

LARGE ADHESIVE RESTORATIONS, MARGIN RELOCATION

CONVENTIONAL WAY

Large caries lesion endodontic treatment -
root canal inlay, crown

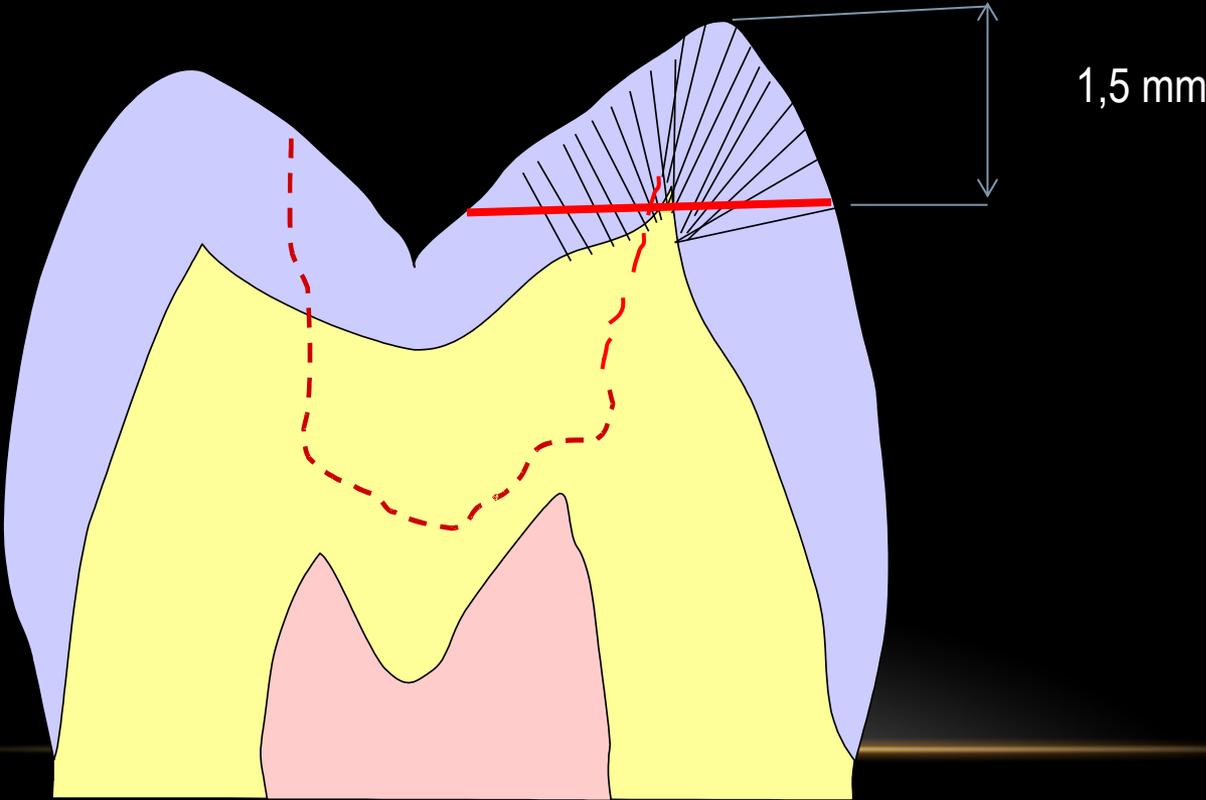
CONTEMPORARY TRENDS

- Adhesive materials
 - Smaller loss of hard dental tissues
 - Connection without any gap
 - Higher resistancy of treated teeth
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ADHESIVE TECHNOLOGIES - RISKS

