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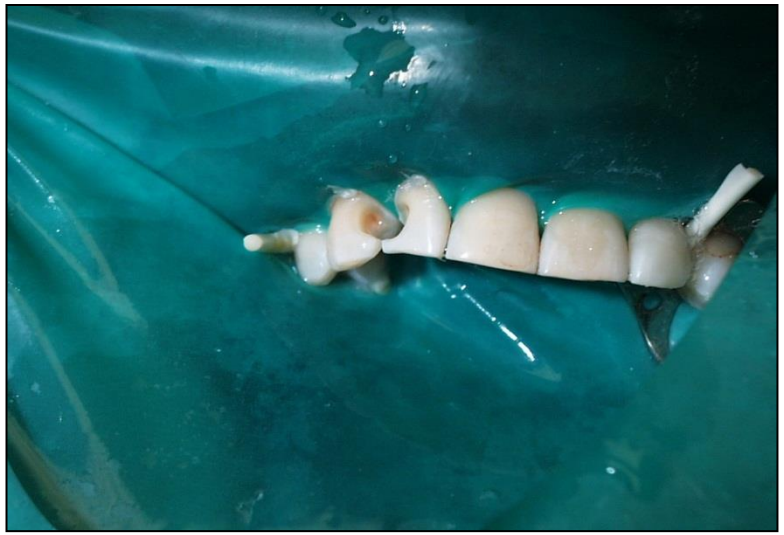
Preclinical dentistry III.

Class III.

Proximal surface of frontal teeth (incisors and canines) without loss of incisal edge. It originates usually below the contact point.



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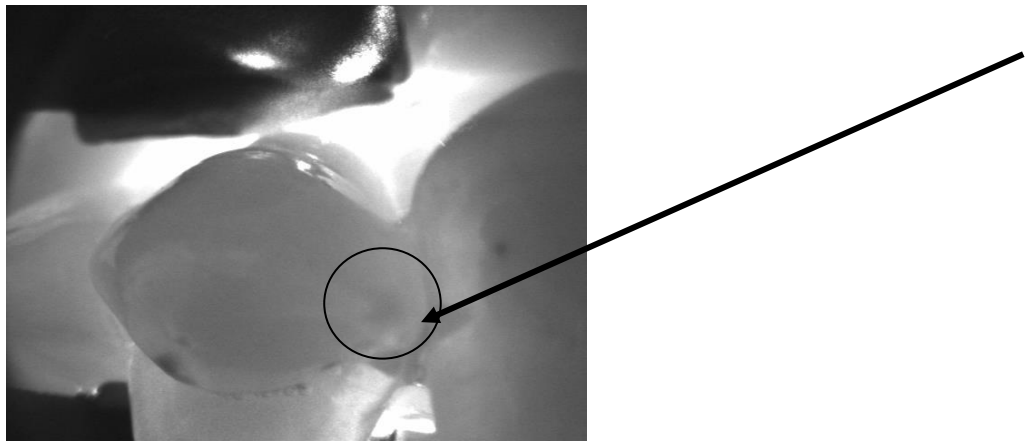
Diagnosis and clinical symptoms

- Visual diagnosis – good illumination or transillumination. Dark spot can be seen.
- Early diagnosis is quite easy.



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Materials

- Composite filling material is a materiál of the first choice
- Glassionomer when oral hygiene or control of dry field is not optimal.

Access to the cavity

- Through the enamel from the oral side
- If the carious lesion is spreading towards vestibular side, vestibular access is acceptable
- Removal of old filling
- Separation of teeth - wedges
- Removal od hyperplastic gingiva

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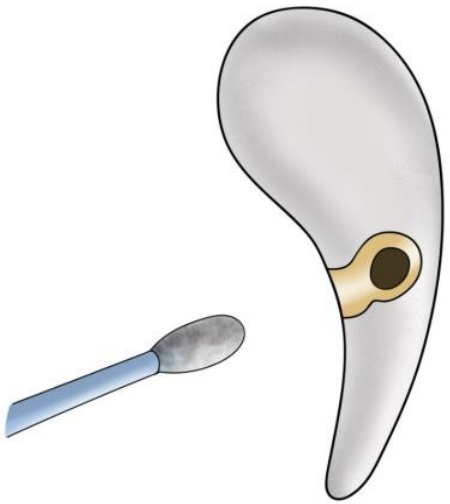
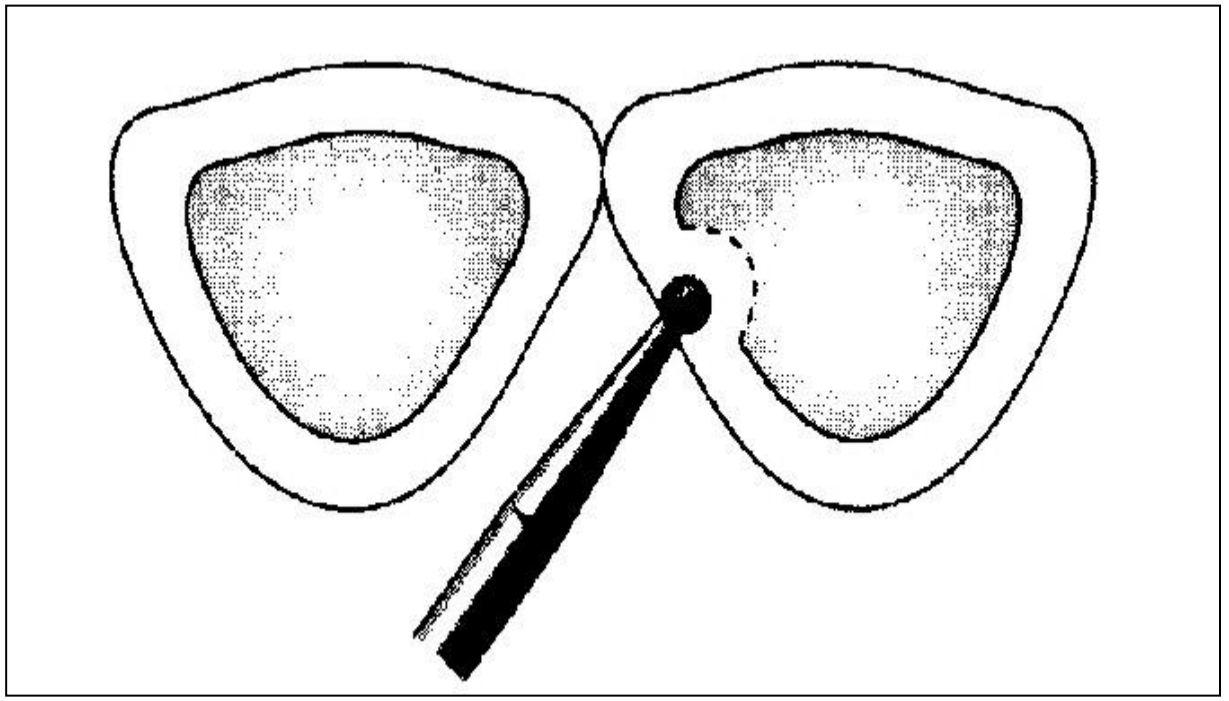
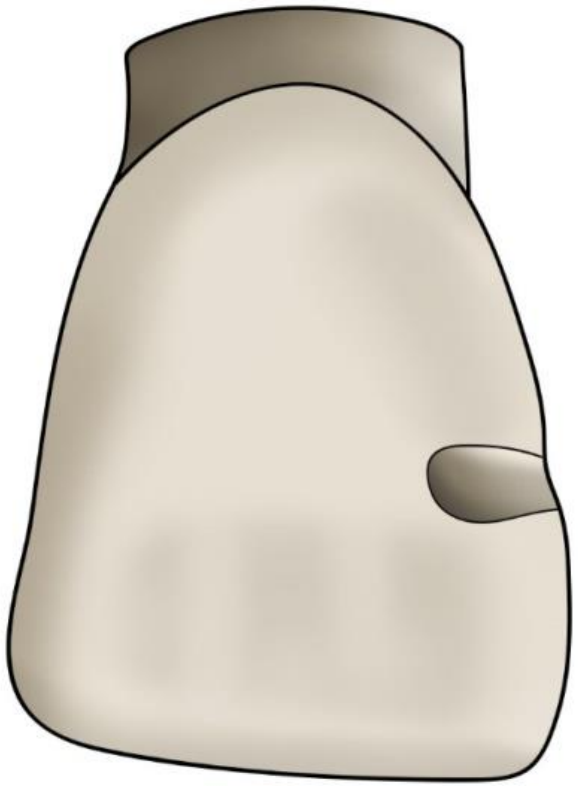
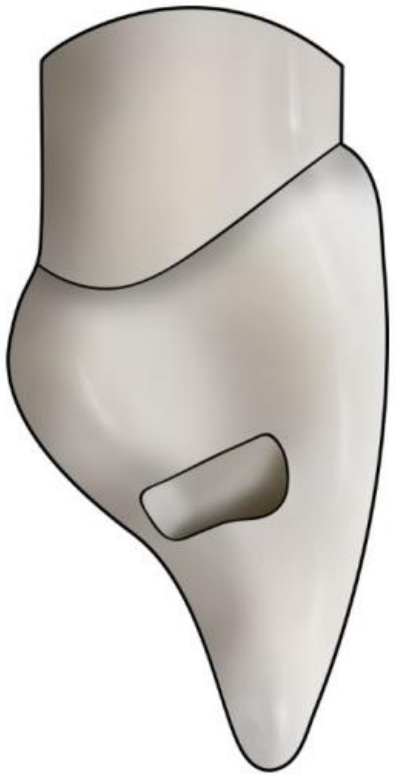
Access

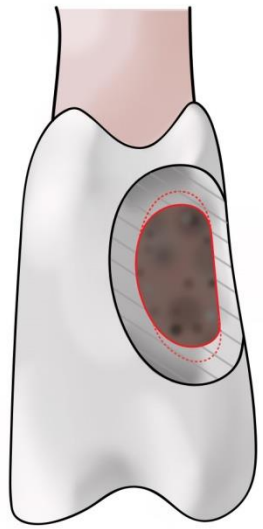


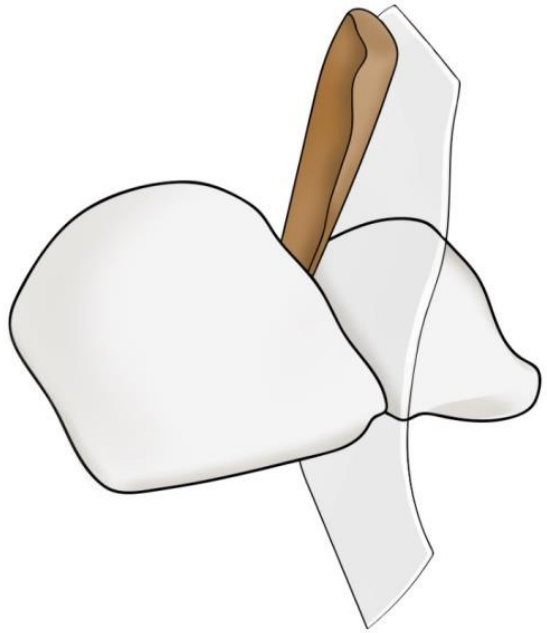


Round bur or diamond,
from oral side,
the caries lesion
on proximal wall must be reached



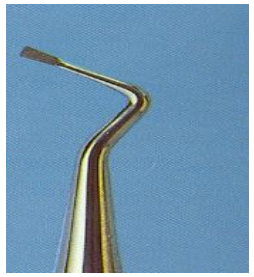






Cavosurface margin

- Cavity is limited on carious lesion only
- Margins must be beveled



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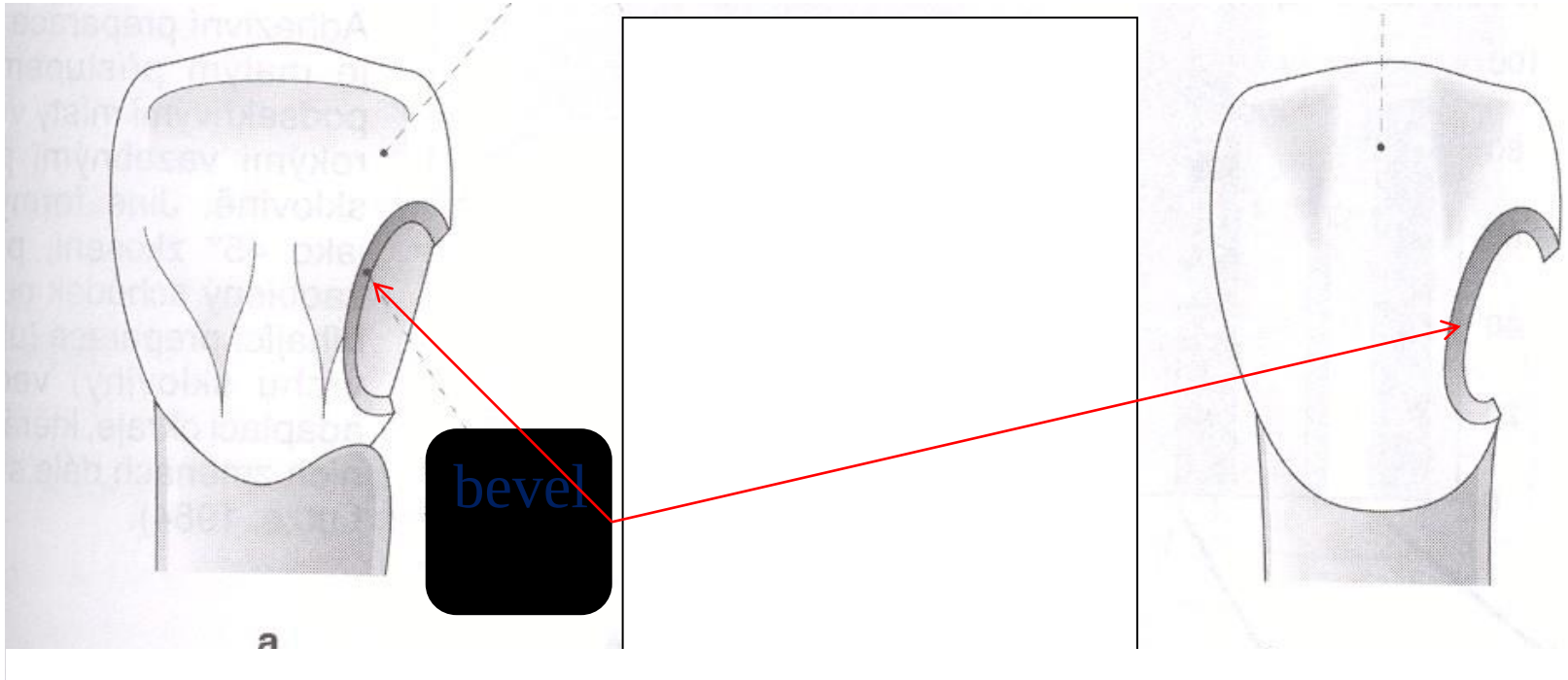
bevel
a

Retention

- Margins must be beveled – micromechanical retention
- Within the bevel (retentive border – shallow groove around the lesion) the aprismatic enamel is removed, the prismatic structure is exposed. Depth 0,5 mm. Angel appr. 45°.

