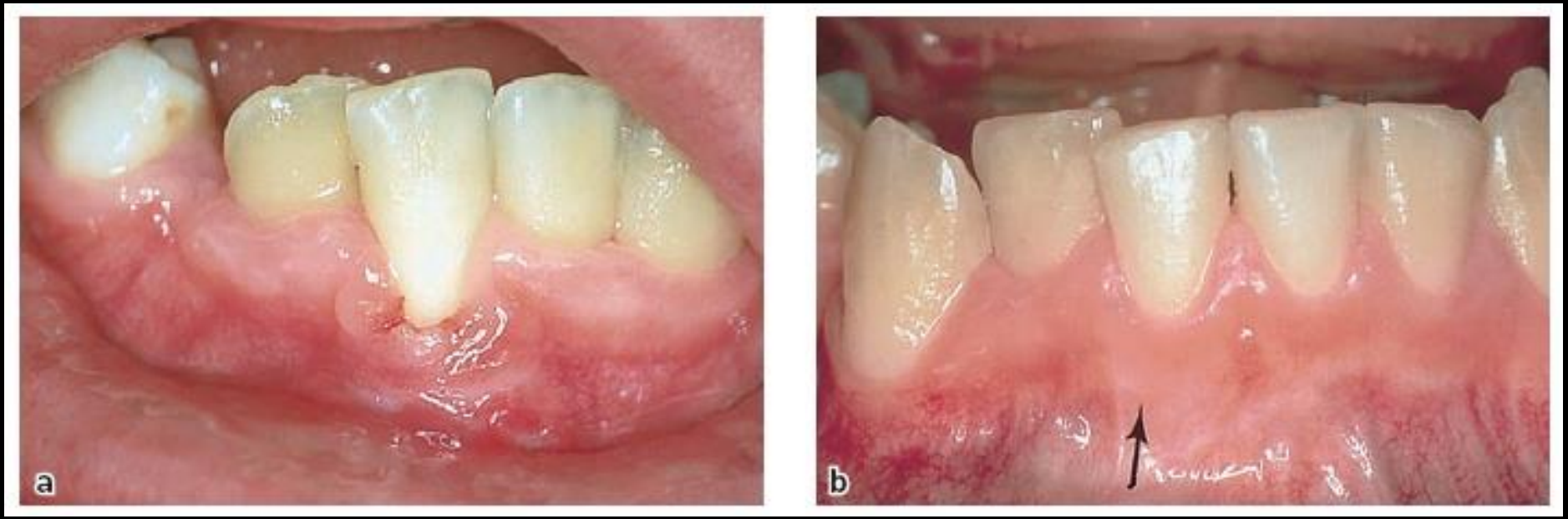

aJE
N2
B
N1



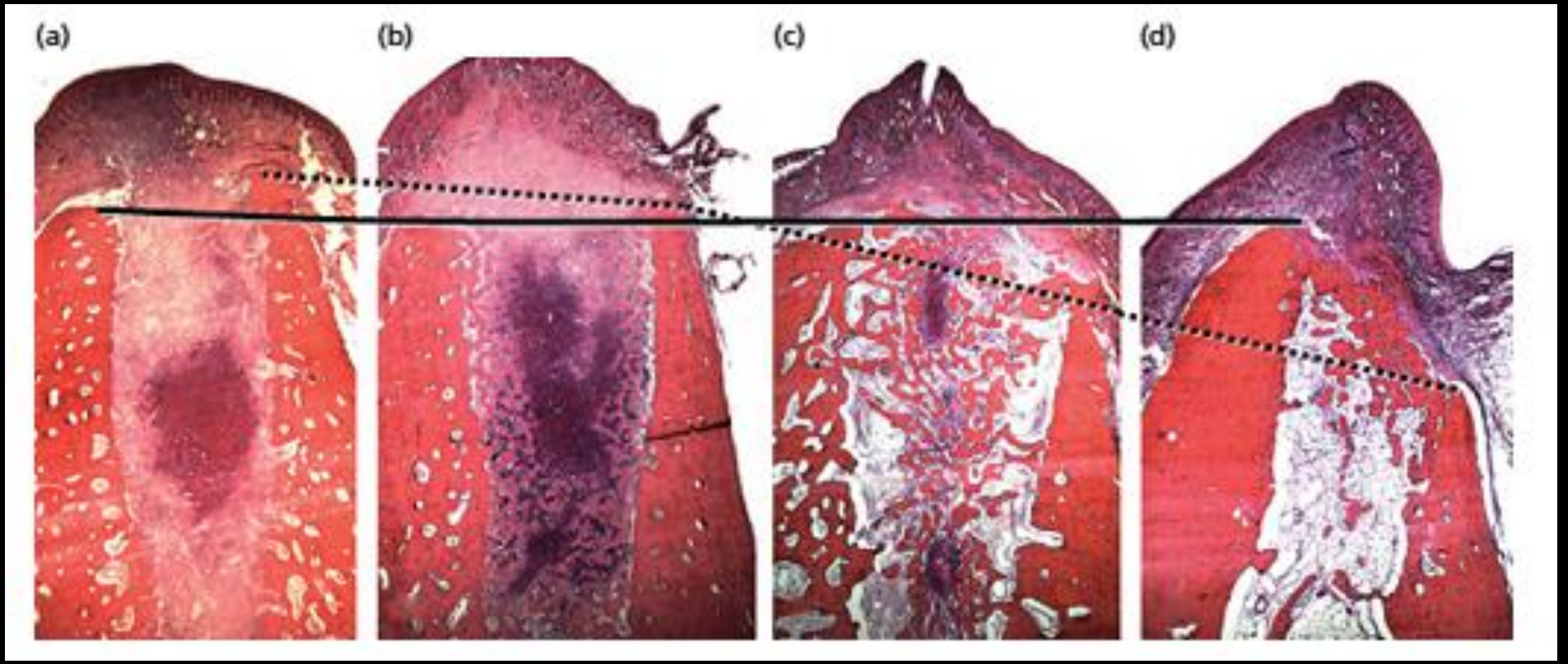





a
b


a
b


73


(a)
(b)
(c)
(d)

Bukkolingual mesafe

3. ay % 30

12. Ay % 50

Bukkal yükseklik lingual/palatinale göre 1.2 mm

Schropp (2003)


(a)
(b)
(c)
(d)