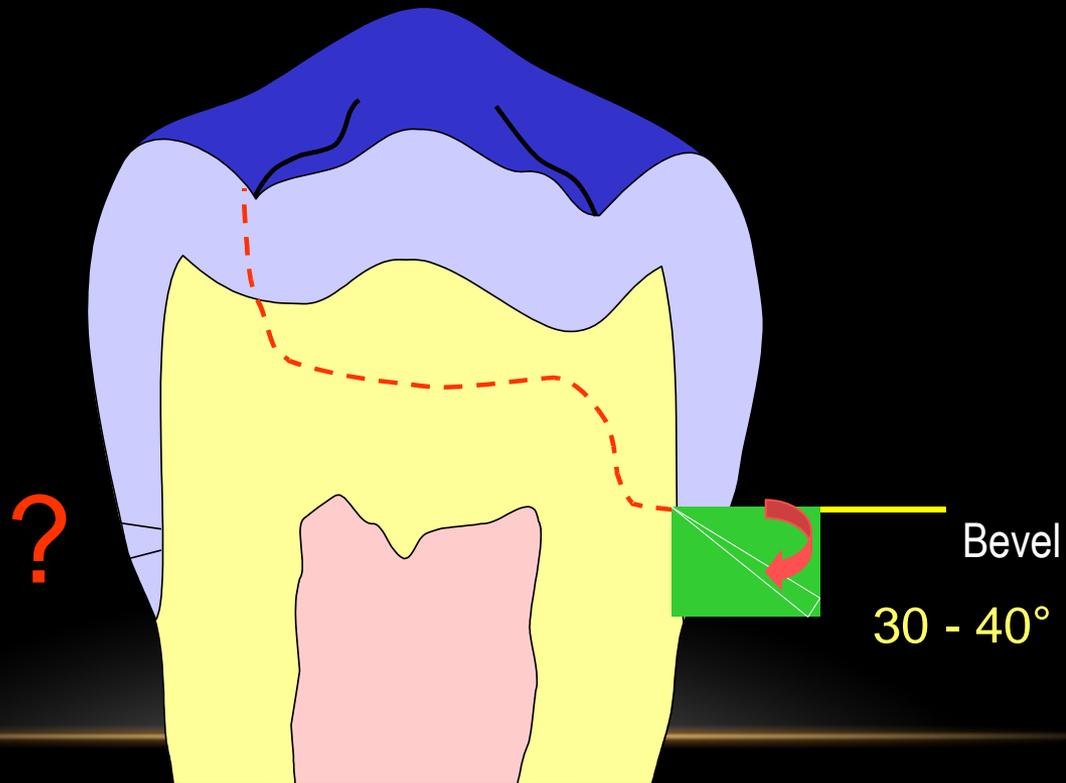
- Preparation of cavosurface margin with regard to orientation of enamel rods and retention of the filling
 - Subgingival defects – is possible to make a composite filling?
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IF THE BORDER IS NEXT TO CUSP – IT IS BETTER TO REPLACE THE CUSP WITH INDIRECT FILLING



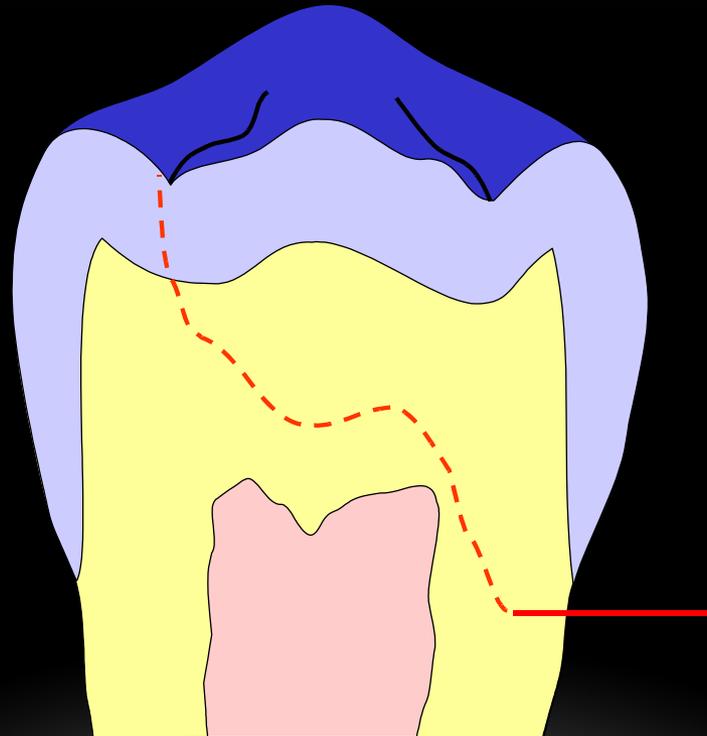
CERVICAL BORDER

In enamel



CERVICAL BORDER

In dentin



no bevel

SUBGINGIVAL DEFECTS

- **Main problems**
 - Substantial loss of hard dental tissues
 - Subgingival cervical borders
 - Adhesive procedures in region without enamel – selfetching adhesive systems are better

CLASSIFICATION OF SUBGINGIVAL DEFECTS - CRITERIA

Technical parameters: Possibility to keep the operating field dry

Biological parameters: measurement of distance between clean gingival border and insertion of periodontal ligament or crest of alveolar bone using periodontal probe and x-ray. Consider biological width.