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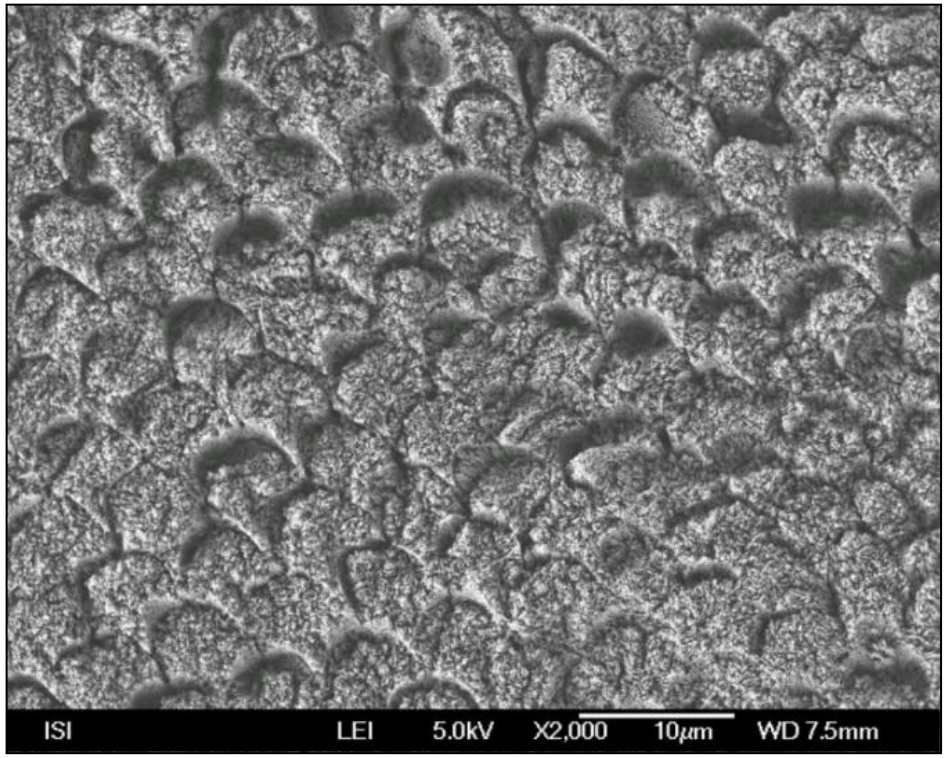
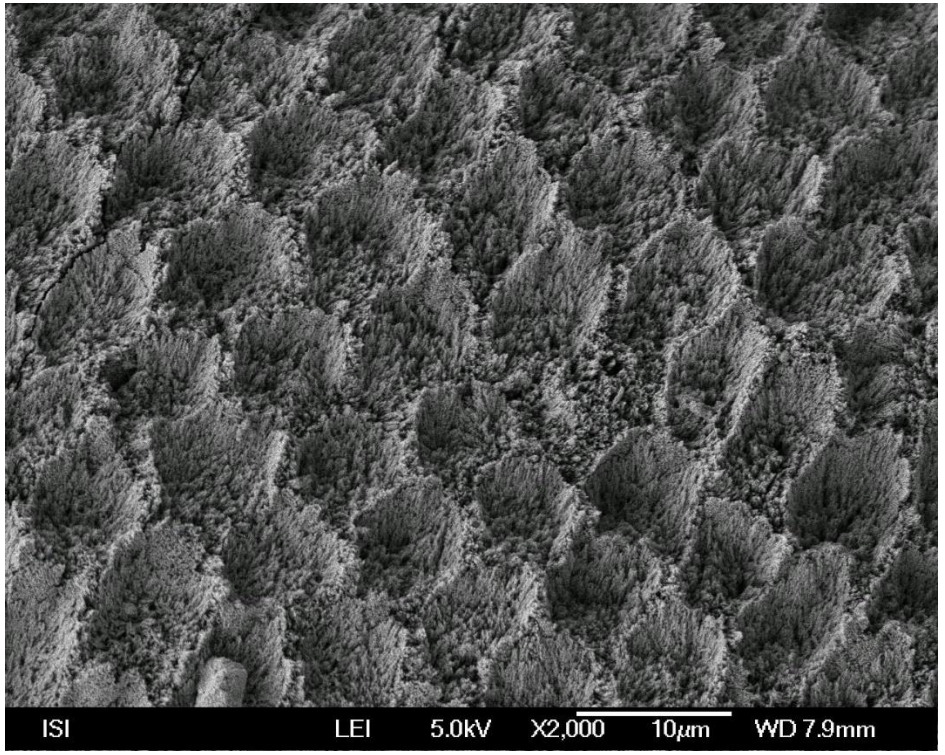
Prismatic structure
after the removalof aprismatic enamel
and acid etching – retentive pattern
periprismatic intraprismatic





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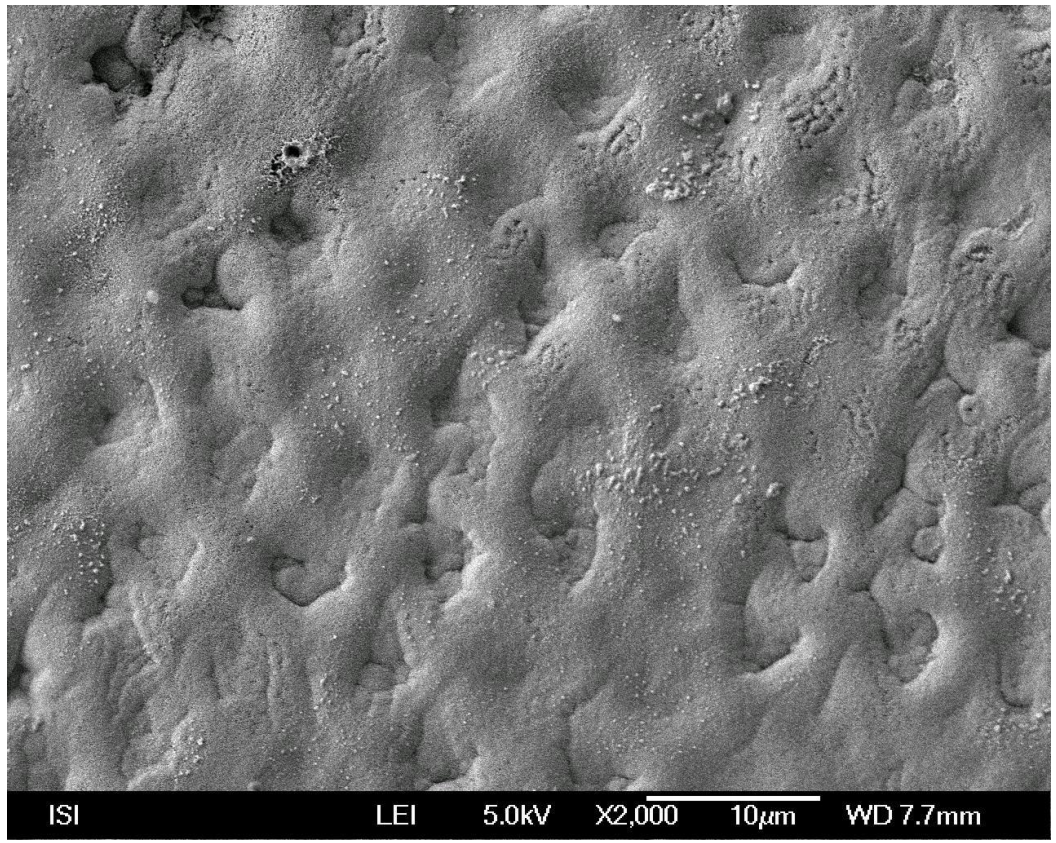
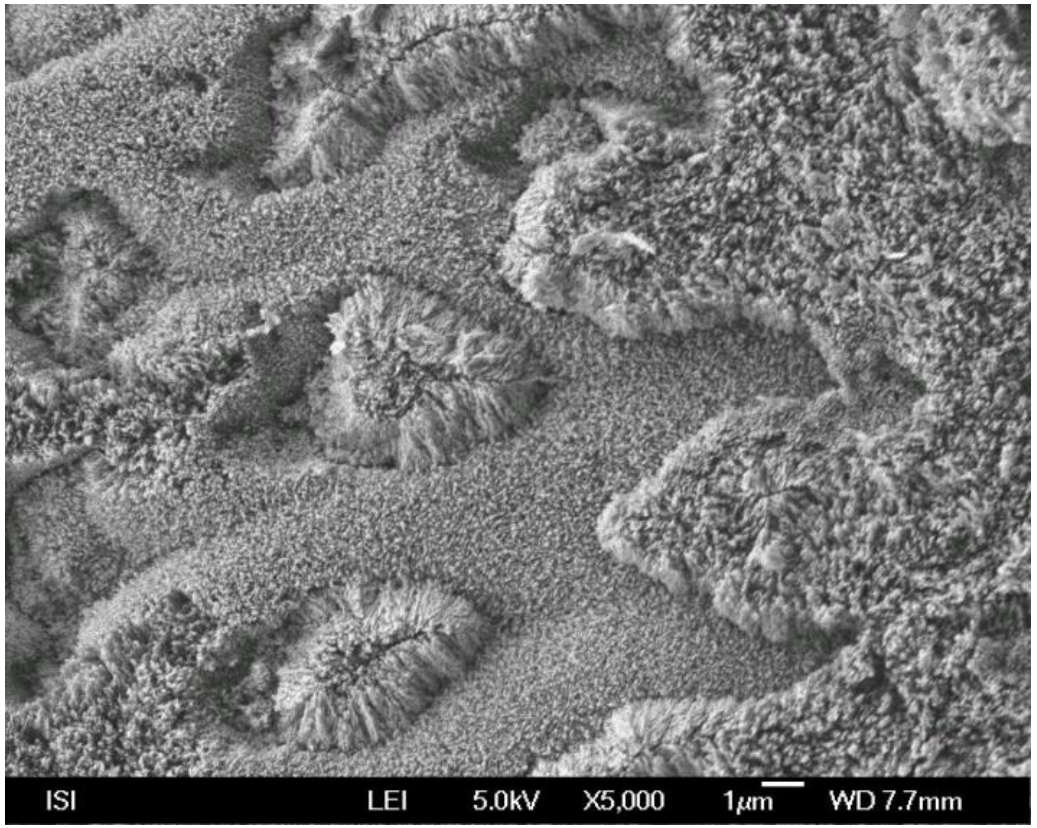
Aprismatic enamel



Aprismatic enamel after acid etching



Good isolation with the rubberdam

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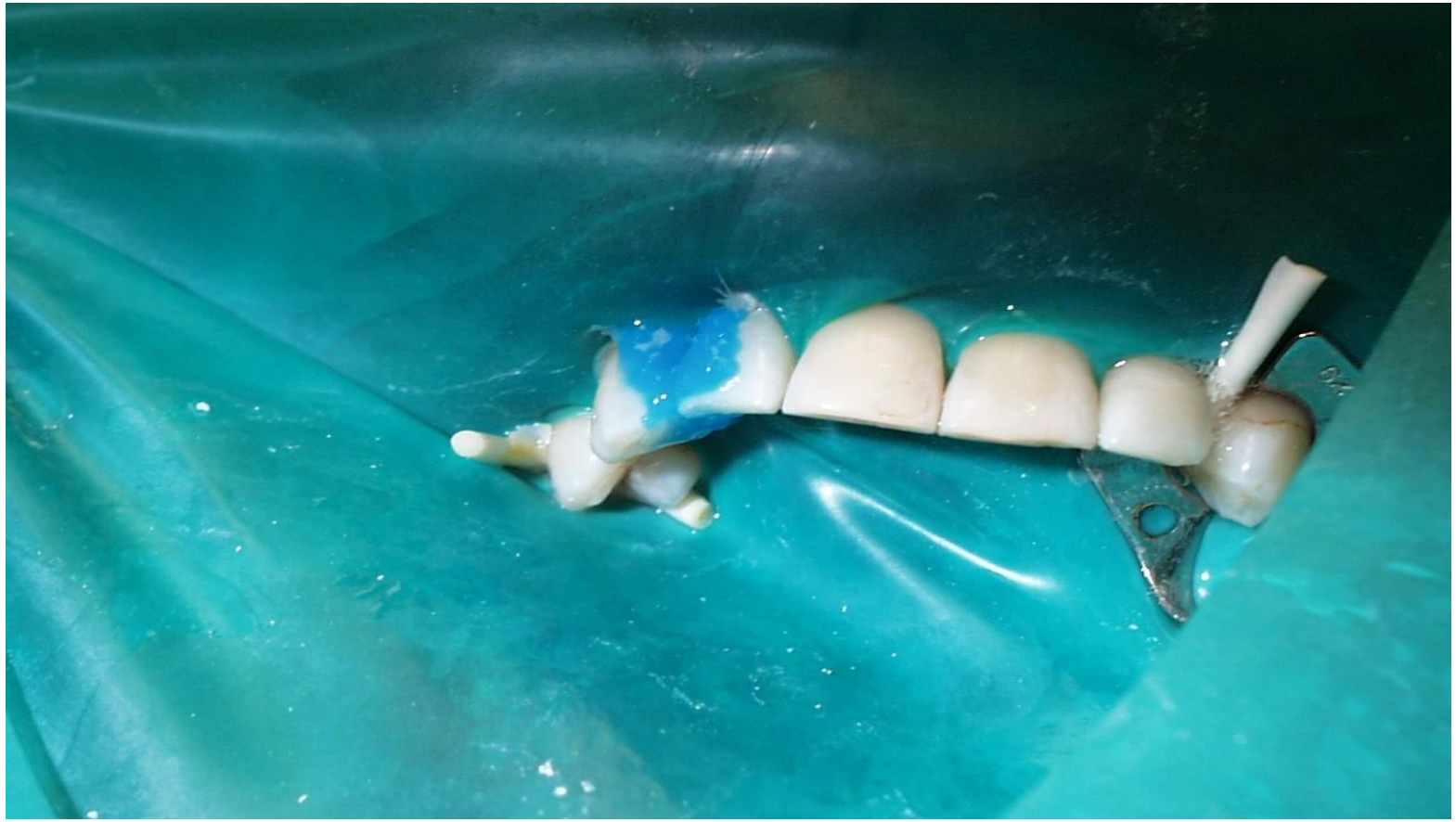
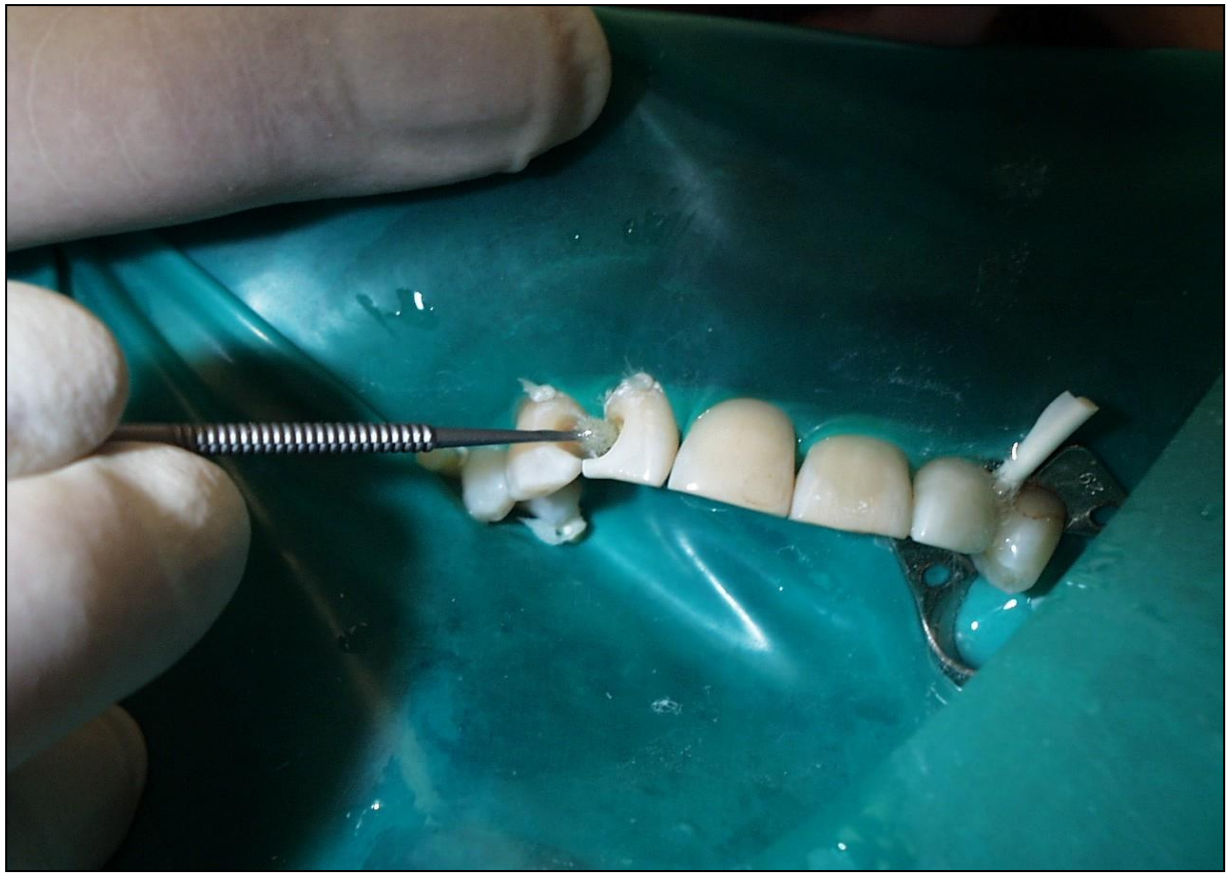
Acid etching of enamel and dentin:
Enamel 20 – 30 s
Dentin 10 s



