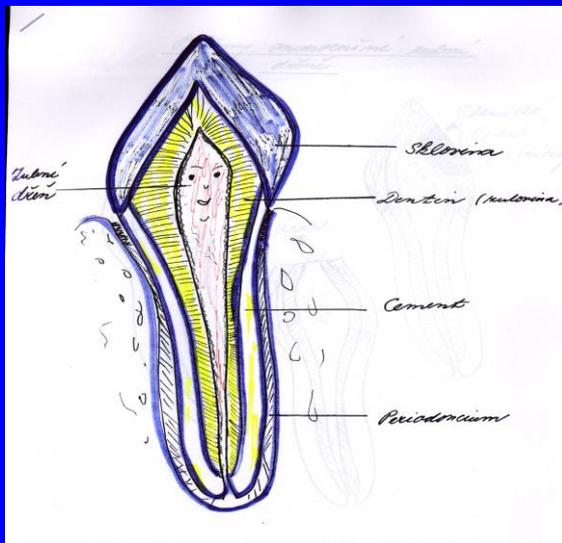


Class V.

Characteristic

- Cervical defects

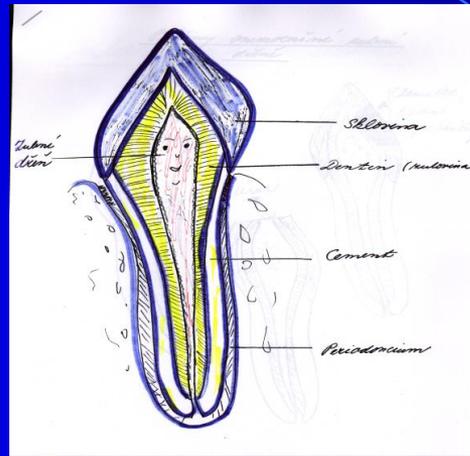


Anatomical x Clinical crown

Anatomical x clinical crown

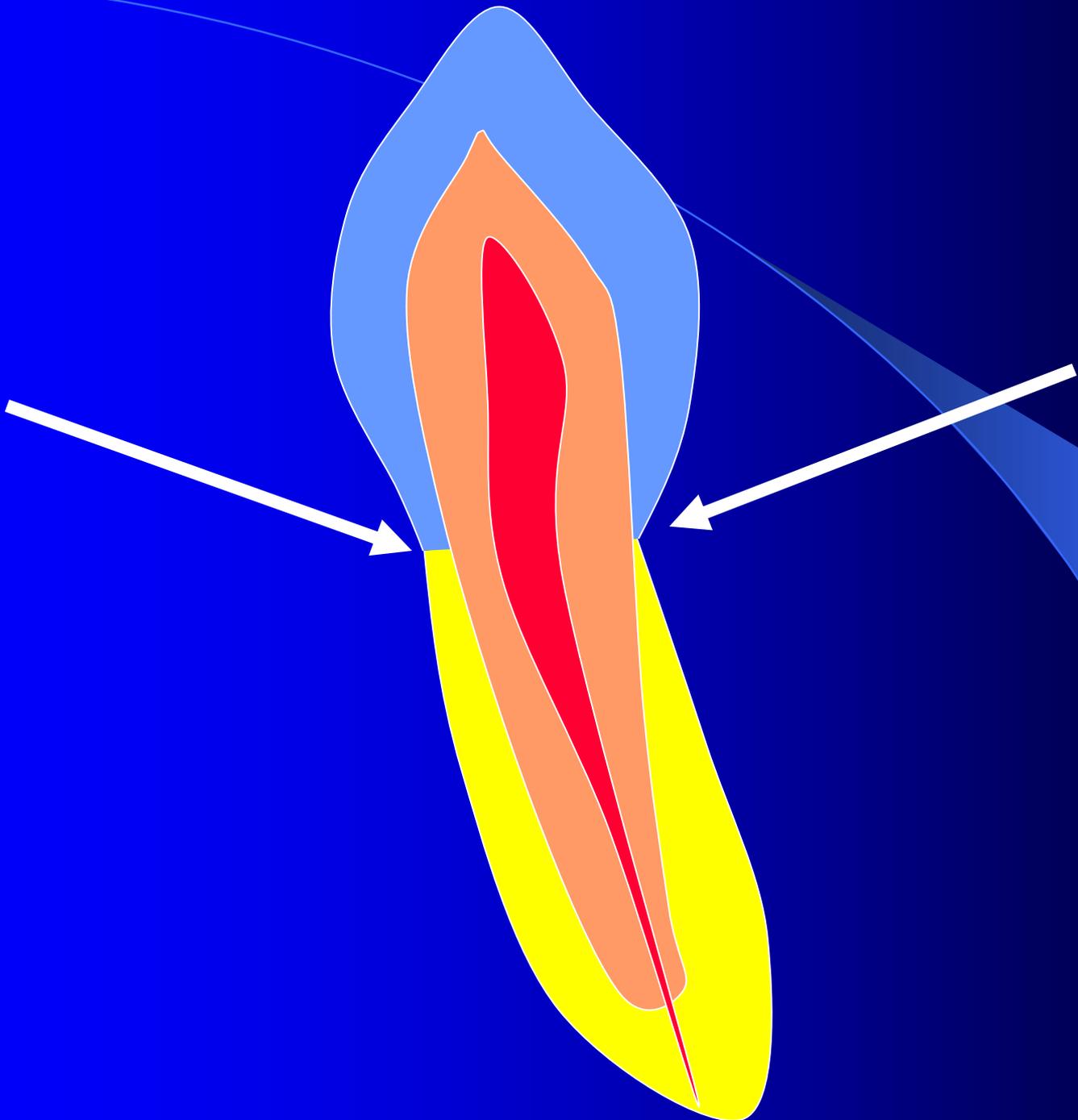
- Anatomical crown - cemento- enamel junction
- Clinical crown – gingival border

