Characteristic Features & Preparation of Class IV & V for Composite Resin Restoration

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Class IV Restorations

Definition:

* Class IV caries affecting
  * the proximal surfaces of anterior teeth
  * involving the incisal angle.
  * Class IV restorations are usually necessitated by fracture of an incisal angle
It is visible on clinical examination

- If caries is present, radiographs may be helpful to determine
  - the extent of the carious lesion
  - its proximity to the pulp chamber
Etiology and Treatment Rationale

- Caries-induced class IV restorations are usually class III lesions that have undermined the incisal edge.

- In case of traumatic fracture found in children or young adults:
  - more often in permanent incisors (5-20%)
  - loss of tooth substance is likely to be more horizontal than vertical
* Cavity design for class IV carious lesion

- Follows the conventional form of class III preparation and includes the incisal edge
- Caries and weak incisal enamel are removed

All enamel margins are beveled
* For fracture

- If no caries or pulpal involvement a bevel is the only preparation necessary.
- 1.0 mm enamel bevel should be placed around the periphery of the cavity.
Use of Pins

* Retentive pins are not needed because the adhesive technique provides sufficient retention for the restoration.
In rare situations when little enamel is available for bonding, and composite is the only treatment

- Pins may be used for additional retention.

- It should be placed 1.0 mm inside the dentino-enamel junction.
Class IV Restoration
Class V Restoration
Class V Restorations:

Definition:

Class V caries affecting the cervical surfaces
Indications

- Caries – most common cause
  Of class V
- Cervical erosion / abrasion lesions.
- Abfraction
Restorative Materials

Micro filled composite Resin is the most esthetic material

- Has good wear resistance
- Longevity

With current adhesive systems provide
- Good retention
- Marginal seal
- Resistance to polymerization shrinkage
Preparation for Root Caries

* Should extend to include caries
* Mechanical retention is recommended
* **Groove** at gingivo axial line angle - *lessen gap formation at the gingival margin*
* All enamel margin should be *beveled* to maximize enamel bonding
**Preparation for Cervical Erosion/Abrasion Lesion**

- **Minimal** preparation is necessary

- Enamel margin should be **beveled**

- **Mechanical retention** is recommended
YOU
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