Bonding



Sequence of operation – after choosing the colour – the enamel is cleaning

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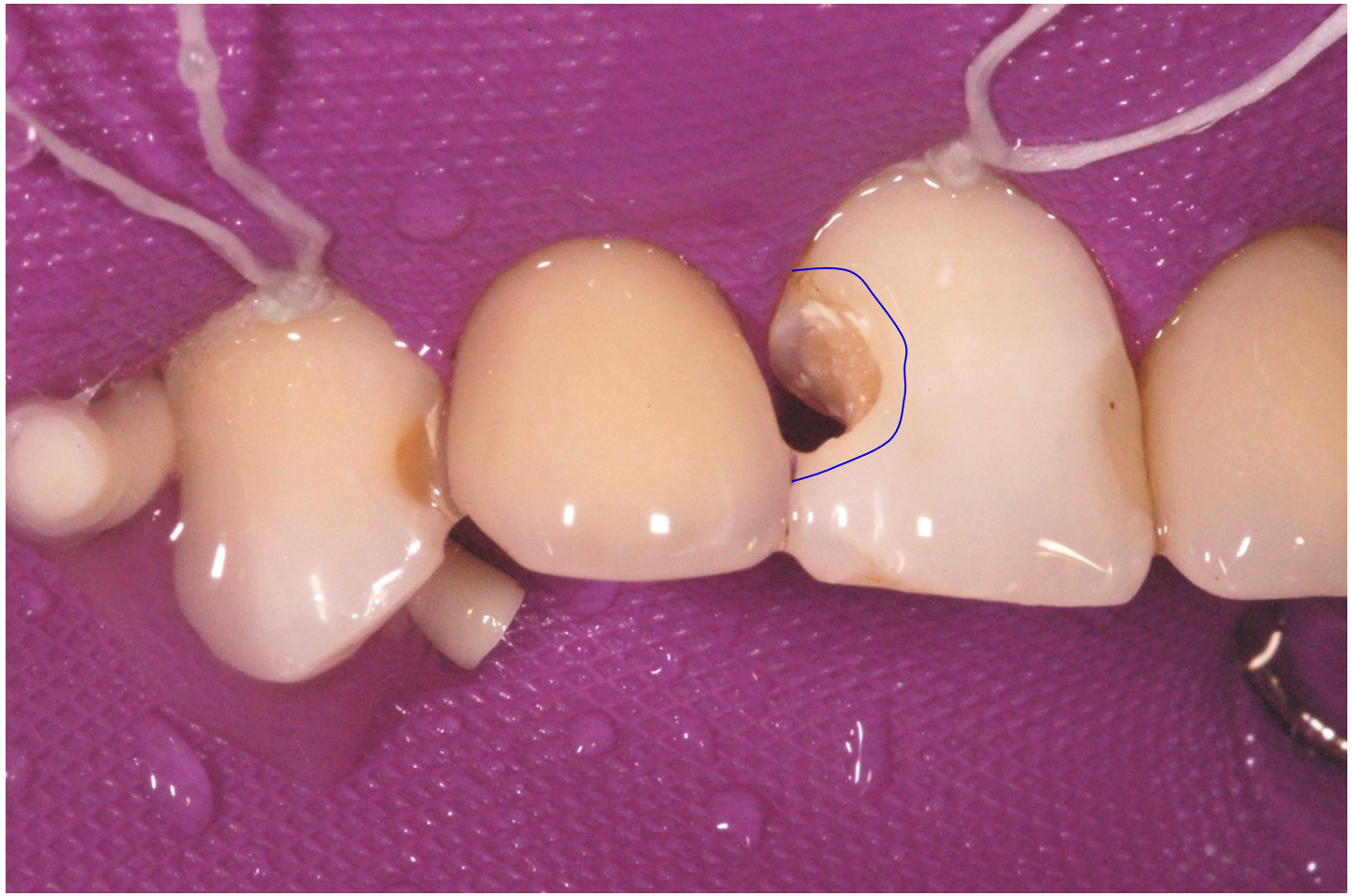
Preparation



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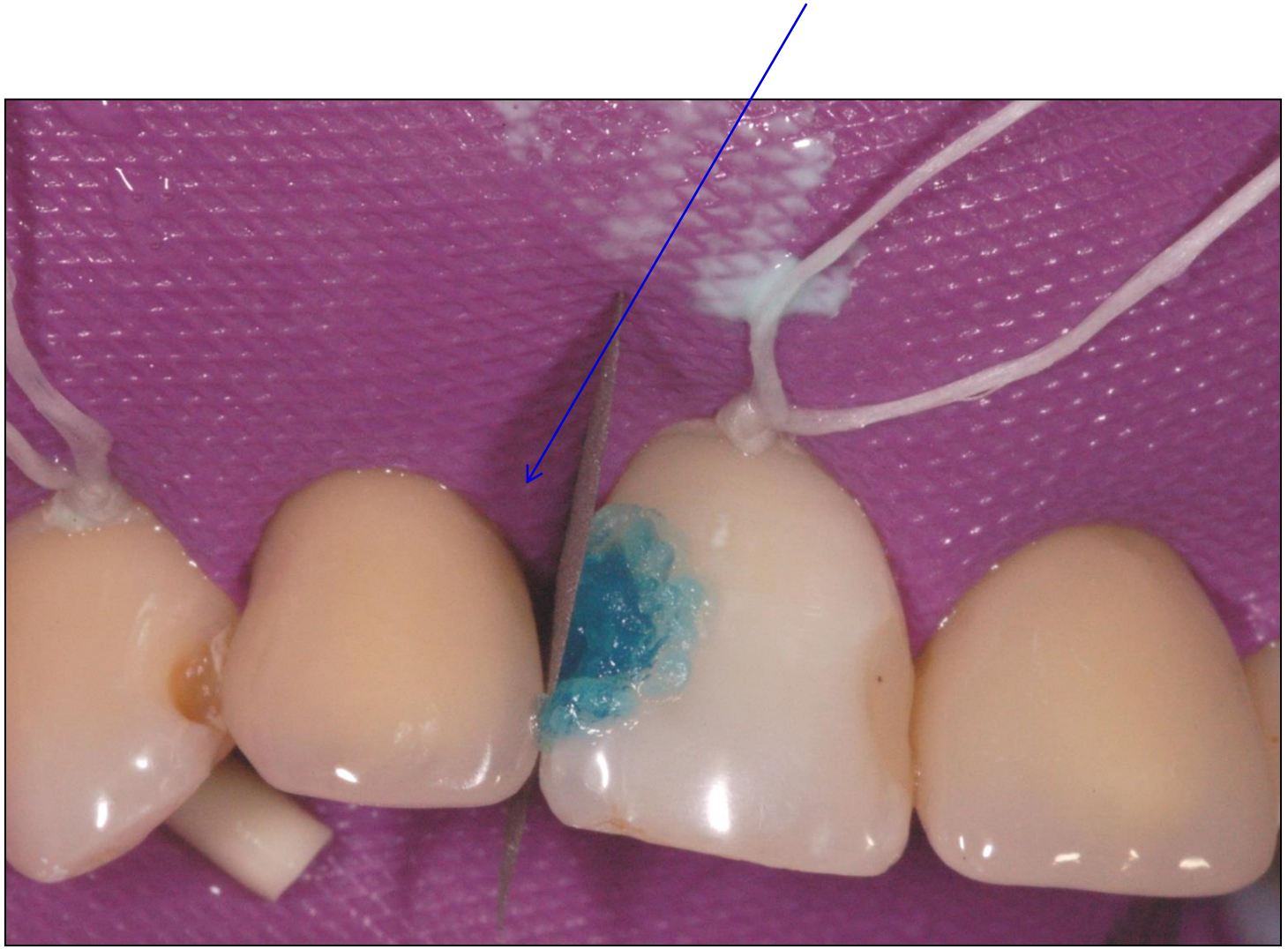
Acid etching – protection of the other tooth tooth



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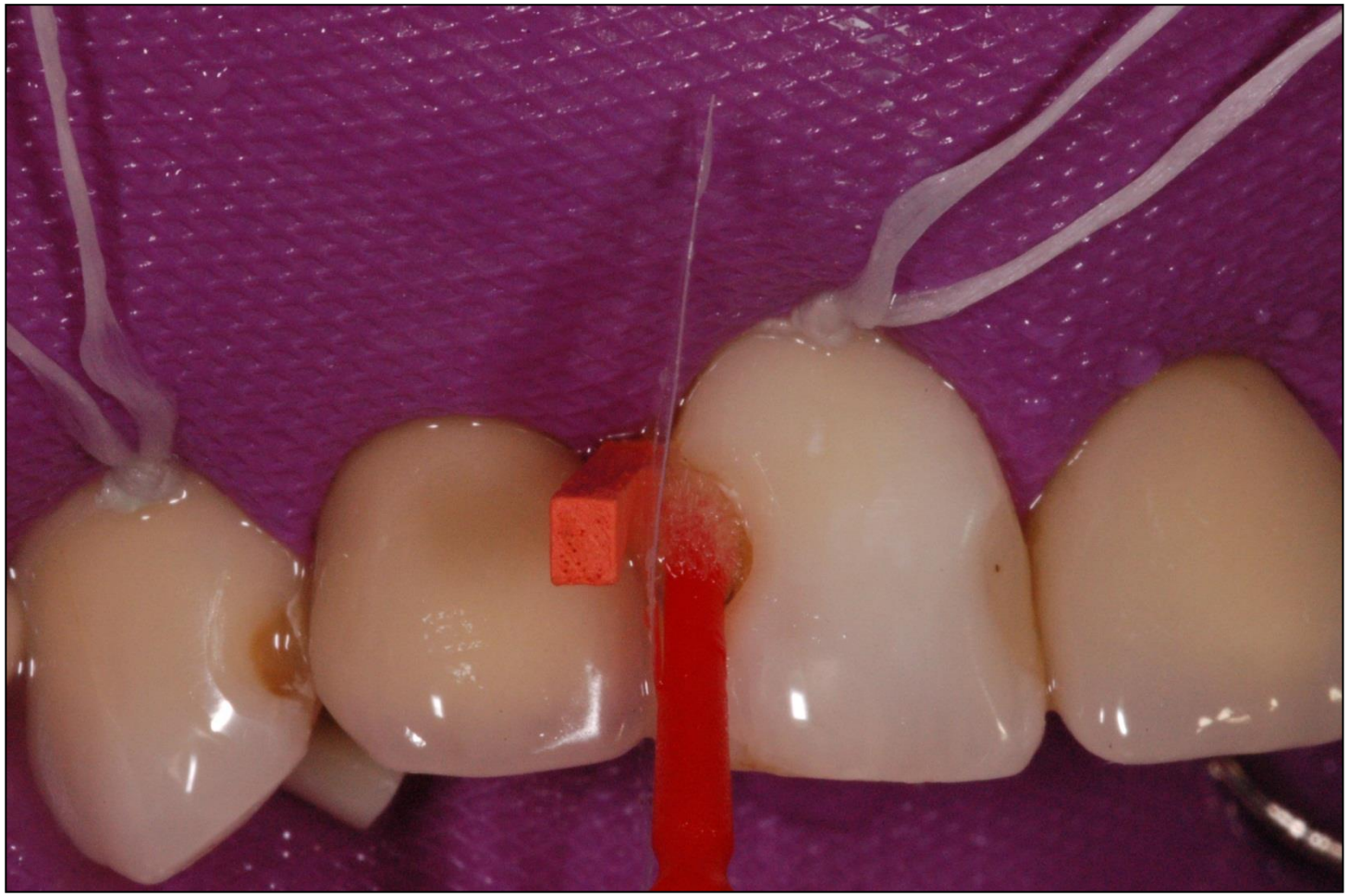
Matrix (transparent polyester strip) and wedge, priming and bonding



