OPERATIVE DENTISTRY AND ENDODONTICS DOE 602

DR NOORHARLIANA MOHAMED ZOHDI

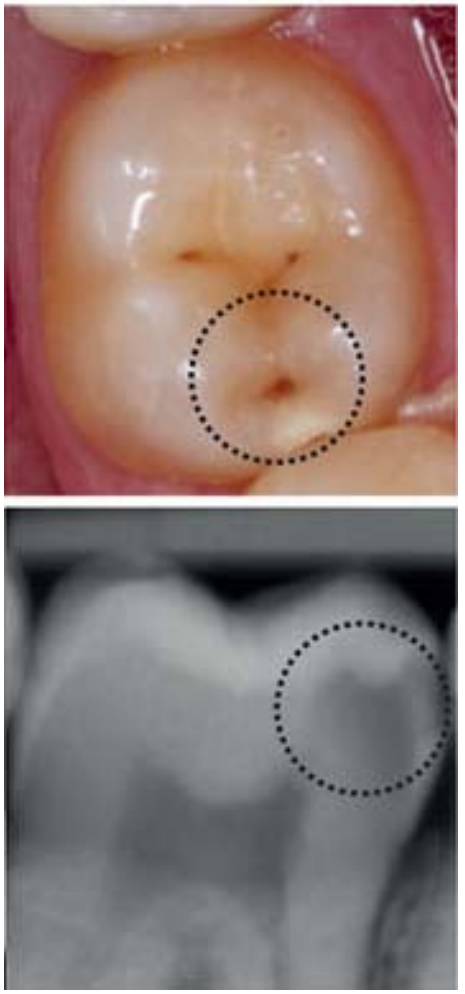
DOE 602

REQUIREMENT	Supervisor
Operative dentistry	
ICDAS 1-2 (Fissure sealant)	ALL
ICDAS 3-4 (PRR, Tooth colored/ amalgam restoration)	ALL
ICDAS 5-6 (Deep/advanced caries management)	ALL
Endodontics	
Anterior/ Single canal	ALL
Premolar/ two canals or more (lower central incisor)	Endodontist and Restorative specialist
Molar	Endodontist and Restorative specialist

