

Failures in Operative Dentistry

Operative restoration

Direct

- Amalgam
- GI/RMGI
- Resin composite



Indirect

- Inlay
- Onlay



The criteria of success of a dental restoration include :

- Restoration remains integral and in place.
- Absence of recurrent caries.
- Marginal accuracy and adaptation.
- Perfect aesthetics.
- Maintain perfect anatomy and relations with neighboring and opposing teeth and periodontal structures.
- Patient comfort and satisfaction.

Type of Restoration Failure

- 1. Dislodgement (loss) of restoration
- 2. Marginal failure
- 3. Fracture of Restoration
- 4. Secondary caries
- 5. Periodontal related
- 6. Discoloration (Esthetics)
- 7. Postoperative Tooth Hypersensitivity

1. Dislodgement (loss) of restoration



1. Dislodgement (loss) of restoration

Cause of failure

- Poor Retention Form
- Improper adhesive application
- Contamination

Correction

- Need Preparation or accessory retention form and then Re-filling
- If having secondary caries should remove caries before re-filling

2. Marginal failure



2. Marginal failure

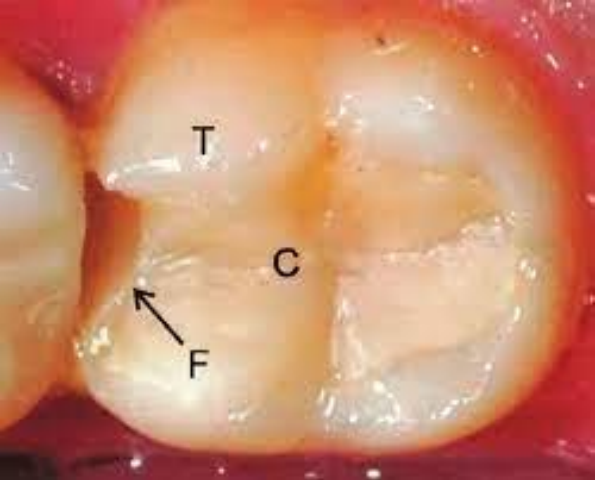
Cause of failure

- Improper manipulate resin composite

Correction

- Re-finishing & re-polishing
- Re-filling

3. Fracture of Restoration



3. Fracture of Restoration

Cause of failure

- Poor resistance form
- Improper cavity preparation
- less tooth remaining and not strong (functional cusp)

Correction

- Need Cavity Preparation and Re-filling
- Cusp capping / onlay / crown

4. Secondary caries



4. Secondary caries

Cause of failure

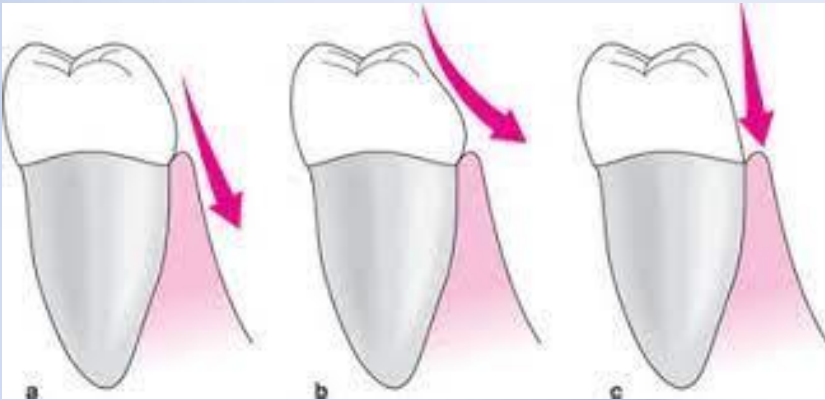
- Improper Caries removal
- Poor adaptation of materials
- Poor oral hygiene

Correction

- Need re-filling

5. Periodontal related

- Over- or under-contoured restoration
- Overhanging margin
- Traumatic Occlusion
- Surface roughness



5.Periodontal related

Cause of failure

- Improper matrix & wedge system

Correction

- Finishing & polishing / Re-filling

5. Periodontal related

- Traumatic Occlusion

Clinical

- 1) Mobility (progressive)
- 2) Pain on chewing or percussion
- 3) Occlusal prematurities/discrepancies

Radiographic

- 1) Widened PDL space
- 2) Bone loss (furcations; vertical; circumferential)
- 3) 3) Root resorption



Correction

- 1) Occlusal adjustment
- 2) Management of parafunctional habits
- 3) Temporary or long-term stabilization of mobile teeth
- 4) Orthodontic tooth movement
- 5) Occlusal reconstruction
- 6) Extraction of selected teeth

6. Discoloration



Correction

- Re-filling
- Veneer/Crown



7. Postoperative Tooth Hypersensitivity



7. Postoperative Tooth Hypersensitivity

Cause of failure

- Trauma from Operative Procedure
- Microleakage
- Cuspal Deflection

Correction

- Re-filling

Thank
you