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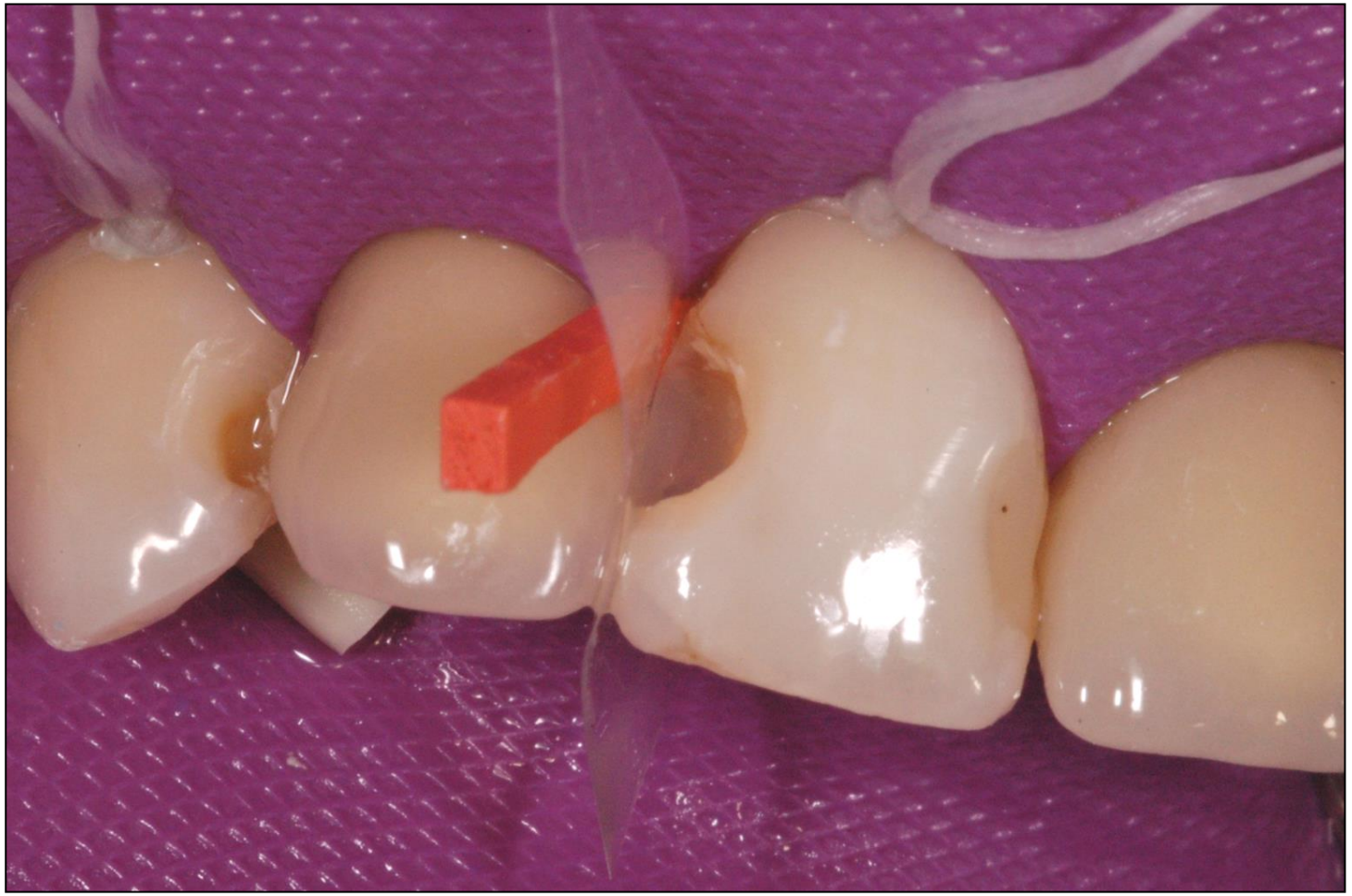
Application of the composite – palatal layer first



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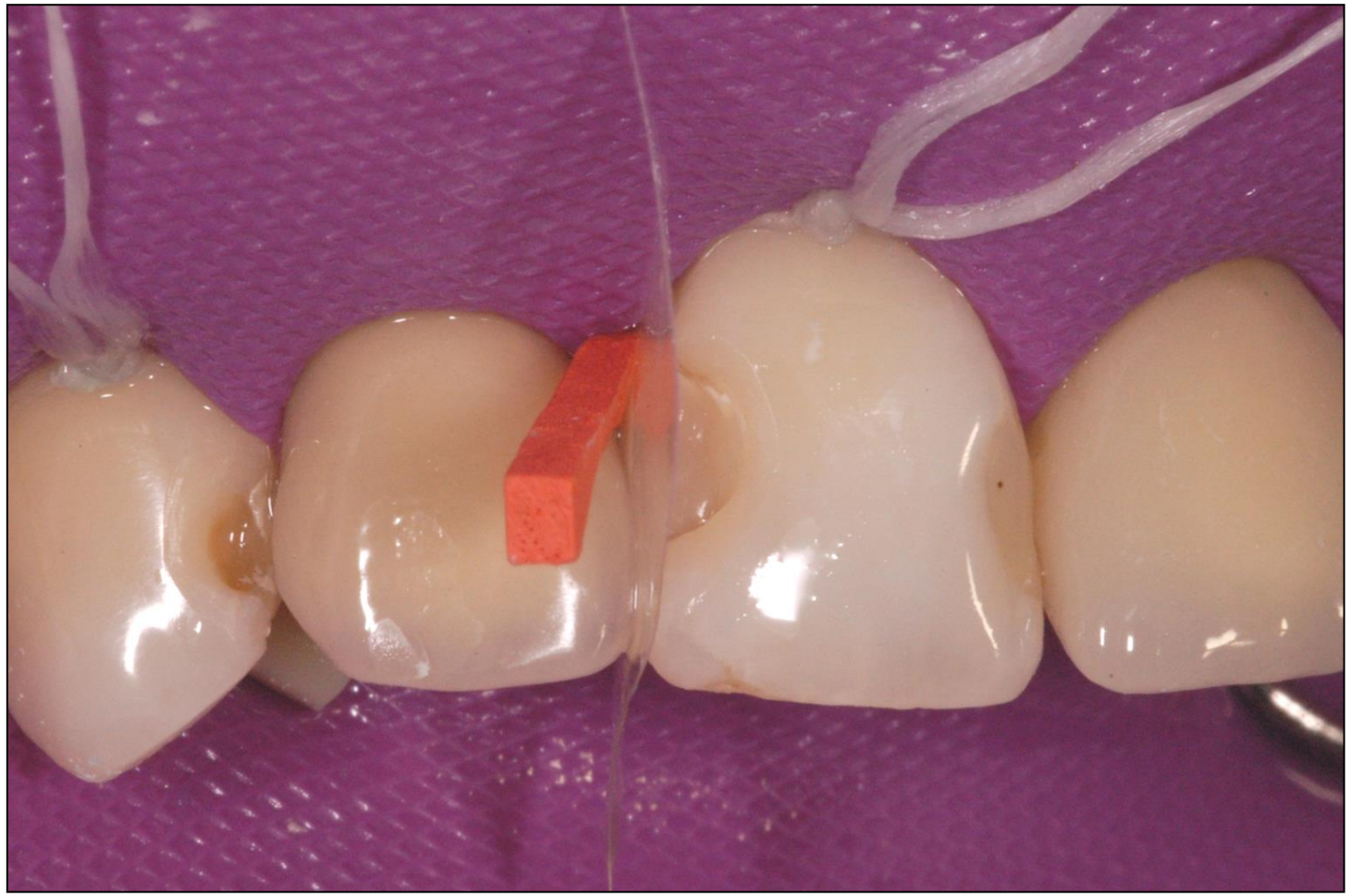
Incremental technique



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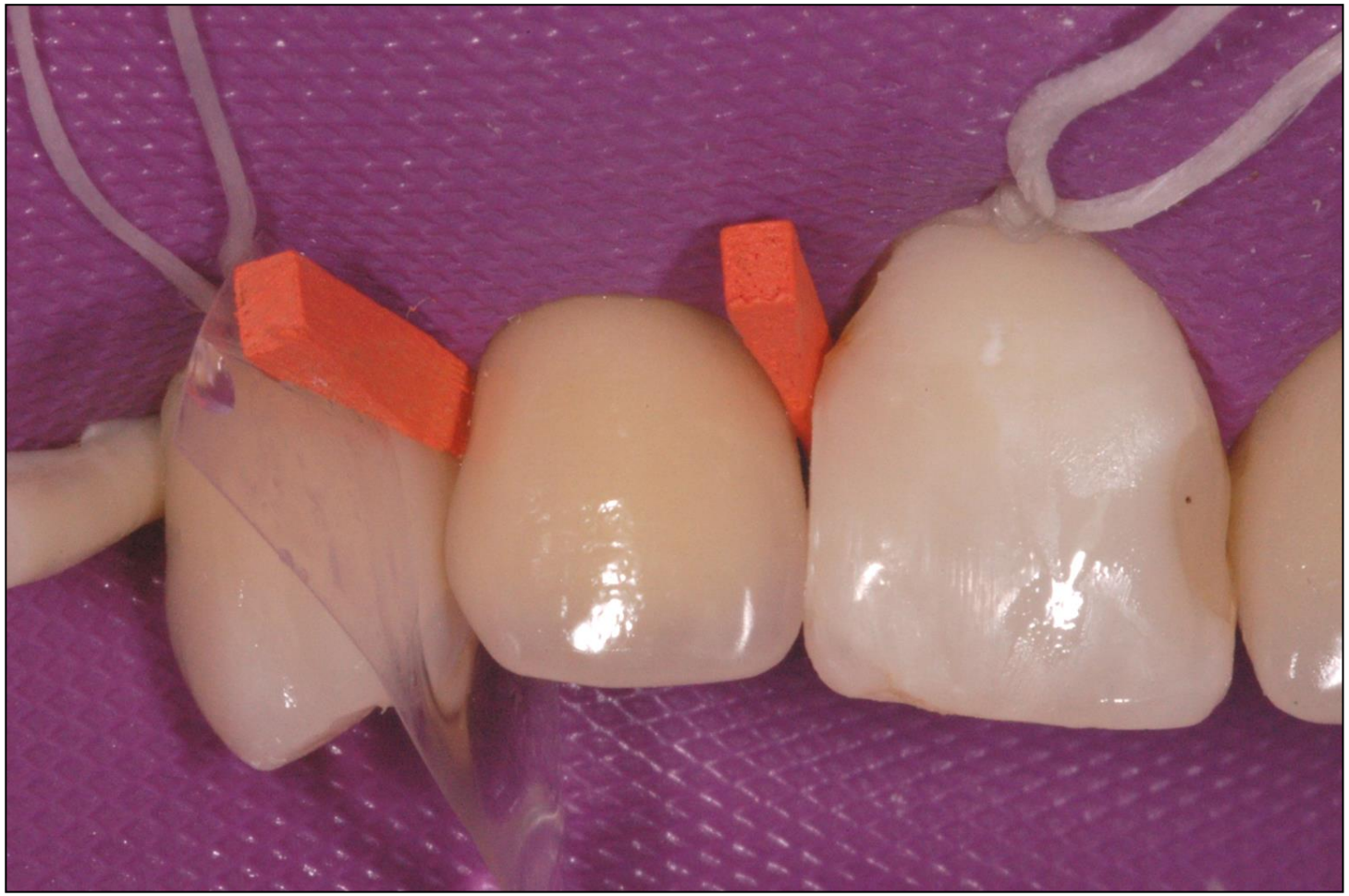
Before finishing, the wedge can remain in situ – separation of teeth



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Layering of the composite

- Palatal wall (matrix in situ) – enamel shade
- Dentin shade
- Enamel shade

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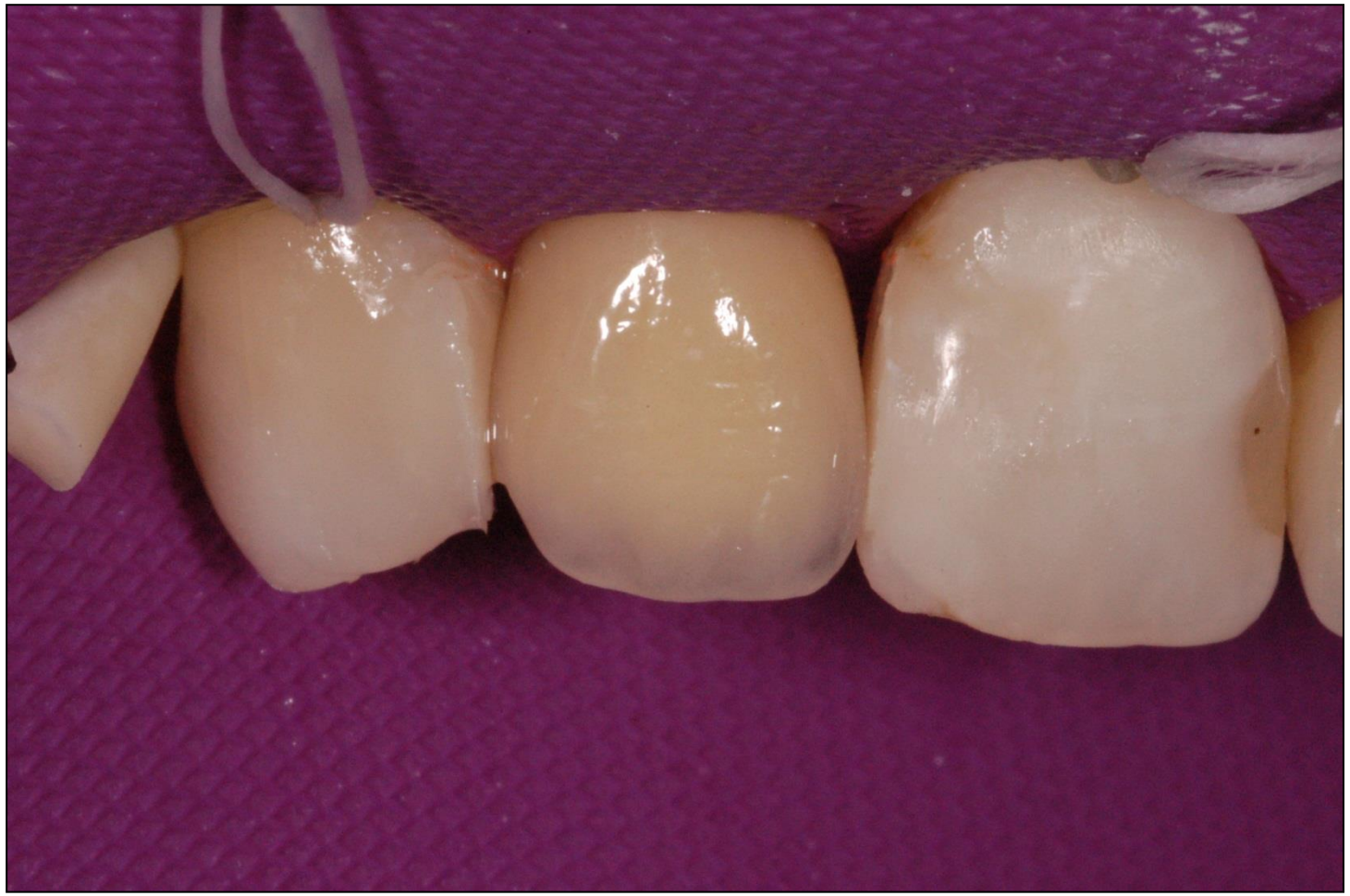
Matrix has been removed