CLASSIFICATION OF SUBGINGIVAL DEFECTS

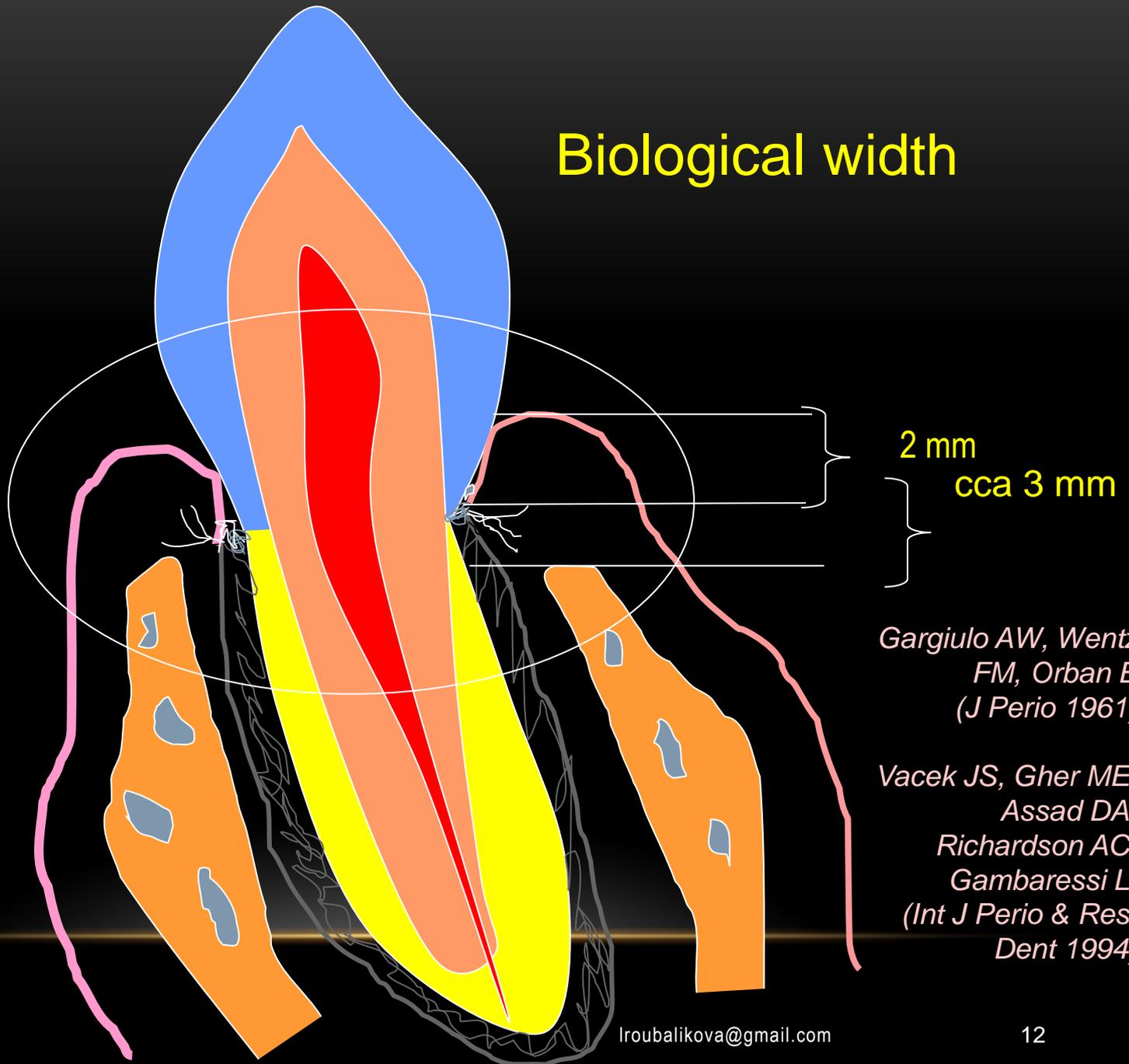
1. Rubberdam is possible to use, gingival border can be seen isolation can be insufficient.
 2. Rubberdam does not allow complete isolation of operating field biological width is ok (distance between gingival border and insertion of periodontal ligament is 2mm and more and distance between gingival border and crest of alveolar bone is 3 mm and.
 3. Subgingival defect, biological width is insufficient.
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SOLUTION

1. Margin elevation (relocation using flowable material 1 – 1,5 mm.
2. Gingivectomy + gingivoplasty
3. Elongation of clinical crown (gingivectomy, ostectomy)