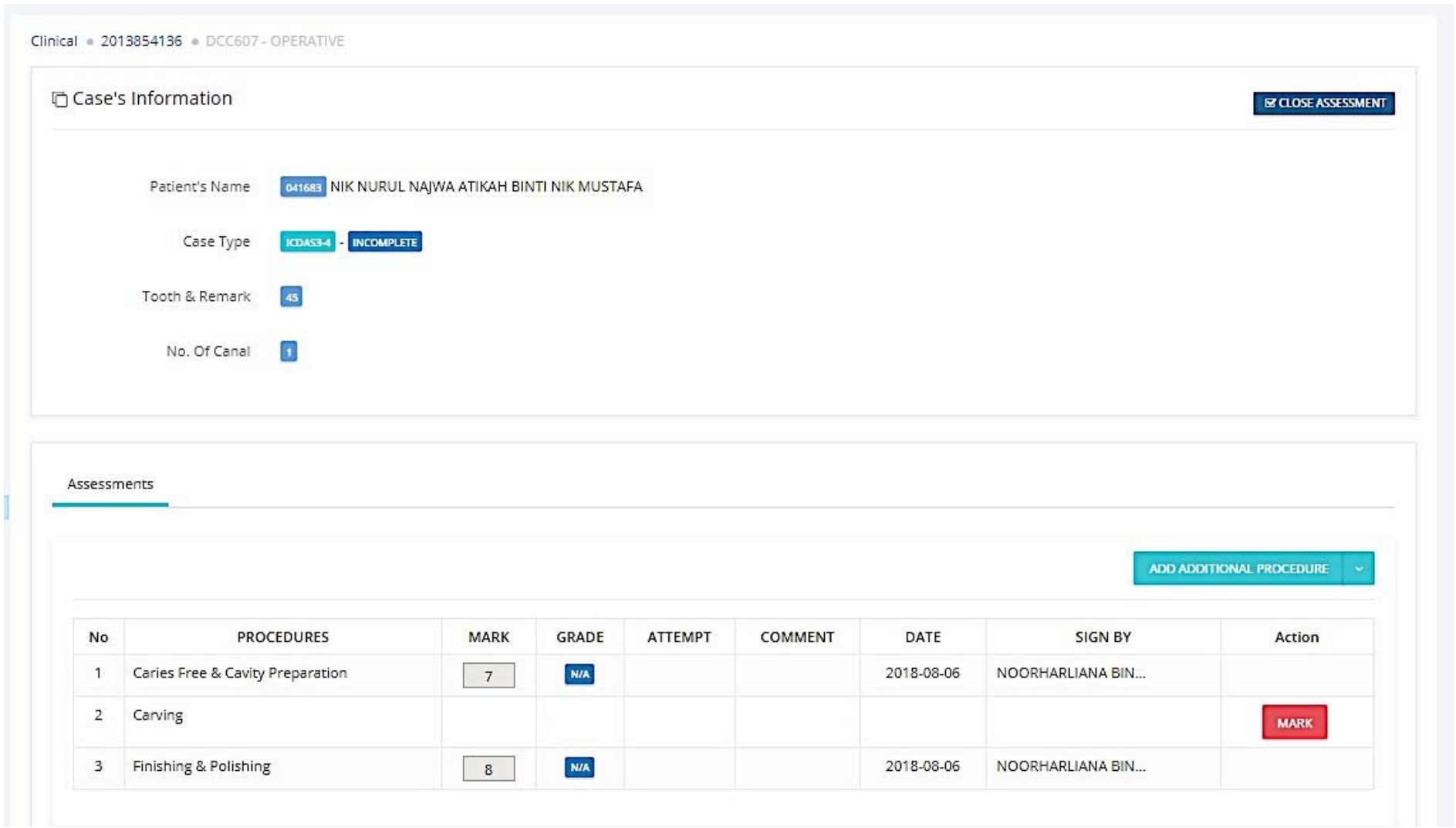
DOE 602 COMPETENCY

Competency	Supervisor
ICDAS 3-4	ALL (Double examiners)
ICDAS 5-6	ALL (Double examiners)
Endodontic: Single canal RCT	Endodontist and Restorative specialist

CARIES MANAGEMENT OF MODERATE CARIES LESION ICDAS 3-4



ICDAS 3-4 ASSESSMENT



COMPETENCY: CARIES MANAGEMENT OF ICDAS 3-4

Supervisor	ALL (Double examiners)
Screening for competency: All lecturers and reconfirm with ODE lecturers • must have adjacent and opposing teeth • ICDAS 3-4 for tooth colored restoration/amalgam	
Competency: • Free of plaque and calculus (scaling and prophylaxis) • Stabilized active infection: caries and any pulpal/periapical diseases and periodontal health. • Fair oral hygiene • Radiographic examination: bitewings	
Procedure to be checked: - E&D and infection control - Rubber dam isolation - Caries removal - Final restoration: occlusion and contact points	