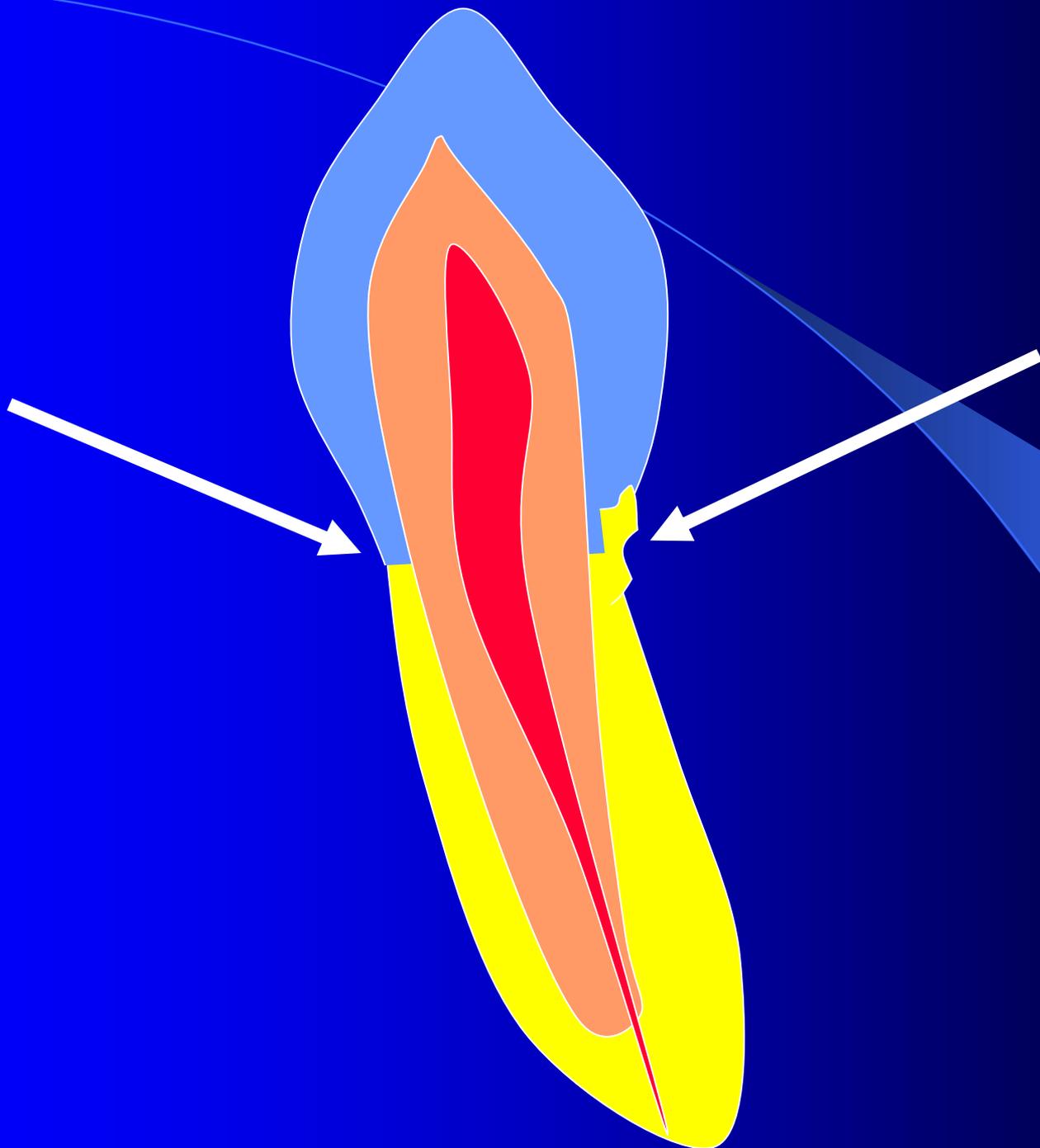
Anatomical X Clinical crown

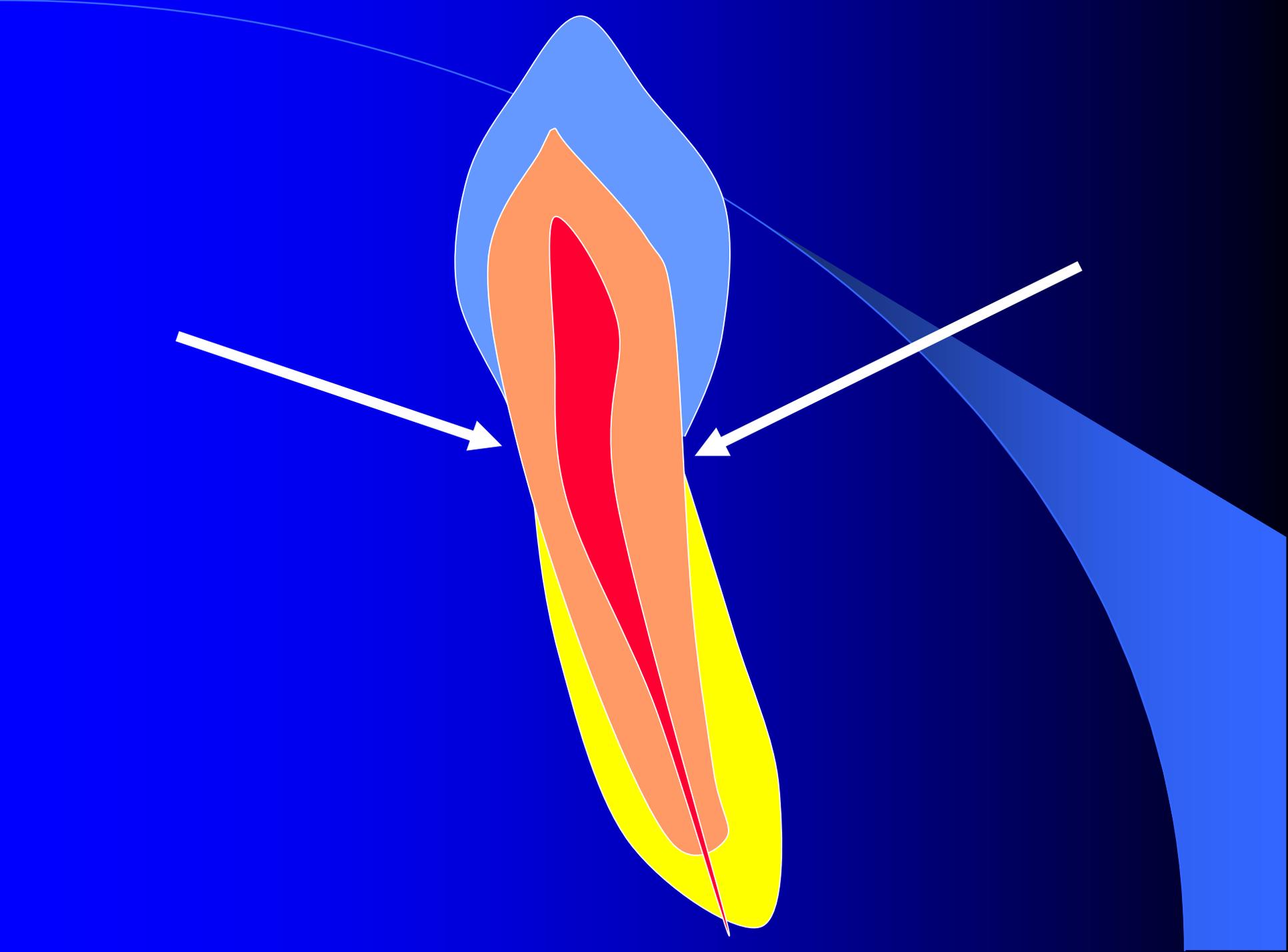


Cervical area

- Caries danger area
- Gingiva - possibility of its injury, bleeding, inflammation
- Flow of the sulcular liquid
 - Difficulties with the maintenance of the dry field
- Specific ordering of the hard dental tissues
- Thin layer of hard dental tissues – risk of opening of the pulp chamber







Types of defects

- Caries

- Erosion

- Abrasion

- V shaped

- Erosion