Reconstruction: direct or indirect

Biological width

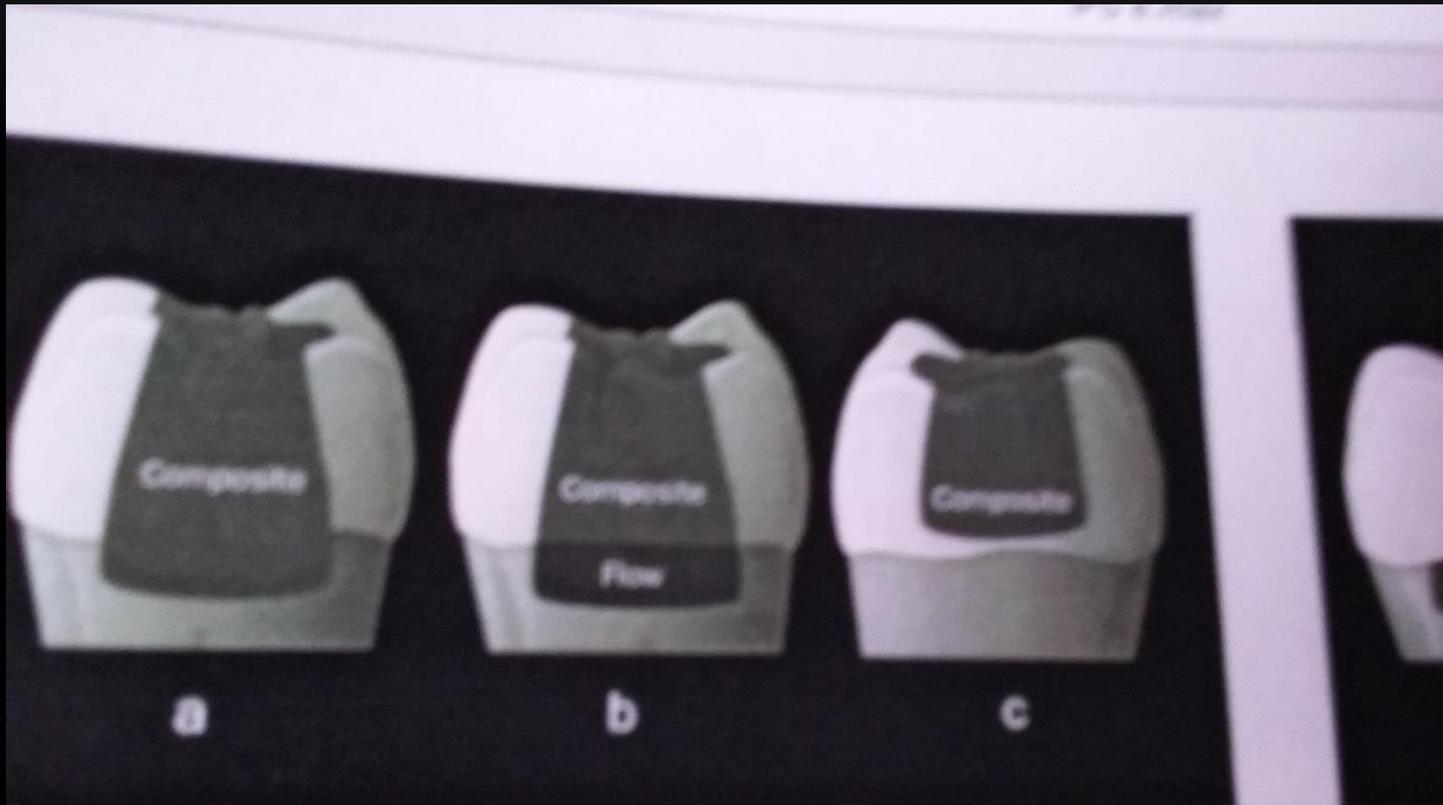


2 mm
cca 3 mm

*Gargiulo AW, Wentz
FM, Orban B
(J Perio 1961)*

*Vacek JS, Gher ME,
Assad DA,
Richardson AC,
Gambaressi LI
(Int J Perio & Rest
Dent 1994)*