COMPETENCY: ICDAS 3-4

Clinical • 2013854136 • DCC607 - OPERATIVE

Case's Information

CLOSE ASSESSMENT

Patient's Name: 041683 NIK NURUL NAJWA ATIKAH BINTI NIK MUSTAFA

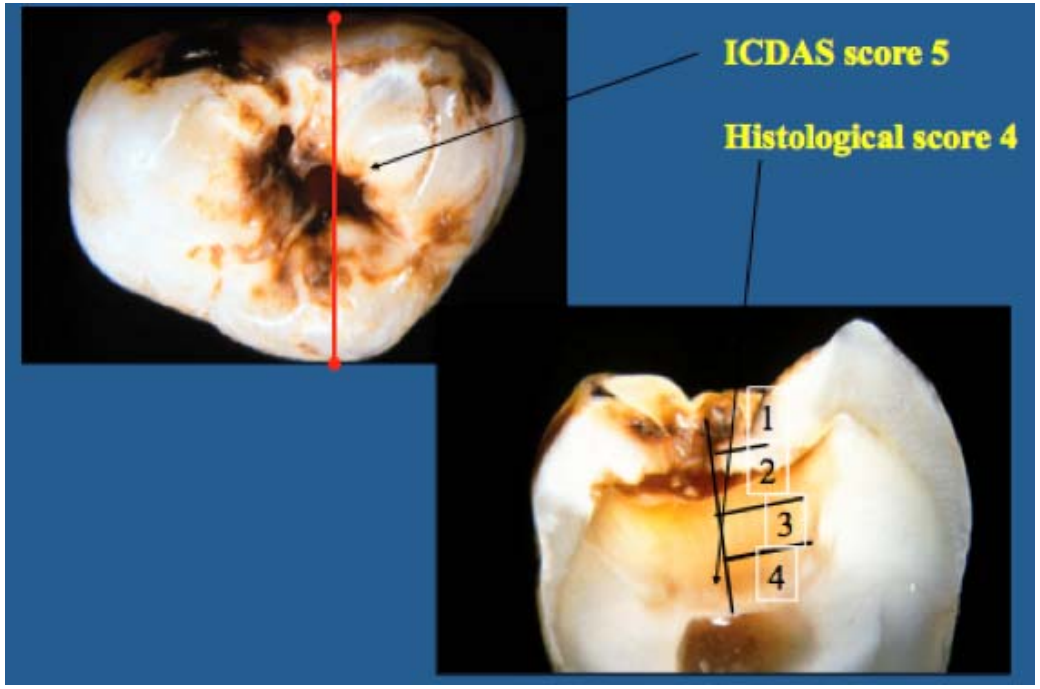
Case Type: COMPETENCY - ICDAS 3-4 - INCOMPLETE

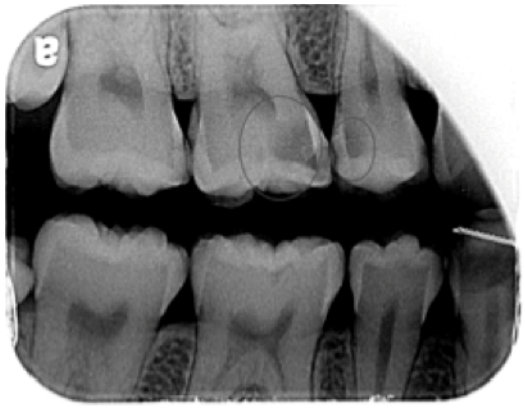
Tooth & Remark: 45

Assessments

ADD ADDITIONAL PROCEDURE

No	PROCEDURES	MARK	GRADE	ATTEMPT	COMMENT	DATE	SIGN BY	Action
1	Examination and Diagnosis							MARK
2	Moisture control							MARK
3	Caries removal and cavity preparation							MARK
4	Completed restoration							MARK





CARIES MANAGEMENT OF ADVANCED/DEEP CARIES ICDAS 5-6

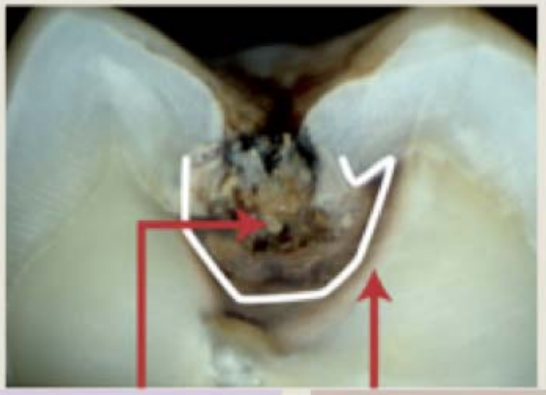
CARIES EXCAVATION

Traditional approach

- Complete caries removal
- Removal of all soft and leathery dentin
- Mechanistic approach to maximize the retention of the restorative material within the cavity