Non carious defects





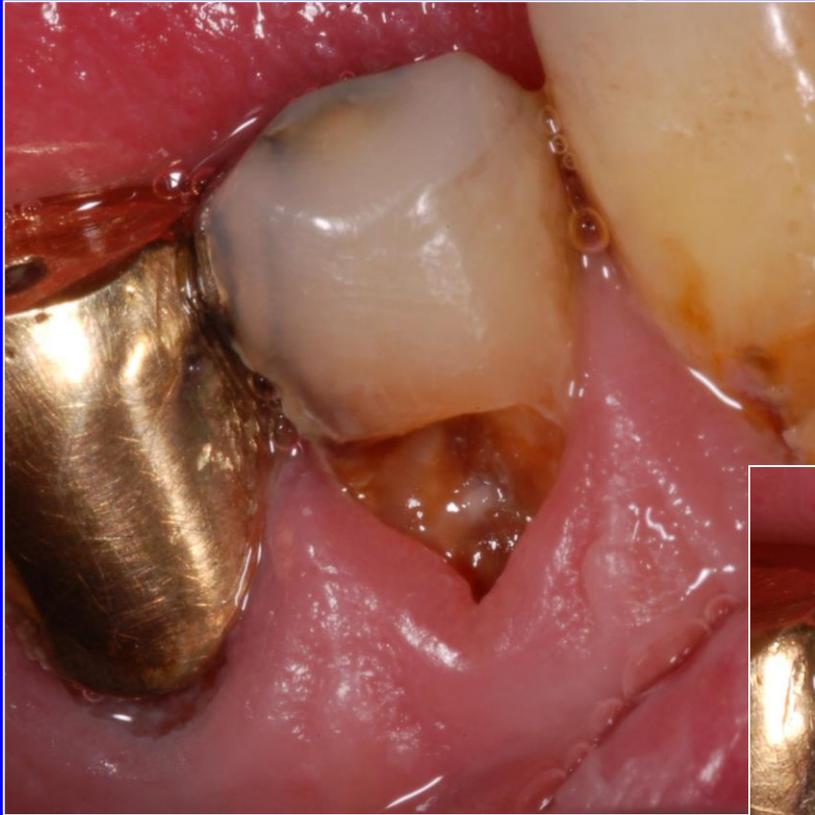
Class V. Amalgam

- Posterior area



Access

- Directly from vestibular or oral side
- Removal of undermined enamel
- Gingivoplasty and gingivectomy
- Temporary filling if necessary to push gingiva out



Cavosurface margin and extension for prevention

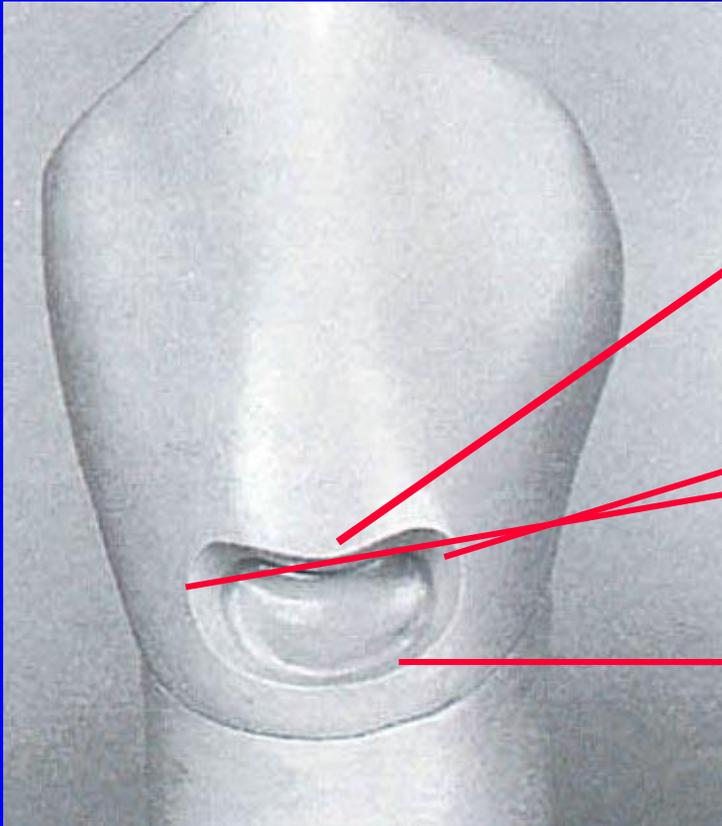
Gingival: 0,5 mm subgingivally

Occlusally: below the maximum convexity

Mesially, distally: to the axial walls

Total depth: 0,75 – 1.25 mm.