Principle of margin relocation



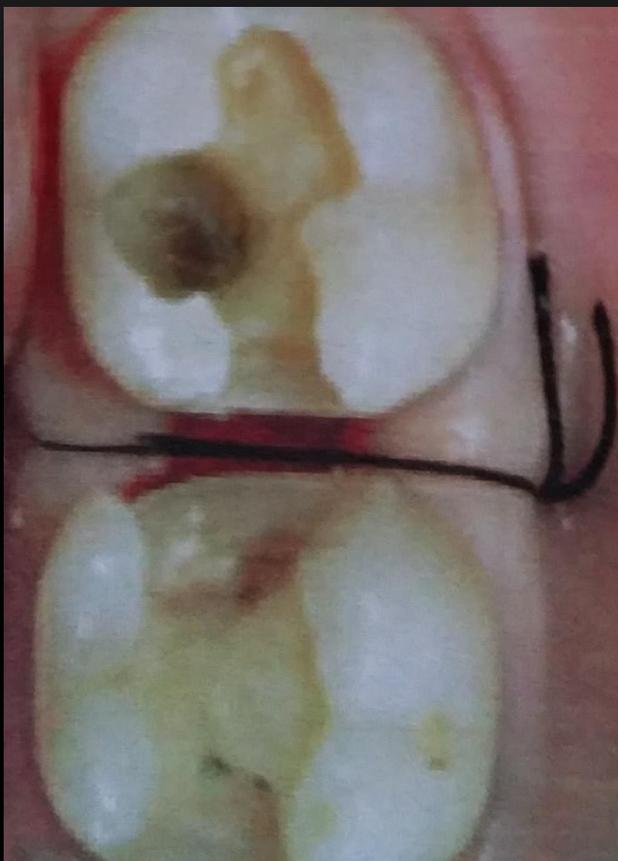




SEQUENCE OF OPERATION – MARGIN RELOCATION

- Consider possibility of effect of rubberdam and biological width
- Margin elevation - matrix wedge
- Selfetching adhesive system
- Flow 1 – 1,5 mm
- BW post op
- Making filling and impression