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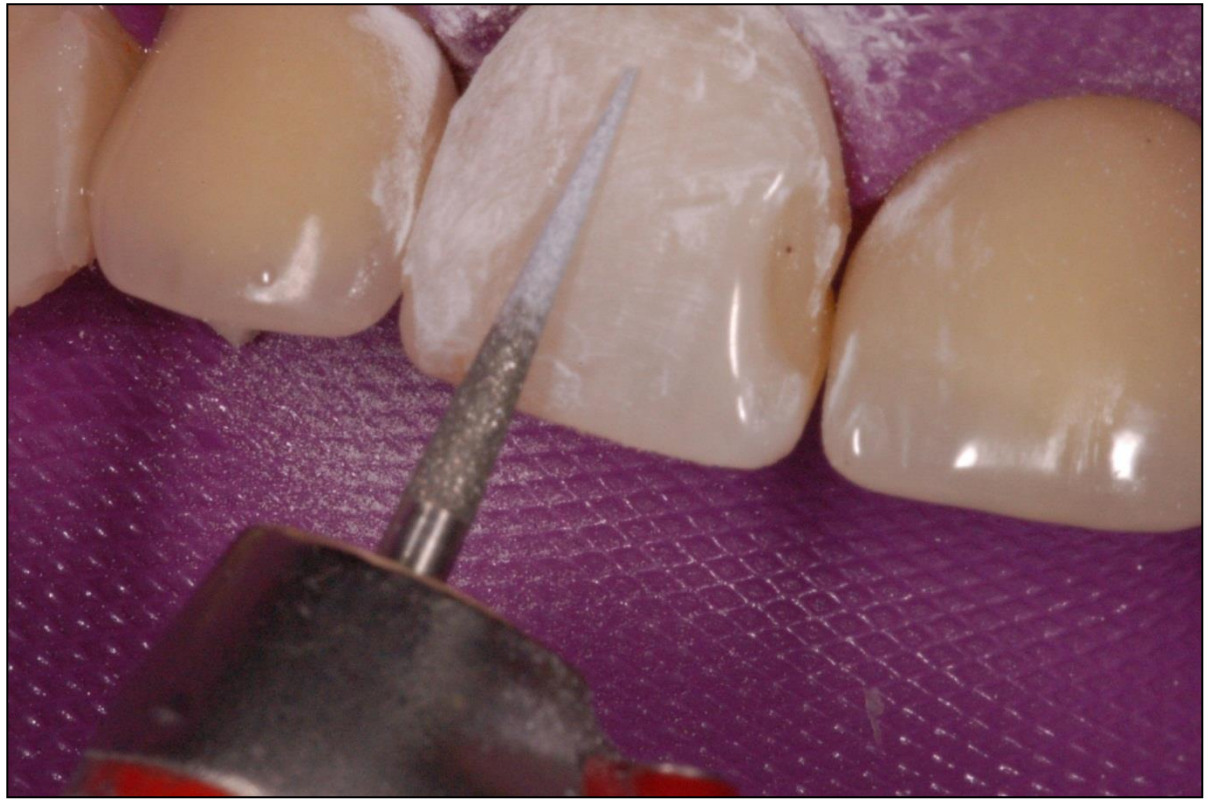
Finishing: final shape with fine and extrafine diamond bur, flexible discs



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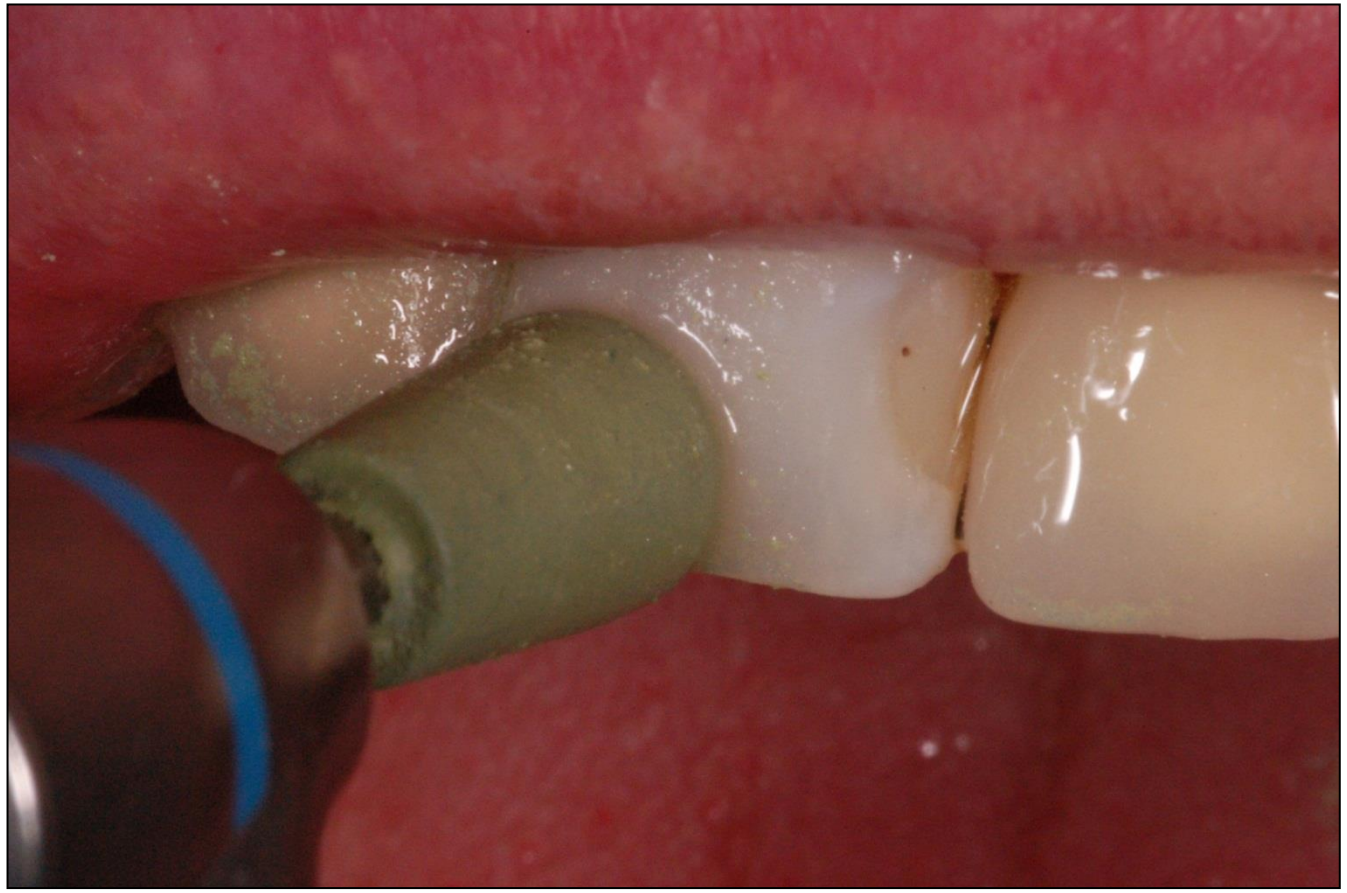
Polishing – rubber instruments, fine discs



Rubber cups,
brushes

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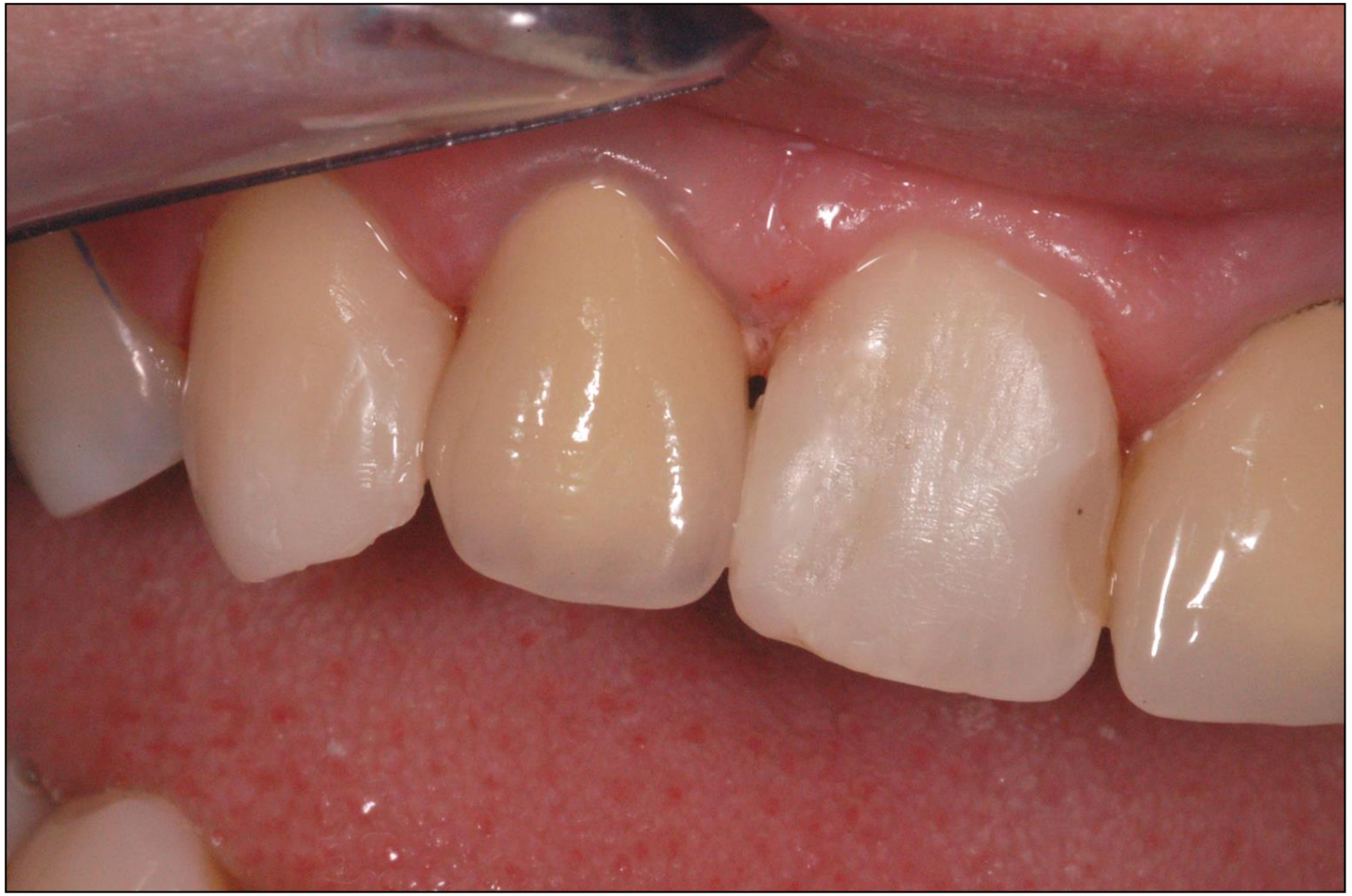
Finished filling



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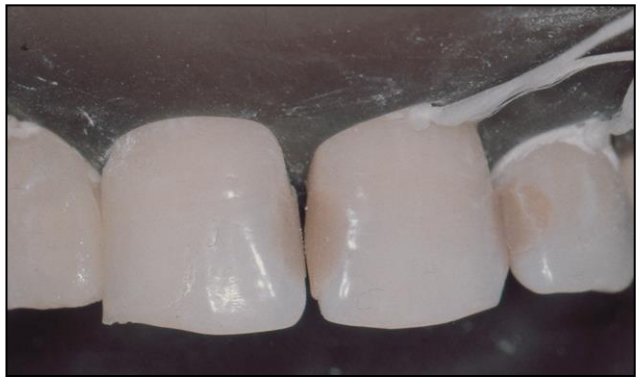
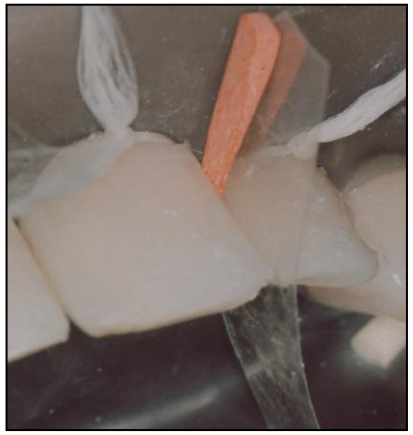
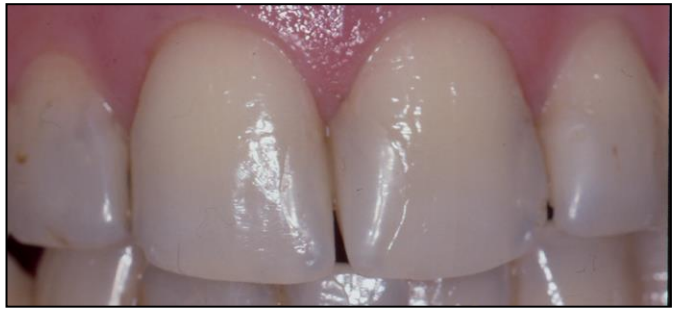
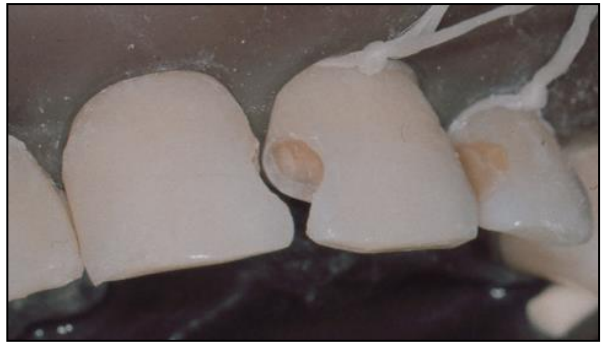
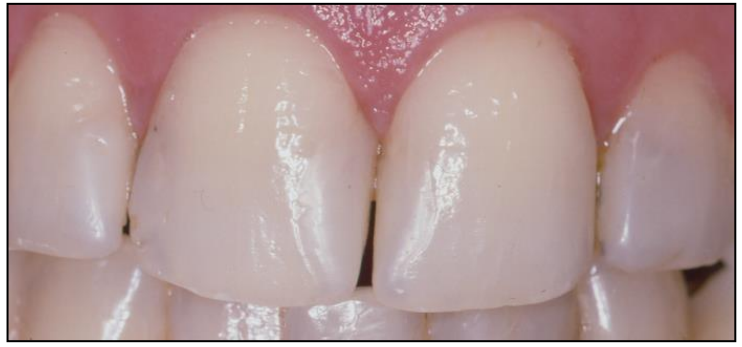
3 rd class restoration – 20 years ago