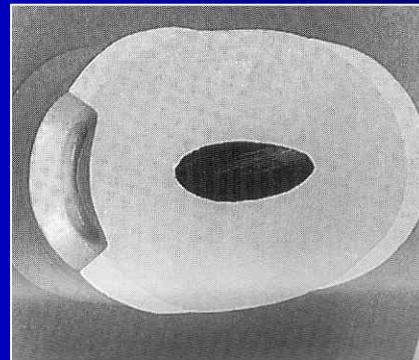
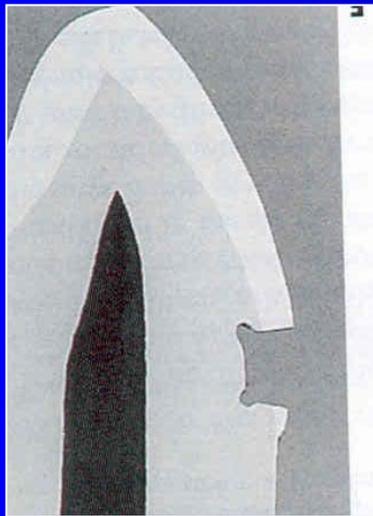
Occlusal border

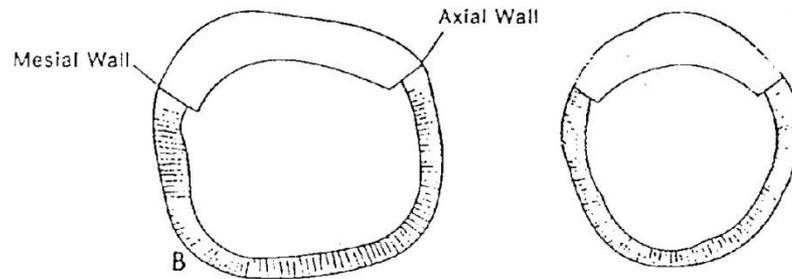
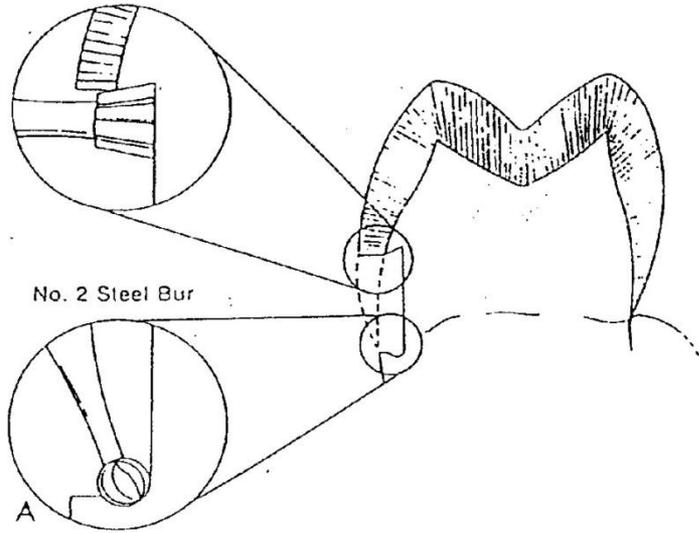
mesial and distal
border

Gingival border

Retention

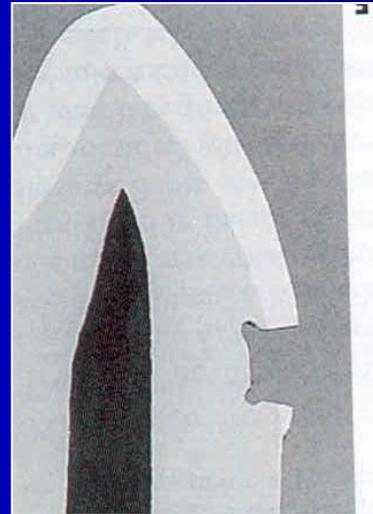
- Box 0,75 – 1,25 mm deep, undercuts, coves (larger cavities)





Resistance

Elastic deformation during the biting



Excavation of carious dentin

Round bur

Excavator

Finishing of the cavity border

- Fine diamond bur of a chisel

Filling

- Portion of amalgam are condensed using a condensor with the straight front and finished using a spatula.

Class V. composit

- Aesthetic area
- Cavities situated in enamel (completely or partly)



Class V. composit, contraindications

- Bad level of oral hygiene
- Dry operating field is not possible to keep
- Root surface caries



Access

- Directly from vestibular or oral side
- Removal of undermined enamel
- Gingivoplasty and gingivectomy
- Temporary filling if necessary to push gingiva out

Cavosurface margin and extension for prevention

Gingival: supragingivally

Occlusally: below the maximum convexity

Mesially, distally: acc to size of the caries lesion

Total depth: appr. 1 mm.