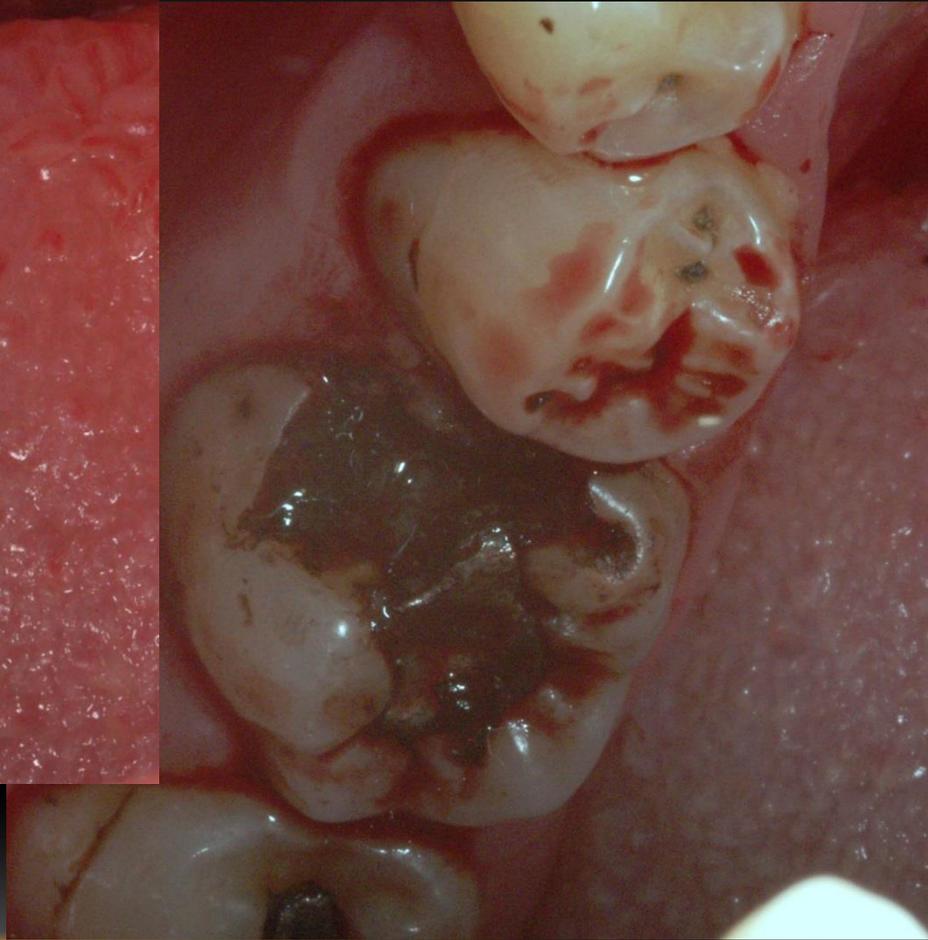
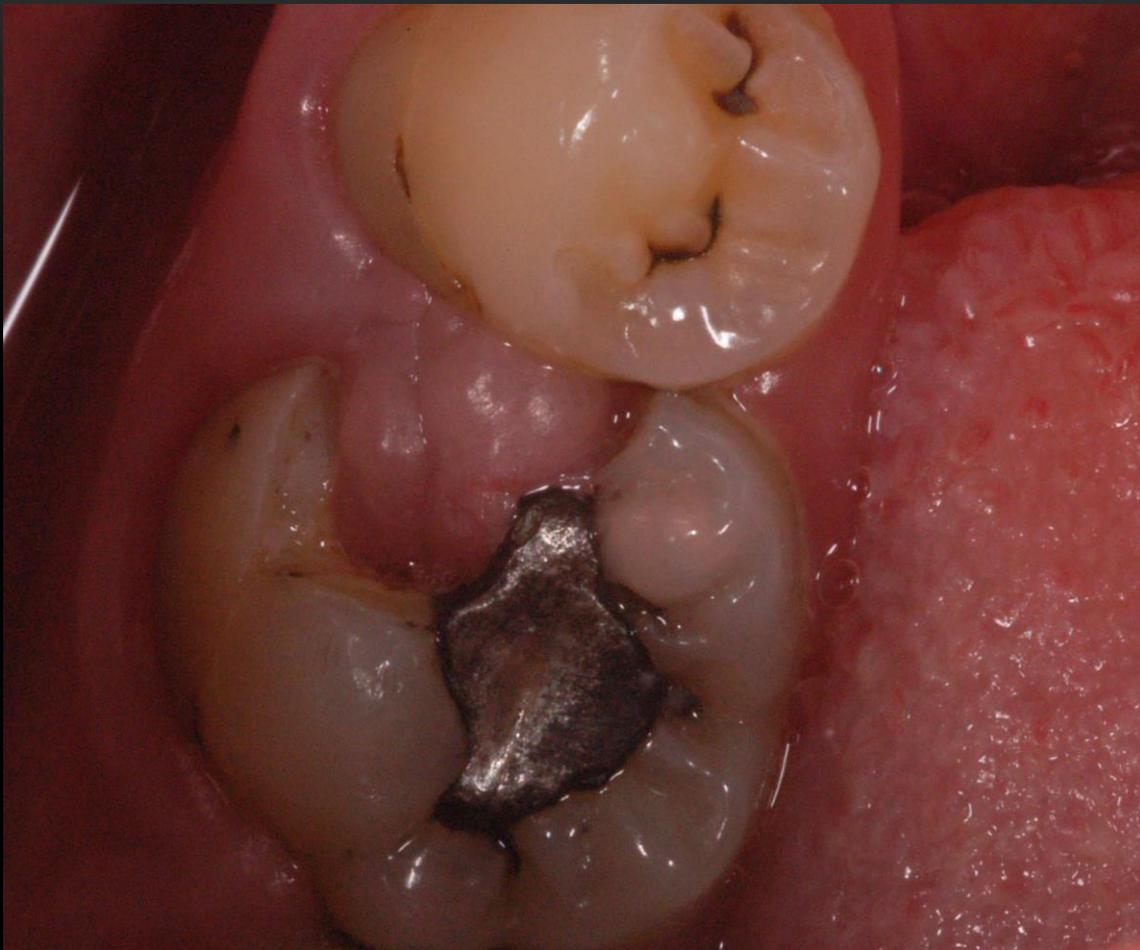