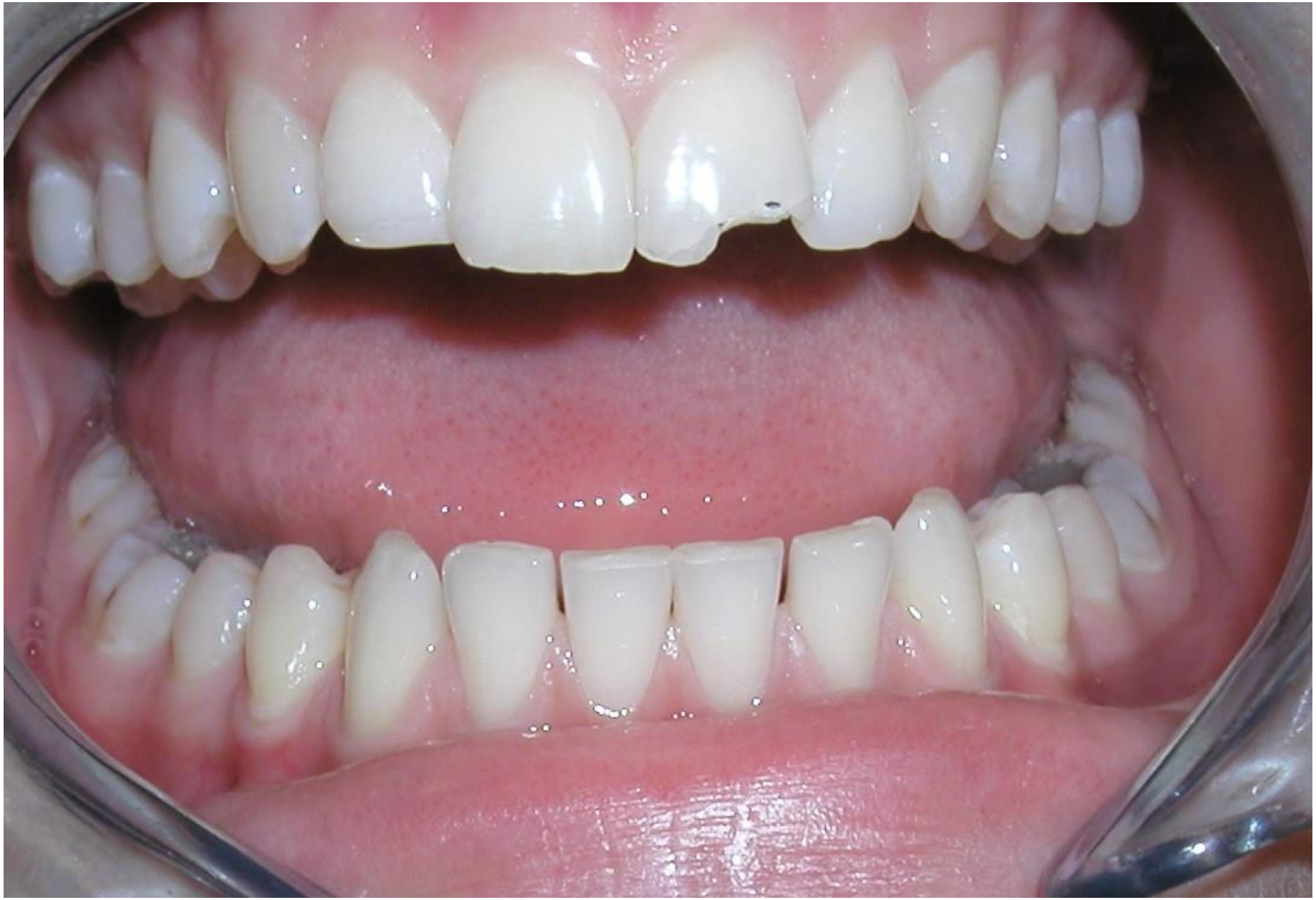


Layering depends on size and location of the defect – dentin and enamel shades

Class IV.

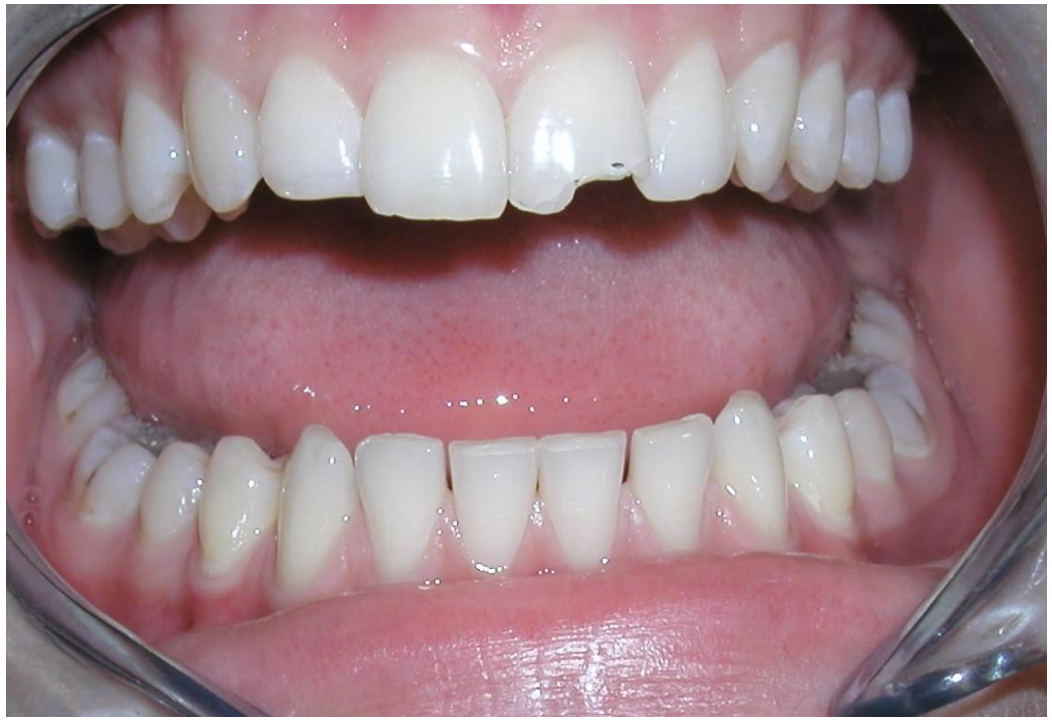
Defects on proximal surfaces premolars and molars with loss of part or complete incisal edge

Dental caries
Trauma



Cavosurface margin

Preparation is limited on the defect



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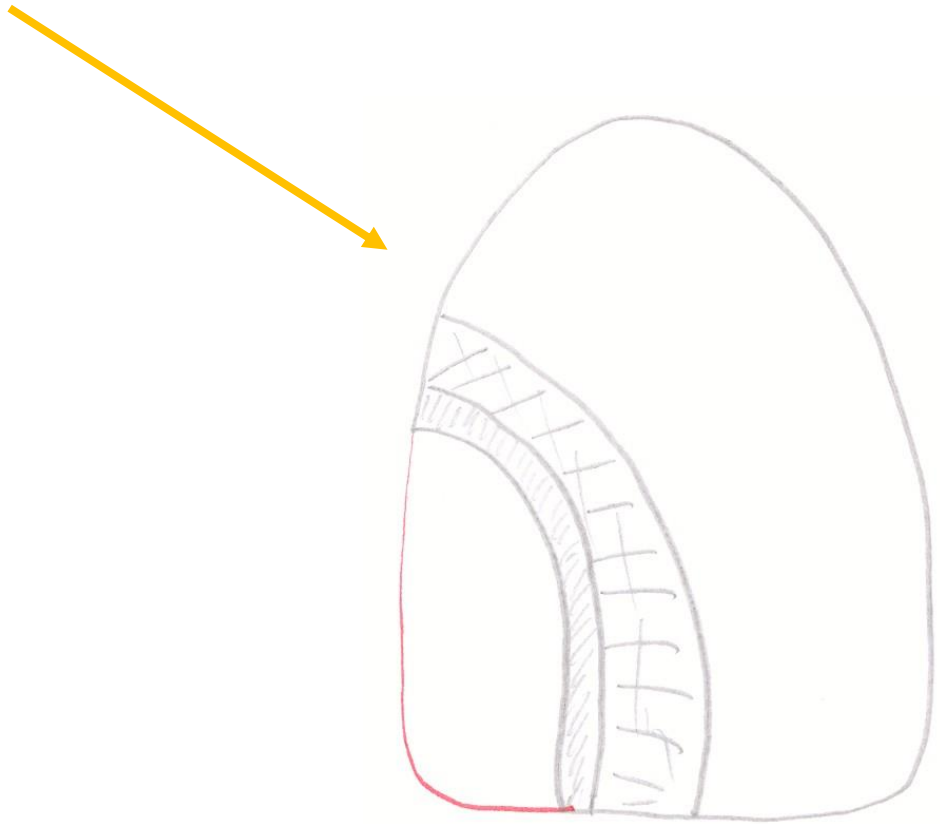
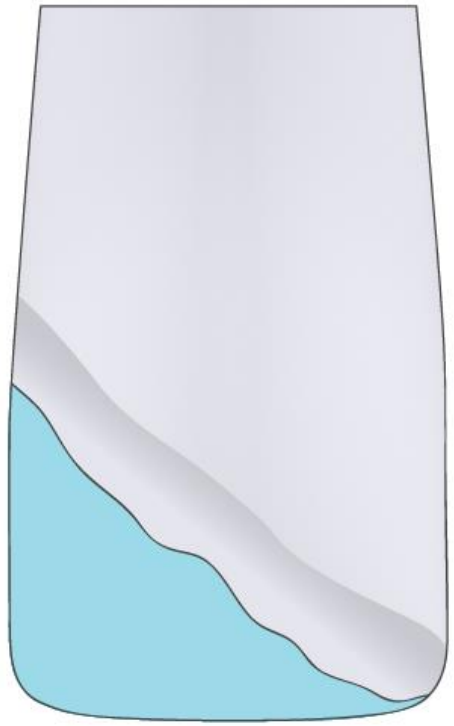
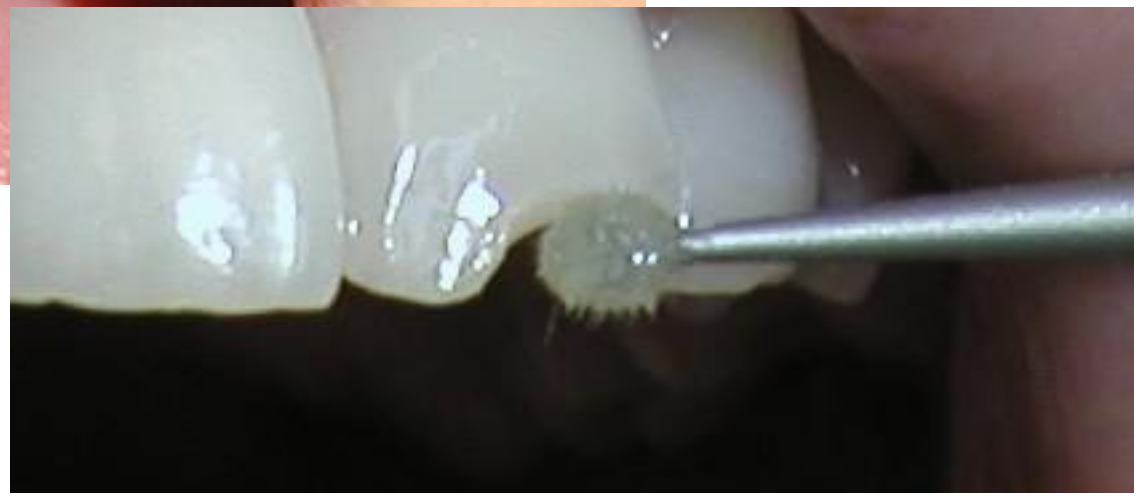
The enamel must be beveled







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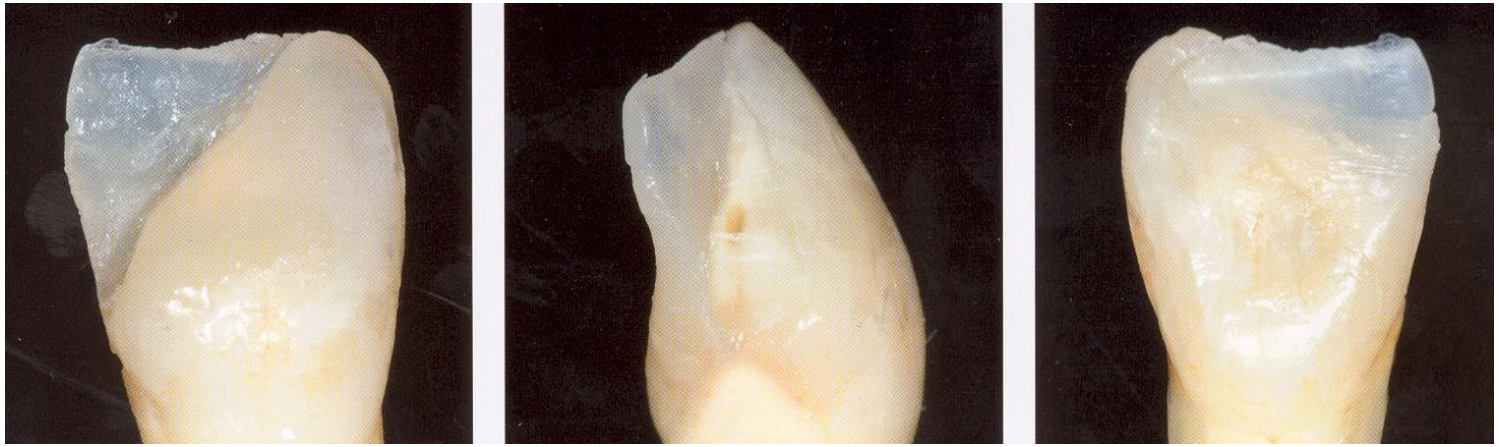
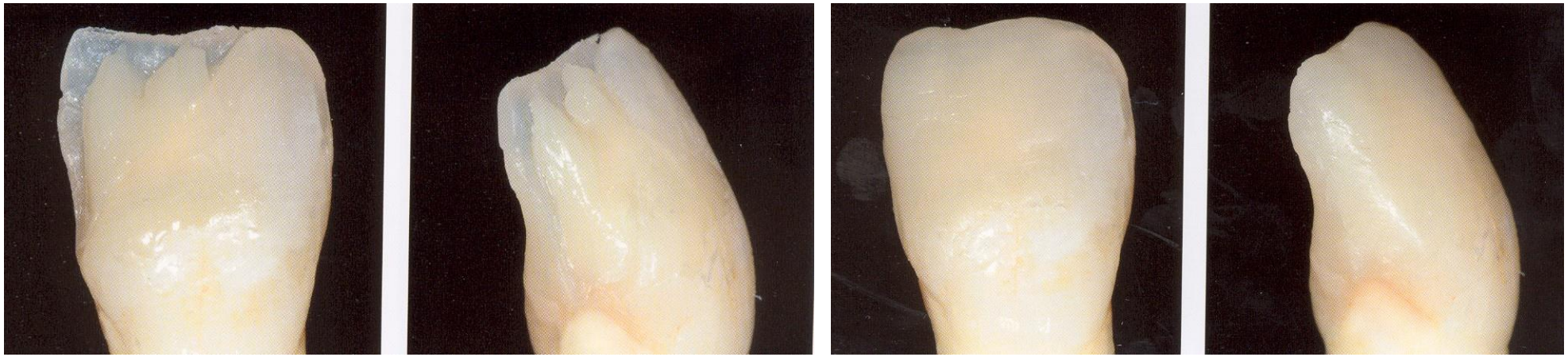
Principle of the layering of the composite material