Excavation of carious dentin

Round bur

Excavator

Retention (micromechanical)

Enamel must be beveled (removal aprismatic enamel, good conditions for acid etching)

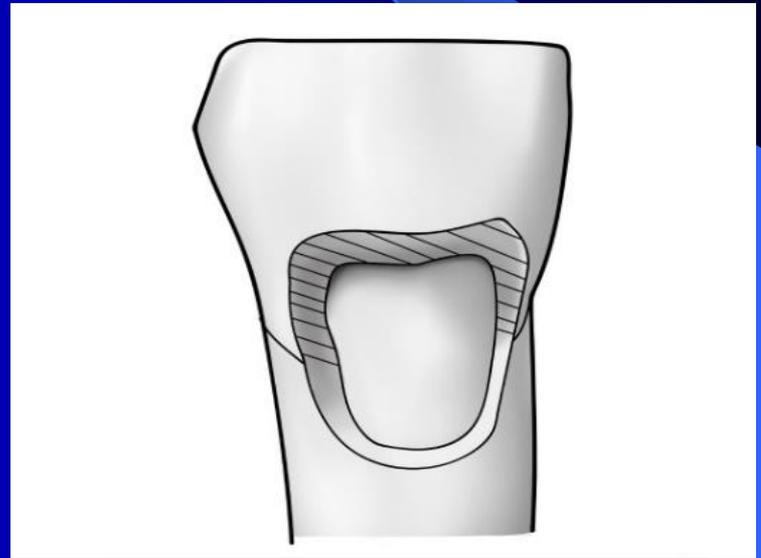
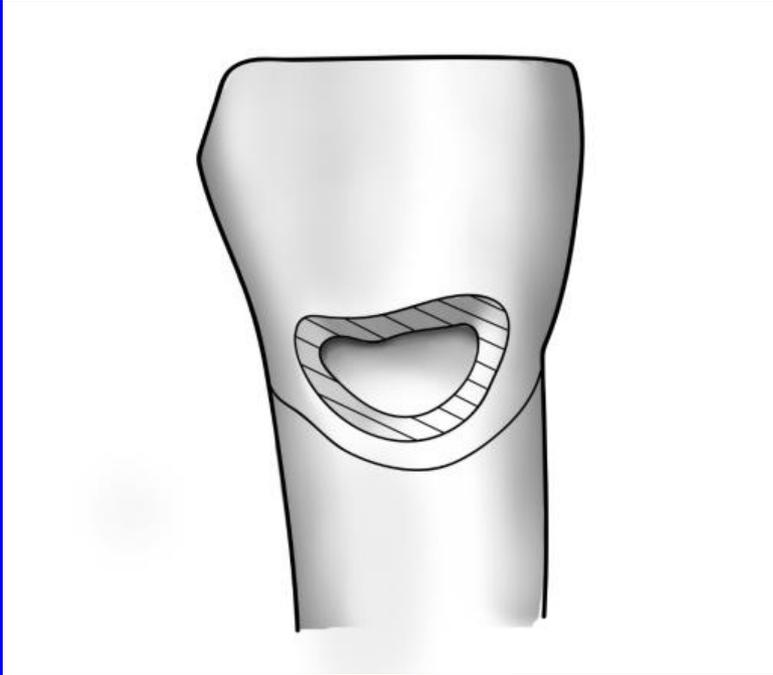
Acid etching (35-37% phosphoric acid)

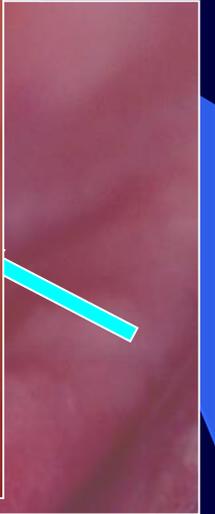
20-30 s in enamel, 10 s in dentin

Washing

Priming, bonding – disperse with air syringe, curing

Placement of the composite material

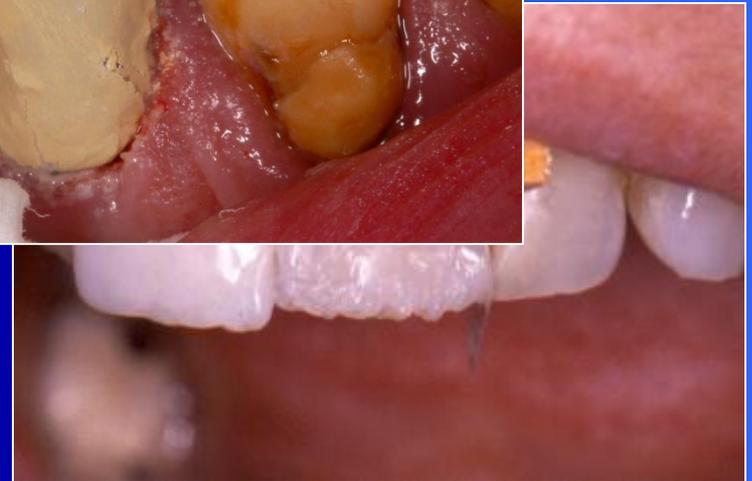




Matrices



Anatomical form
Good curing



Class V. Glassionomer

- Indication:
 - Cavity out of enamel (root surface caries)
 - Not optimal level of oral hygiene



Class V. Glassionomer

- Contraindication:
 - Cavity out of enamel (root surface caries)
 - Not optimal level of oral hygiene



Glassionomer – benefits

- Chemical binding to hard dental tissues
- Releasing fluoride ions
- Thermal expansion similar to dentin
- Acceptable aesthetics

Glassionomer –disadvantages

- Vulnerable during setting
- Not strong mechanically

Access

- Directly from vestibular or oral side
- Removal of undermined enamel
- Gingivoplasty and gingivectomy
- Temporary filling if necessary to push gingiva out

Cavosurface margin and extention for prevention

Preparation limited on caries lesion

Retention

➤ Box

➤ Chemical

Resistance

Elastic deformation during the biting

No occlusal loading



Excavation of carious dentin

Round bur

Excavator

Filling

- Conditioner 20 s
- Washing off
- Wet cavity
- Filling material
- Matrix
- Varnish