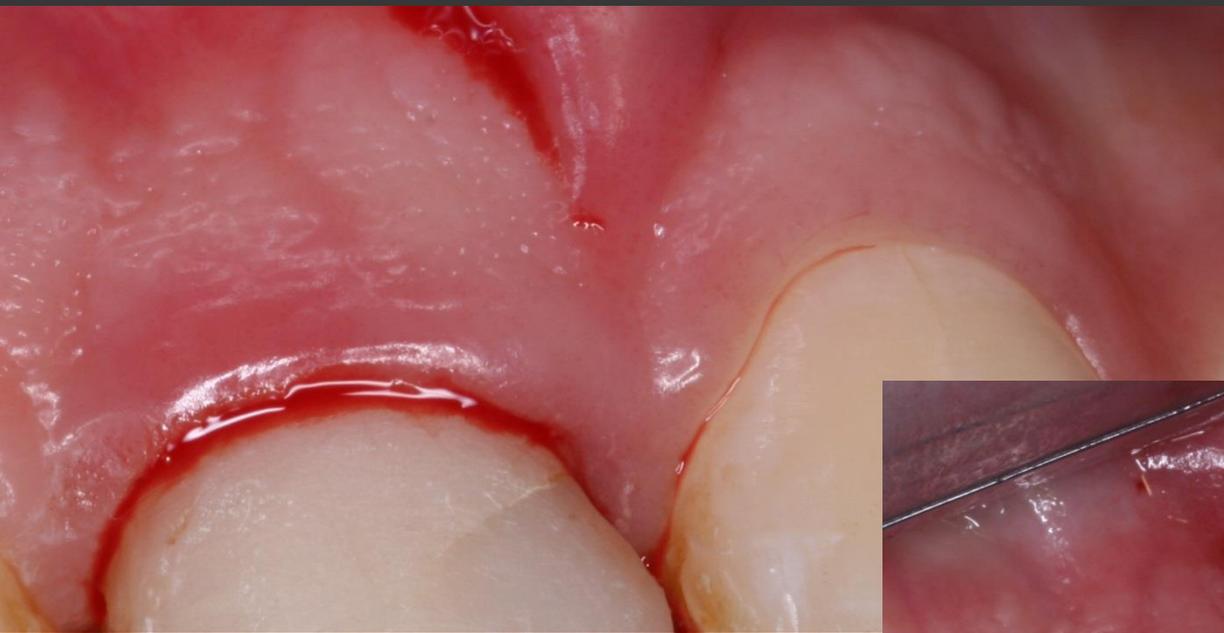
Gingivektomie
Gingivoplastika





GINGIVECTOMY + GINGIVOPLASTY

- Cut gingiva and form it anatomically
 - Scalpel
 - Laser
 - Cauter



Elongation of clinical crown

Ostectomy, gingivectomy

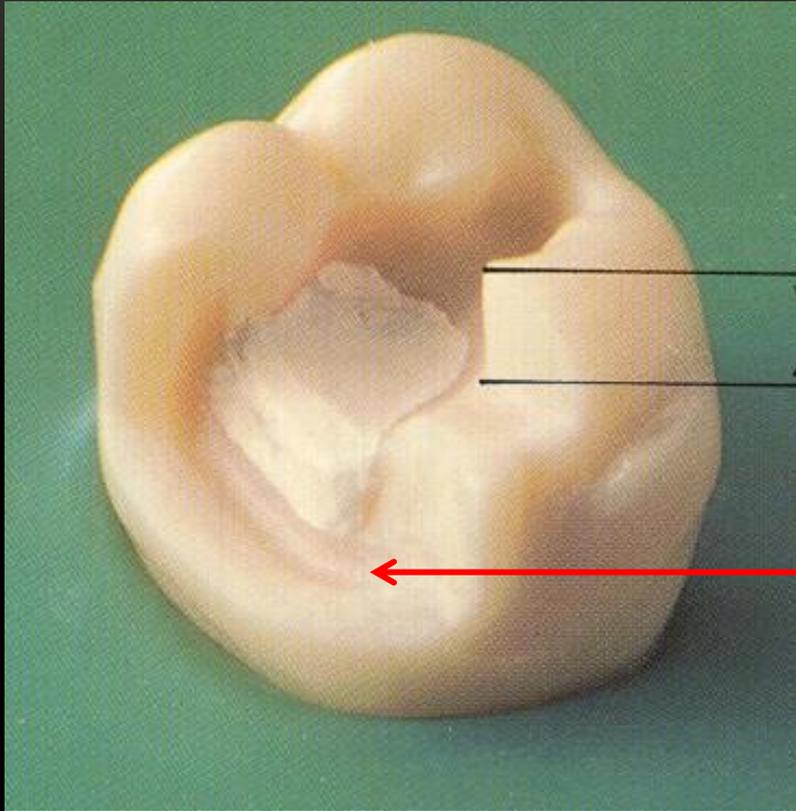
Scalpel

Laser

Ultrasound

LARGE DEFECTS - AMALGAM

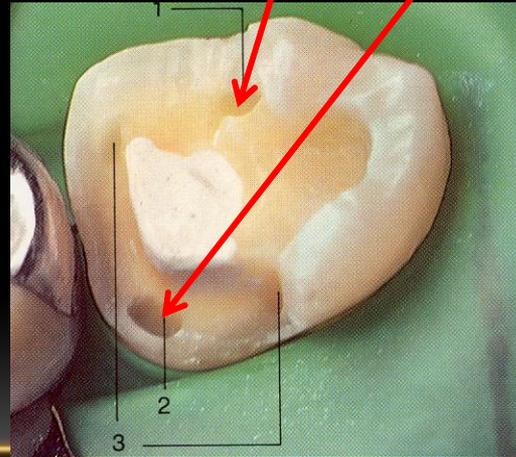
- In vital teeth if the cusp has been undermined due to dental caries
 - Large defects in non vital teeth – amalgam overlays
 - Combination with the cavity on vestibular/oral surface