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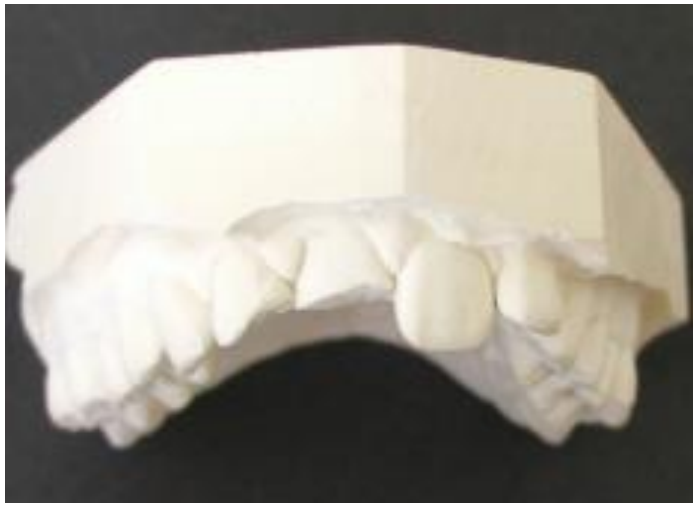
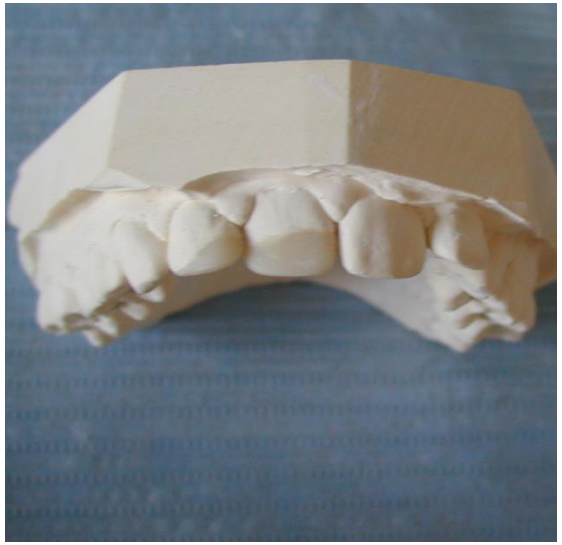
The matrix is necessary:

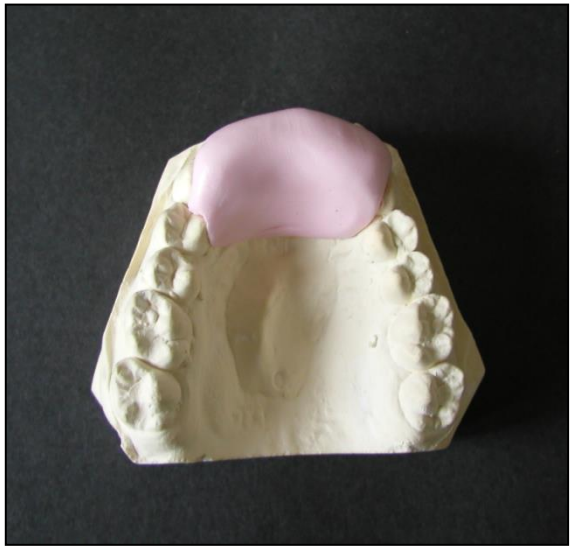
Transparent polyester strip + wooden wedge
For location od the palatal wall silicone matrix can be used

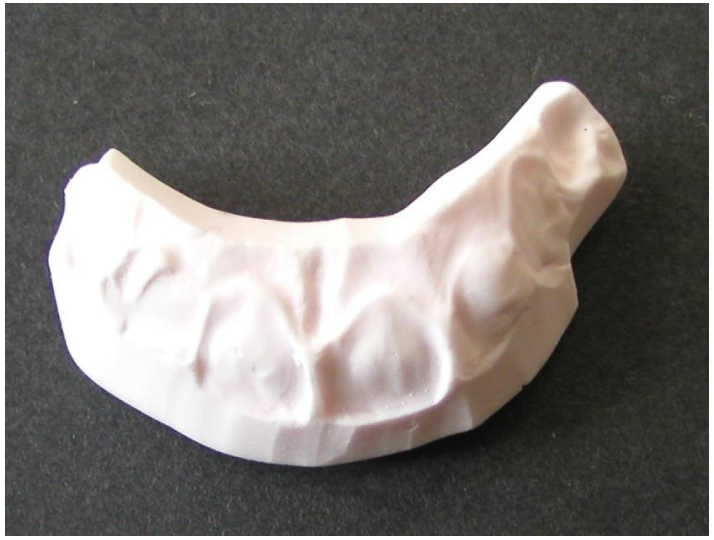
Silicone matrix

- Is a simple impression of silicone impression materiál after building of the shape of the future restoration on the model or in oral cavity









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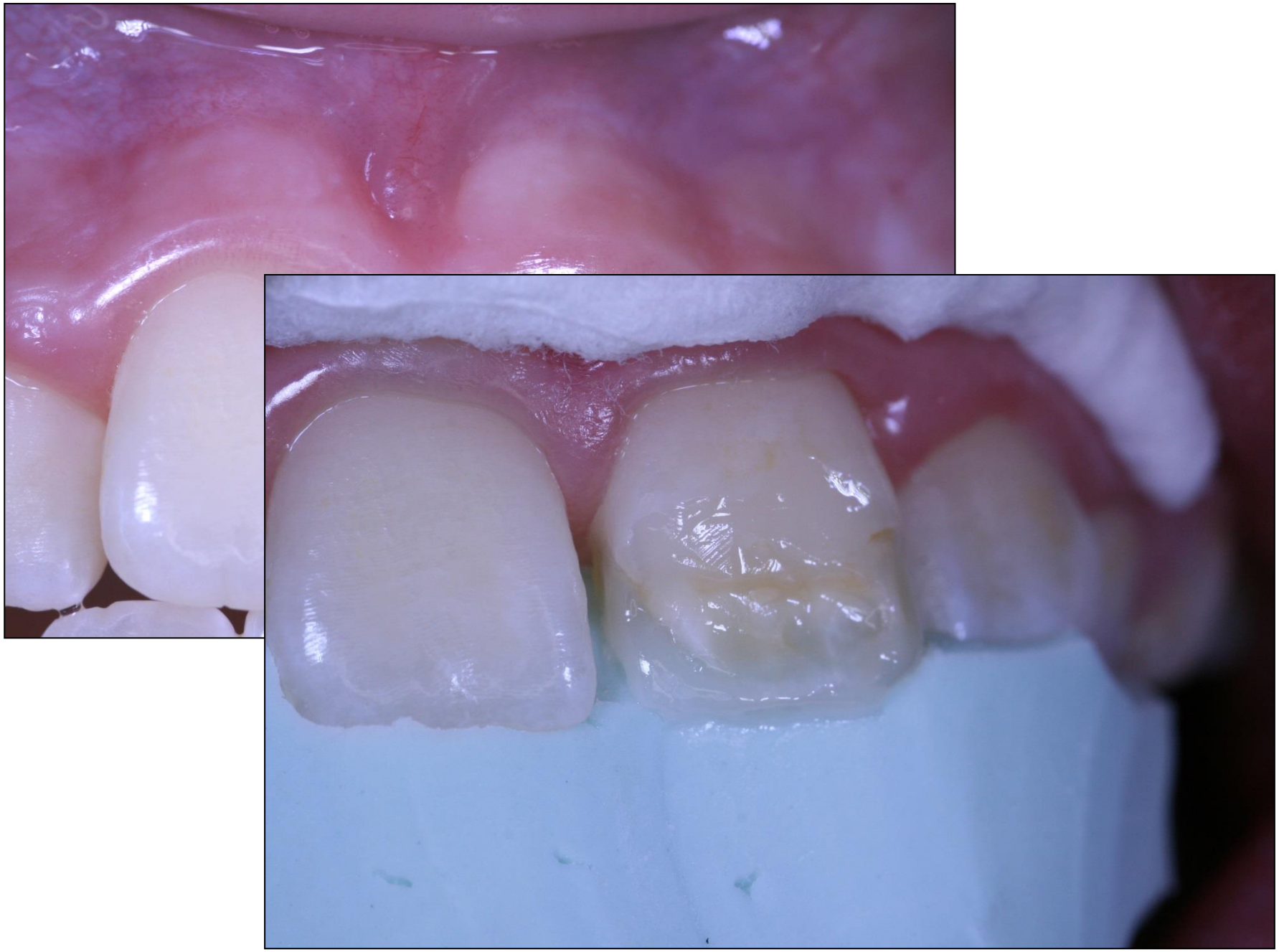