Finishing of the margin

- Smoothing using red coded diamond

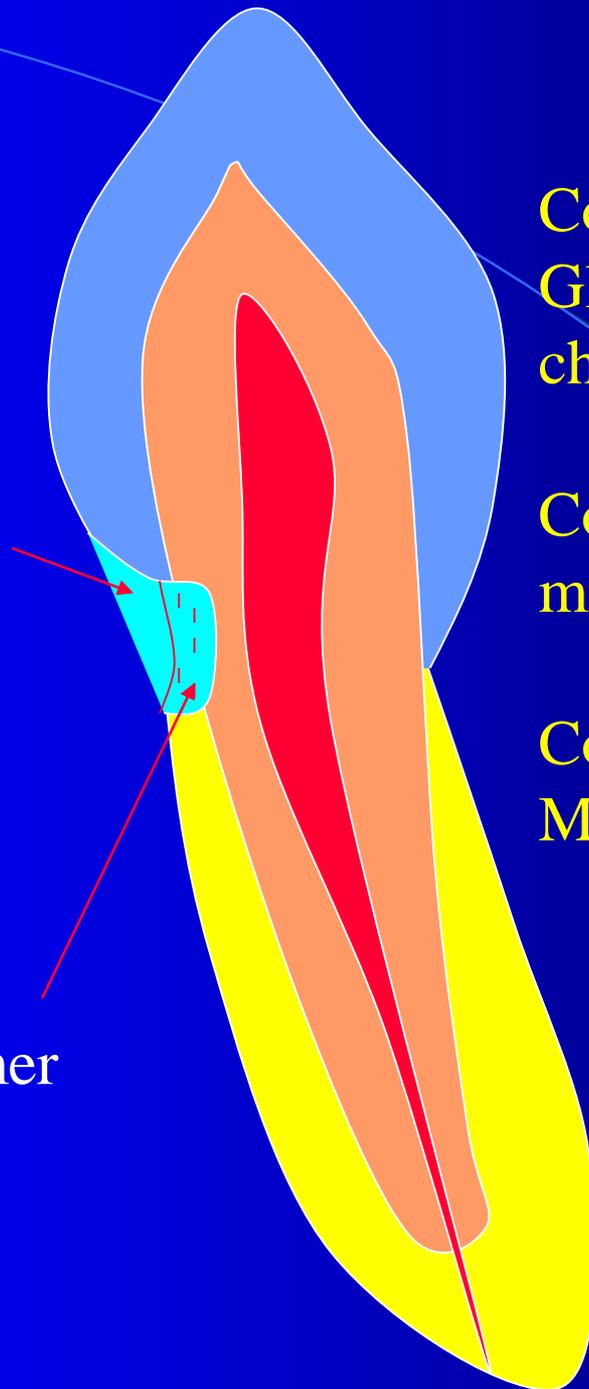


Combination – GIC and Composite

- Sandwich filling

Composite

base of glassionomer



Connection
Glassionomer – tooth:
chemical

Composite – tooth:
micromechanical

Composite – glassionomer
Micromechanical.