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Cusp has been removed

The thickness of the filling
3 – 4 mm (at the cusp)

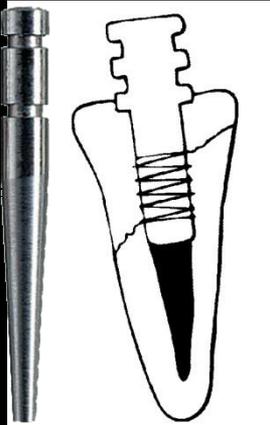
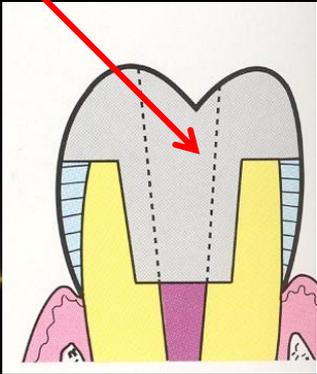
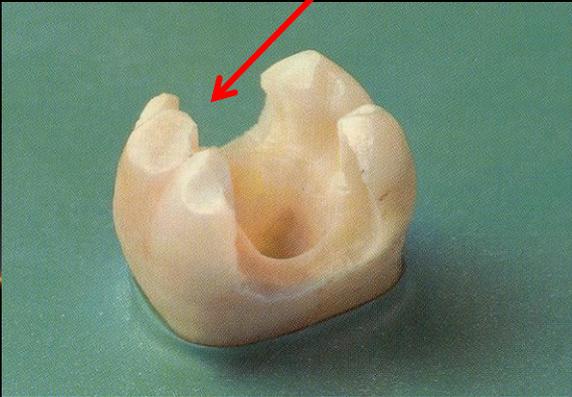
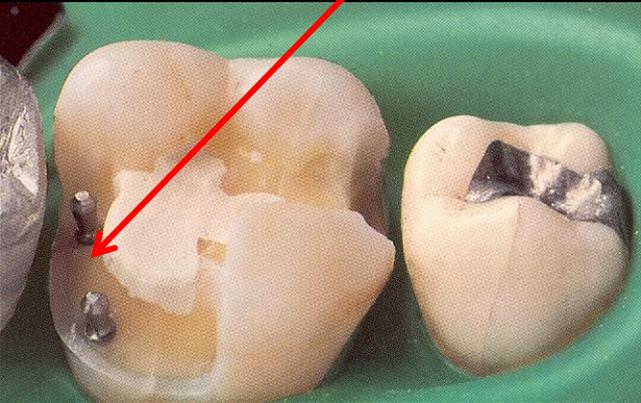
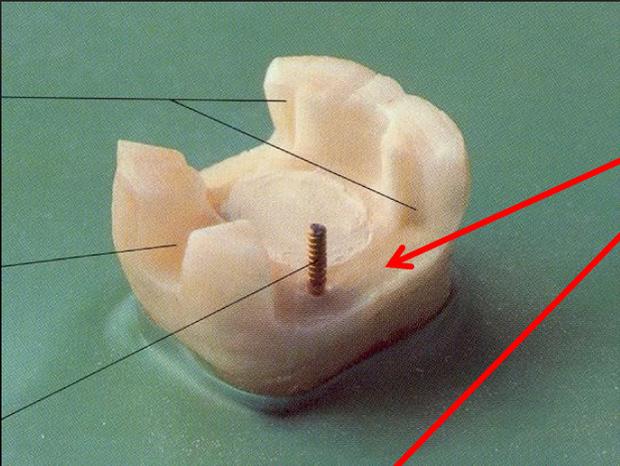
Retention
Grooves, pins, slots



Parapulpal pins (today obsolete)

Intrapulpal posts (root canal posts)

Retention in the endodontic cavity



LARGE AMALGAM RESTORATION - OVERLAYS