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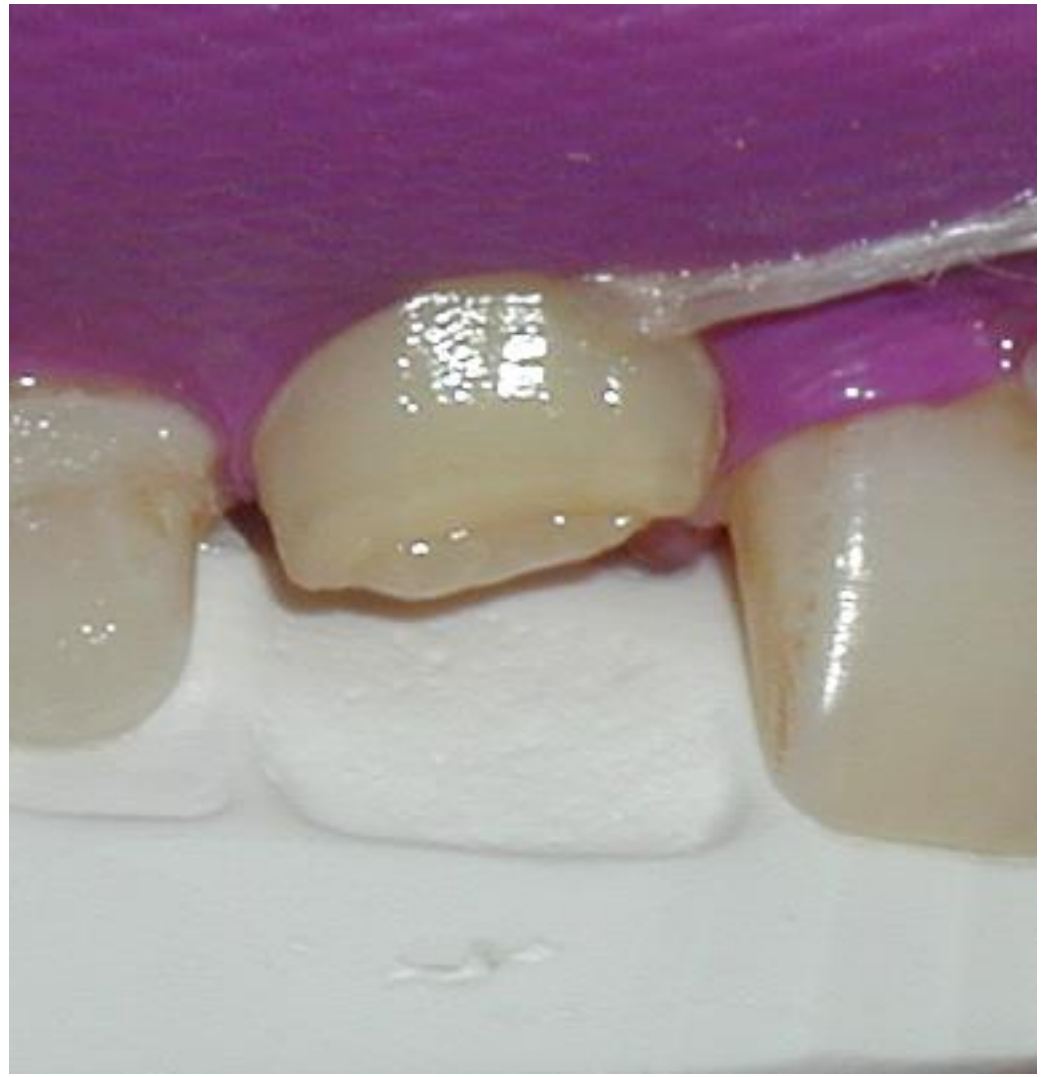
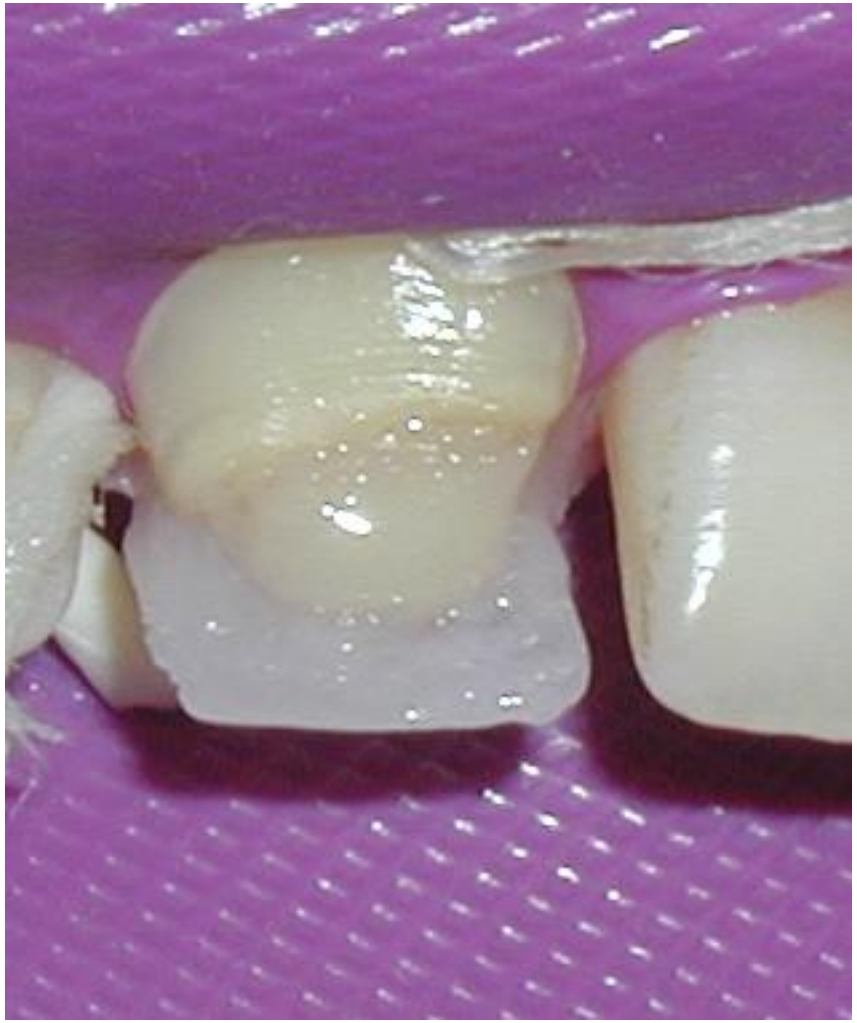
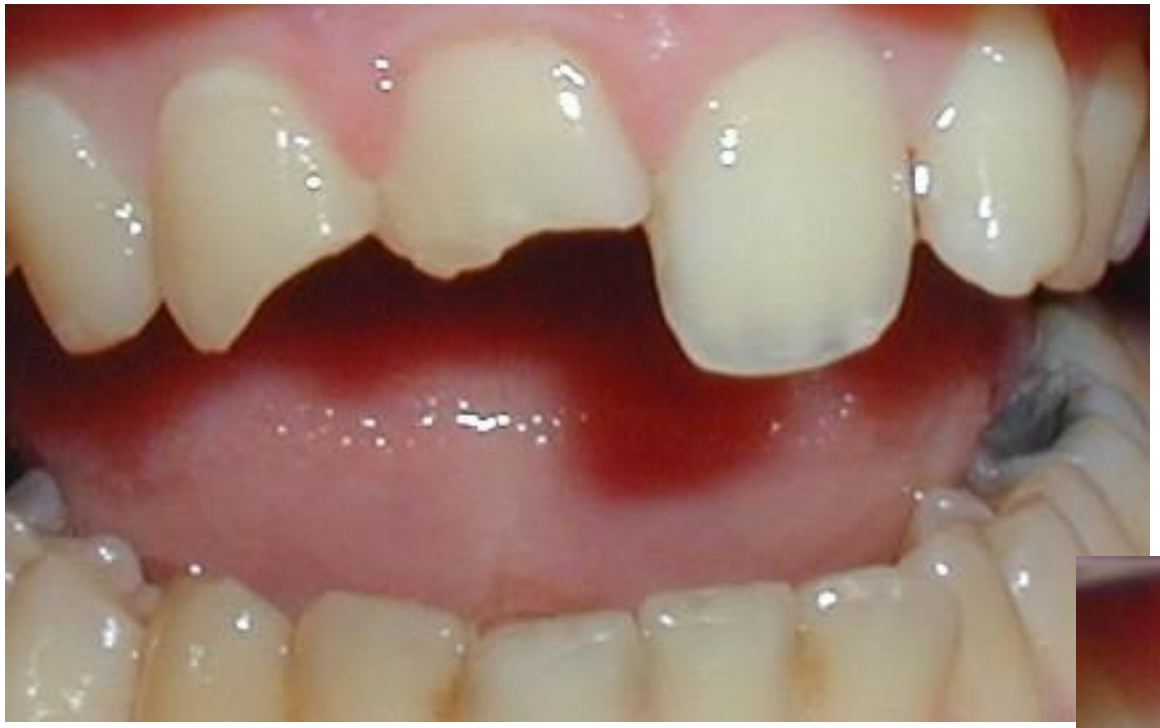
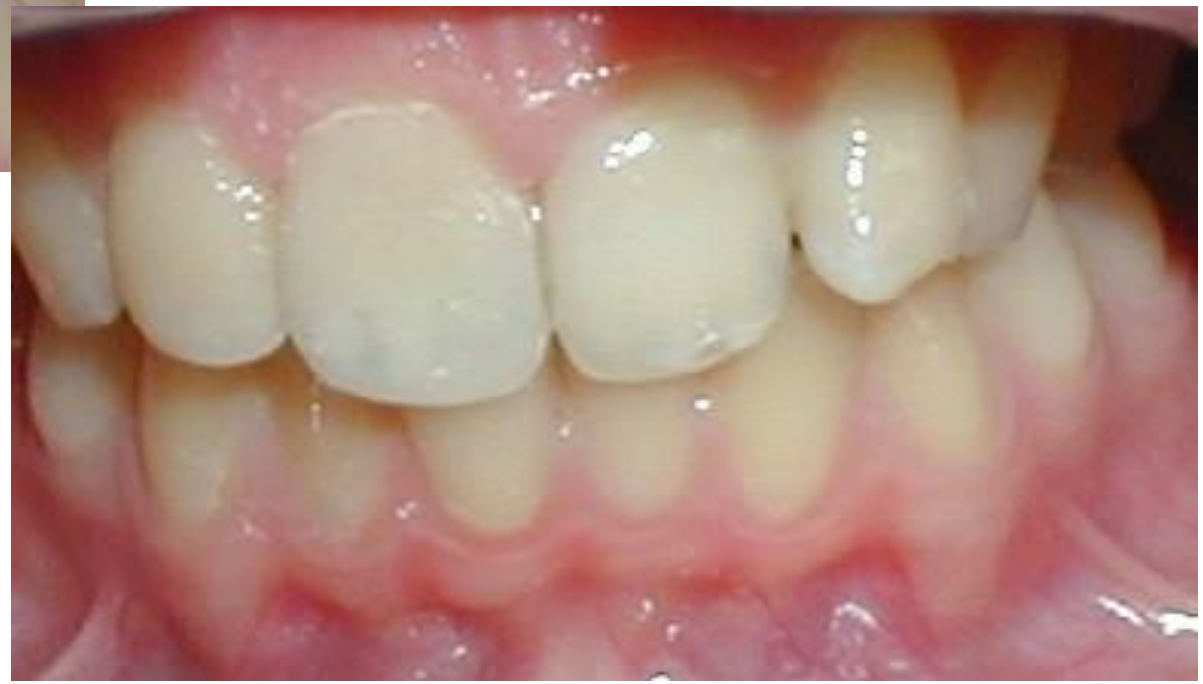
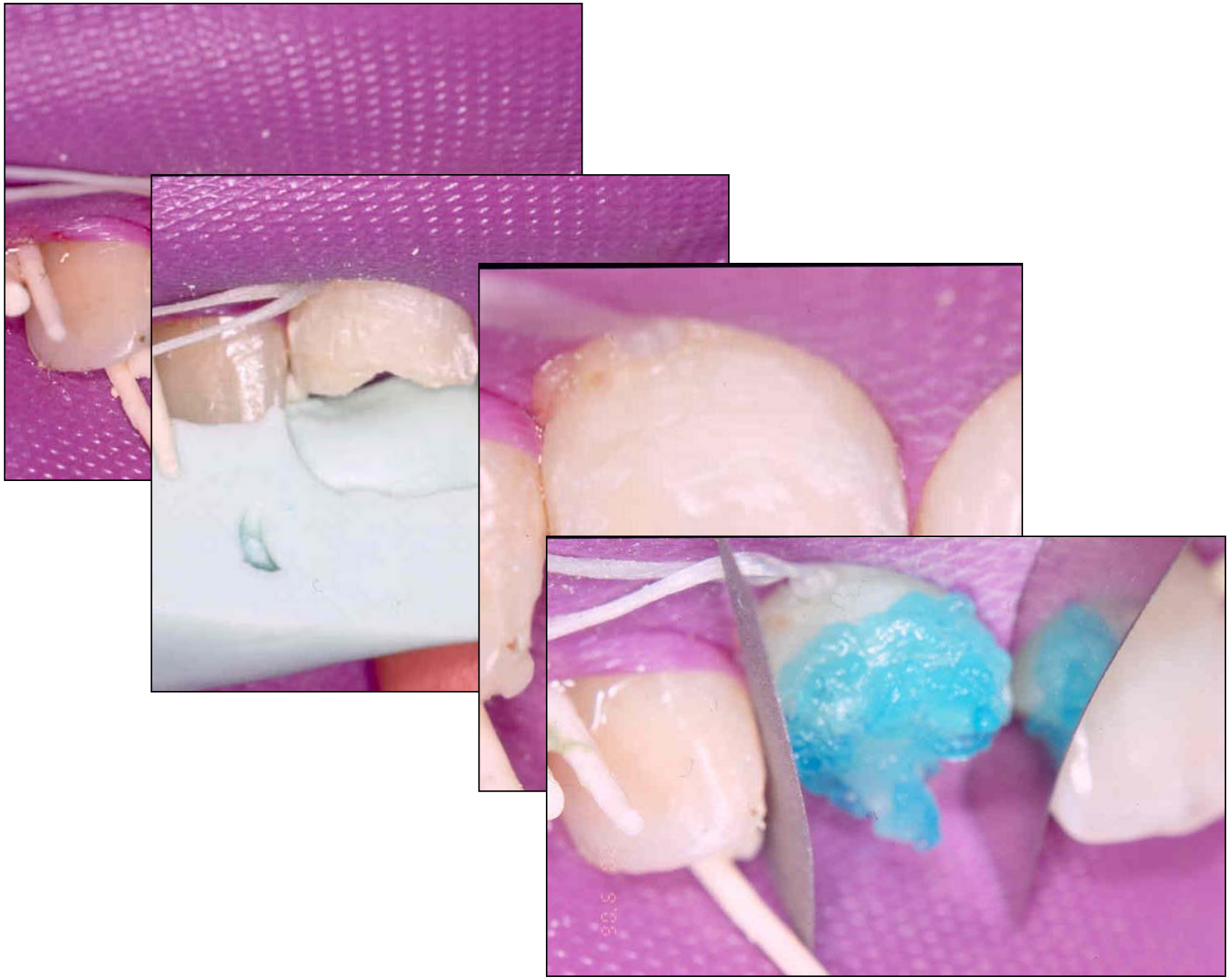




Now the transparent strip
and wedge is necessary again







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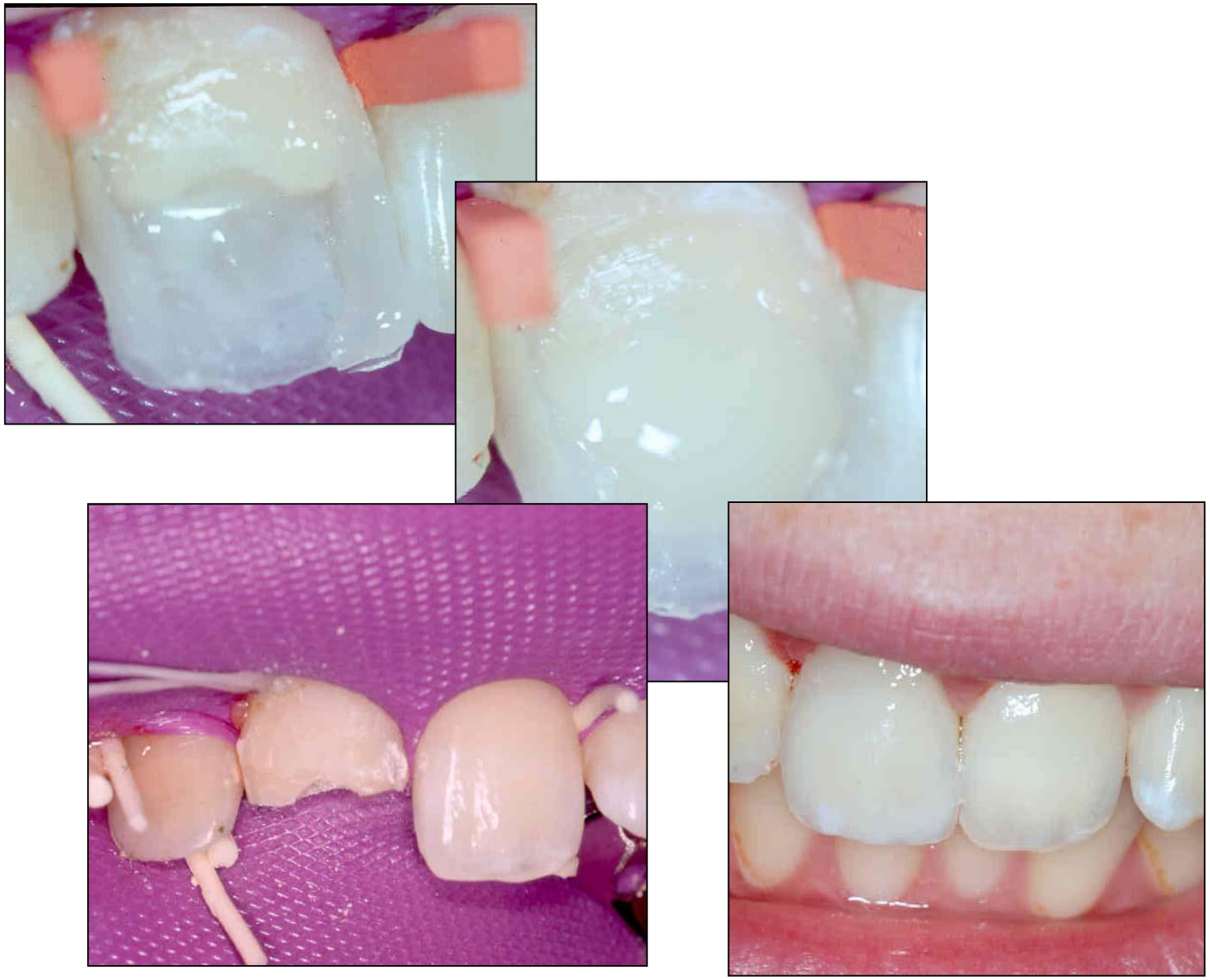

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Finishing and polishing