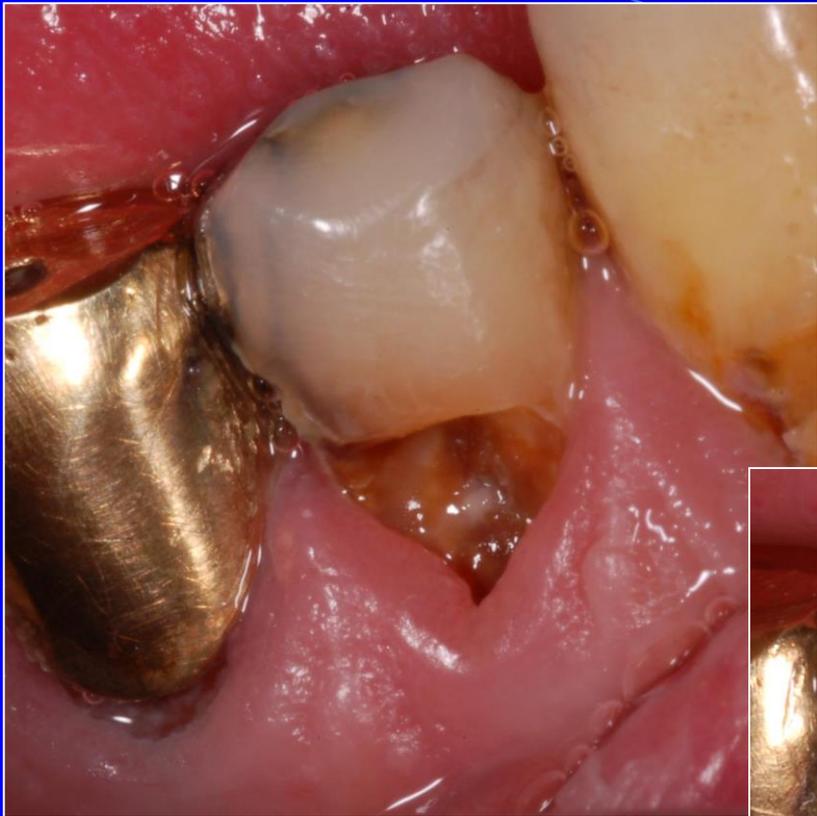








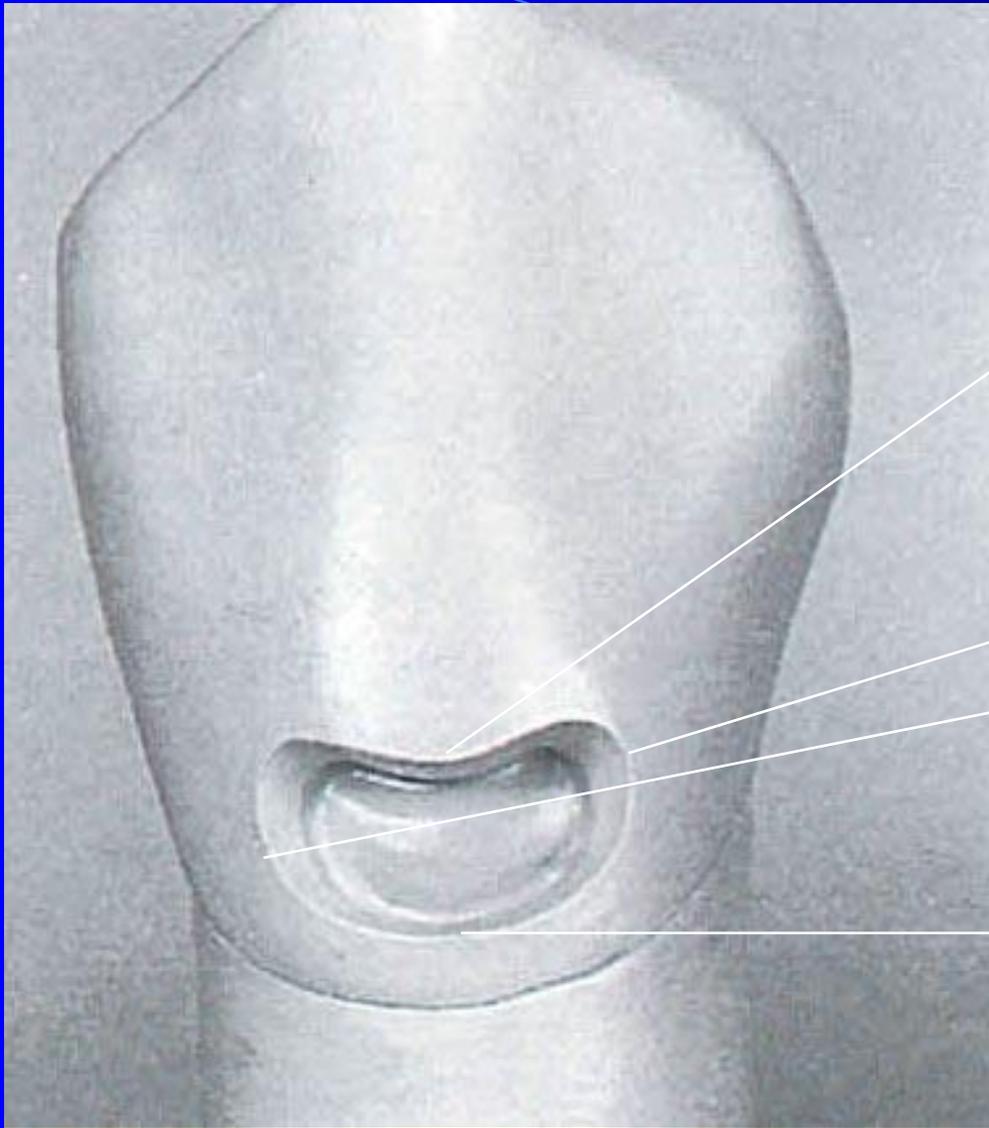




V.Class Amalgam

- Posterior area



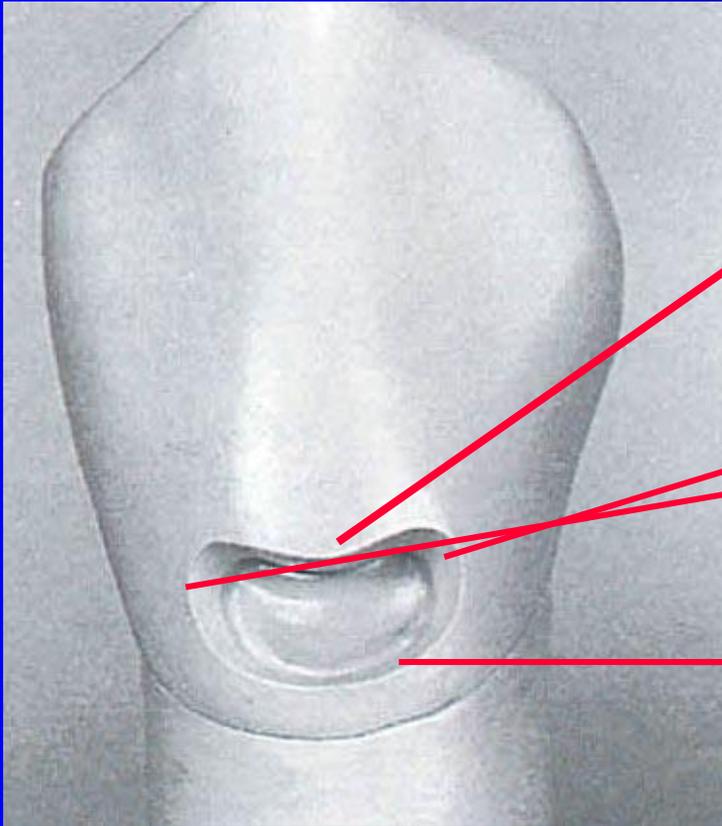


Incisal border

Mesial
and distal
border

Gingival border





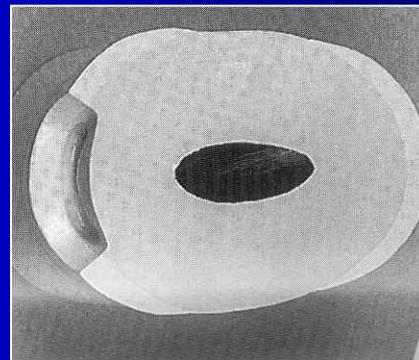
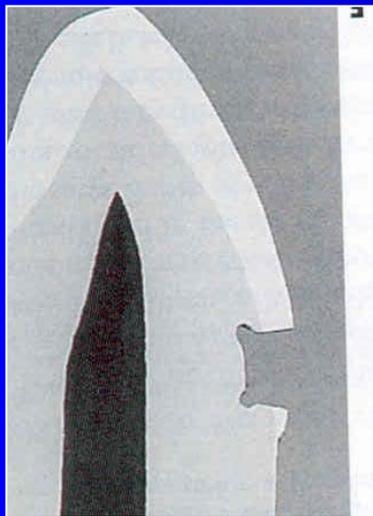
Occlusal border

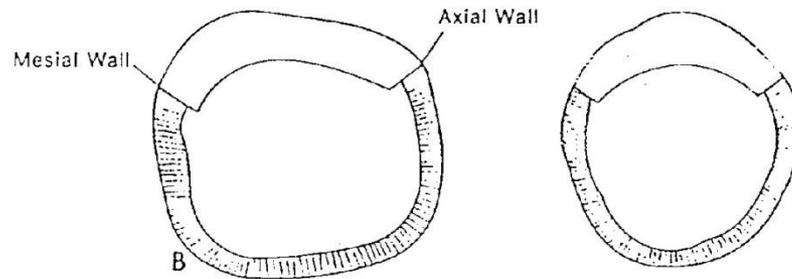
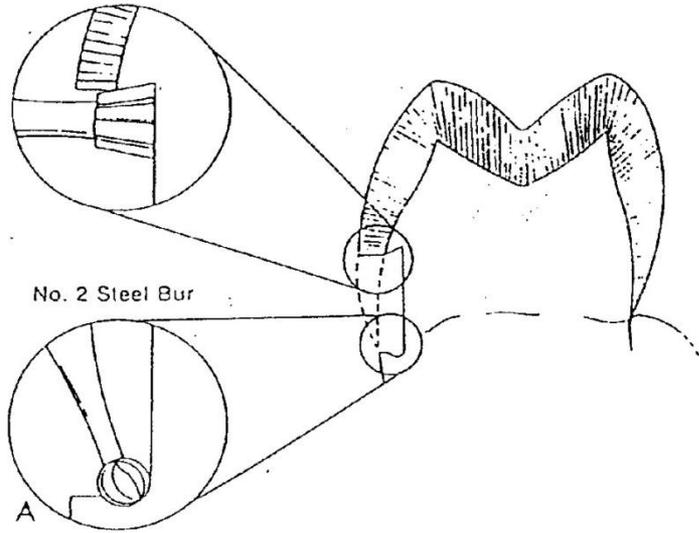
mesial and distal
border

Gingival border

Retention

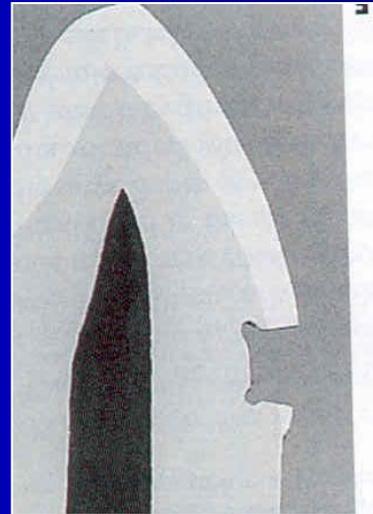
- Box 0,75 – 1,25 mm deep, undercuts, coves (larger cavities)





Resistance

Elastic deformation during the biting



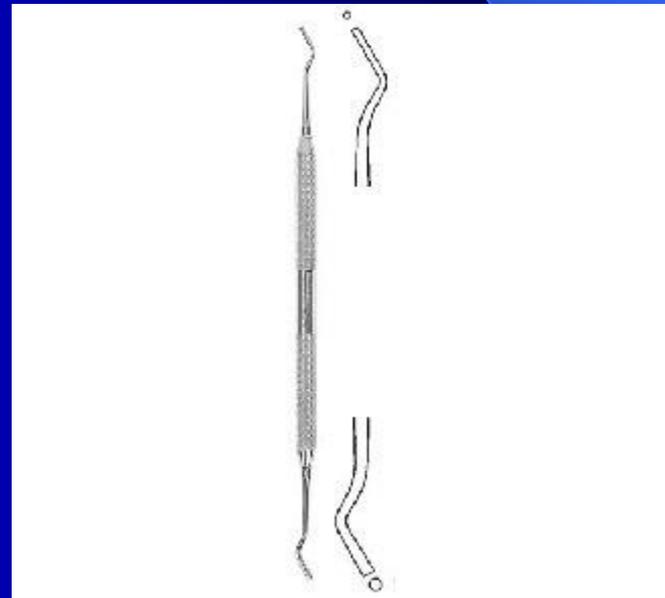
Excavation of carious dentin

Round bur

Excavator

Finishing of cavity borders

- Fine diamond bur of a chisel



Filling

- Portion of amalgam are condensed using a condensor (stamen) and finished using a spatula or a carver.

Class five - composite

- Aesthetic reasons



Contraindication of composites

- Bad hagiene
- Subgingival cavities
- Root caries (outside of enamel)



Access Into The Cavity

- Elimination of the undermined enamel
 - Burs or diamonds (pear), tapered fissure bur
 - Separation of the gingiva— temporary filling guttapercha, fermit, clip, zinkoxidsulfate cement, cavit, provimat).
 - Ablation of ingrown gingiva – surgical (scalpel, laser, high frequency current)
- Composite must not be subgingival!!!!

Determination of cavity borders

Cavity is limited on the caries defect only –
no extention!!!!

The depth usually 1 mm

Retention

➤ Micromechanical retention

Enamel: Retentive border – 1 – 2 mm wide
and the angle 45°

Cementum: only finishing with the fine
diamond bur.

Retention

Retentive border:

- removing of the aprismatic enamel



- better condition for micromechanical retention

- better aesthetics

Retention

Acid etching (phosphoric acid): 30 s dentin,
30 s enamel

Rinsing (washing off) 30s

Priming, bonding, light curing.

Filling

Spatula

Matrix

- Polyester strip, wooden wedges
- Special cervical matrix

Matrix

Anatomical form



Class five - glasionomer

- Cavity outside of enamel



Properties

- Chemical fixation to tooth structure
- Fluoride release
- Favorable thermal expansion
- Acceptable aesthetics

Determination of cavity borders

Cavity is limited on the caries defect only –
no extention!!!!

The depth usually 1 mm

Retention

- Box

- Chemical

Finishing of cavity borders

Fine diamond bur

Filling

- Conditioner 20 s
- Washing off
- Wet cavity
- Filling material
- Matrix
- Varnish



Class V. – Sandwich principle

Base of galsionomer – replace of the lost dentin

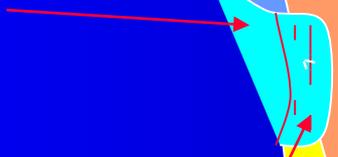
Thin layer of composite – replace of the lost enamel

Sandwich filling

Bond:
GIC - Tooth
Chemical

Composite

Composite – Tooth
Micromechanical



Composite - GIC
Micromechanical

Base