Minimal intervention dentistry/ conservative and minimally invasive dentistry

- Partial or incomplete caries removal
- Removal of soft and infected carious dentin, leaving affected dentin



Infected dentinal carious lesion:

- the irreversible demineralised & denatured layer with bacterial invasion.
- Very soft, moist and easy to remove with a spoon excavator.
- Unmineralisable
- Dead dentin
- Without any sensation
- Need to be removed

Affected dentinal carious lesion:

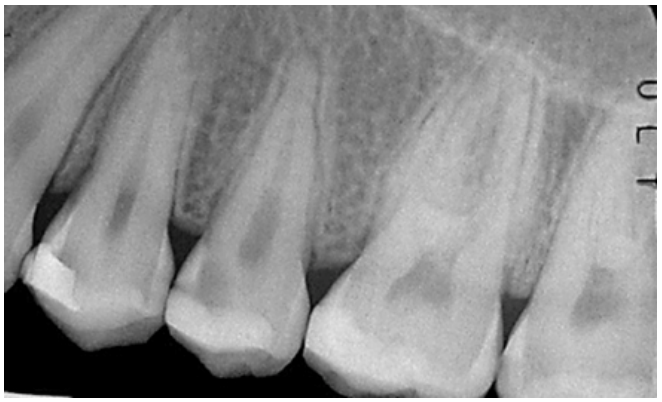
- dentin is partially demineralised (leathery/softer than normal),
- collagen is not denatured
- contains minimal to no bacteria.
- Vital dentin
- Sensitive
- Can be left behind

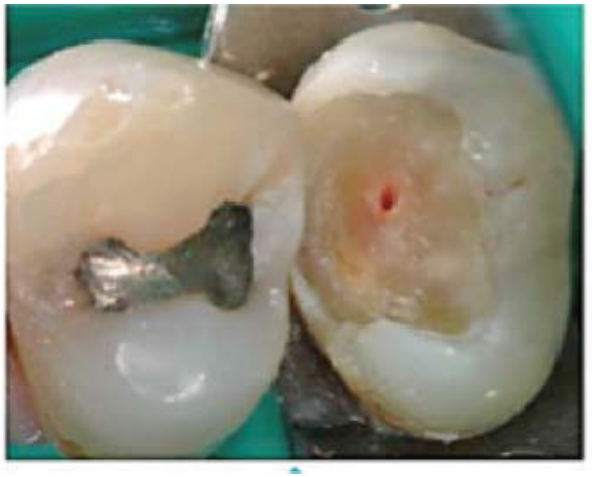
PROBLEMS WITH ADVANCED CARIOUS LESION

Caries involving inner third of the dentin, near/into the pulp.

May accompanied with signs and symptoms of pulpal or apical disease.

Pulp exposure.





MANAGEMENT OF ADVANCED CARIES

Examination and diagnoses. Get the DIAGNOSIS right!

- Presenting and history of complaint
- Clinical examination: caries, crack, mobility, surrounding gingiva and mucosa
- Palpation and percussion test
- Pulp sensibility test: EPT, hot and cold
- Radiographic investigations: bitewings and periapical radiograph.

Rubber dam isolation. MANDATORY!

Caries excavation:

Always start at the peripheral first! Remove all infected carious dentin.

Followed by caries near the pulp.

WHAT TO DO WHEN THERE IS PULPAL EXPOSURE?

Clean the cavity with normal saline.

Control the bleeding with sterilized cotton pellet moisten with normal saline/local anaesthesia.

a) Dycal placement on the pin point pulpal exposure (Smooth and minimal thickness). GIC liner to seal the dycal.

b) MTA/Biodentine

Semi permanent restoration: GIC

Permanent restoration: Composite/ Amalgam

Review in 2-3 months. Follow up to 1 year. Reassessment: check any signs and symptoms.

DIRECT PULP CAPPING WITH CALCIUM HYDROXIDE

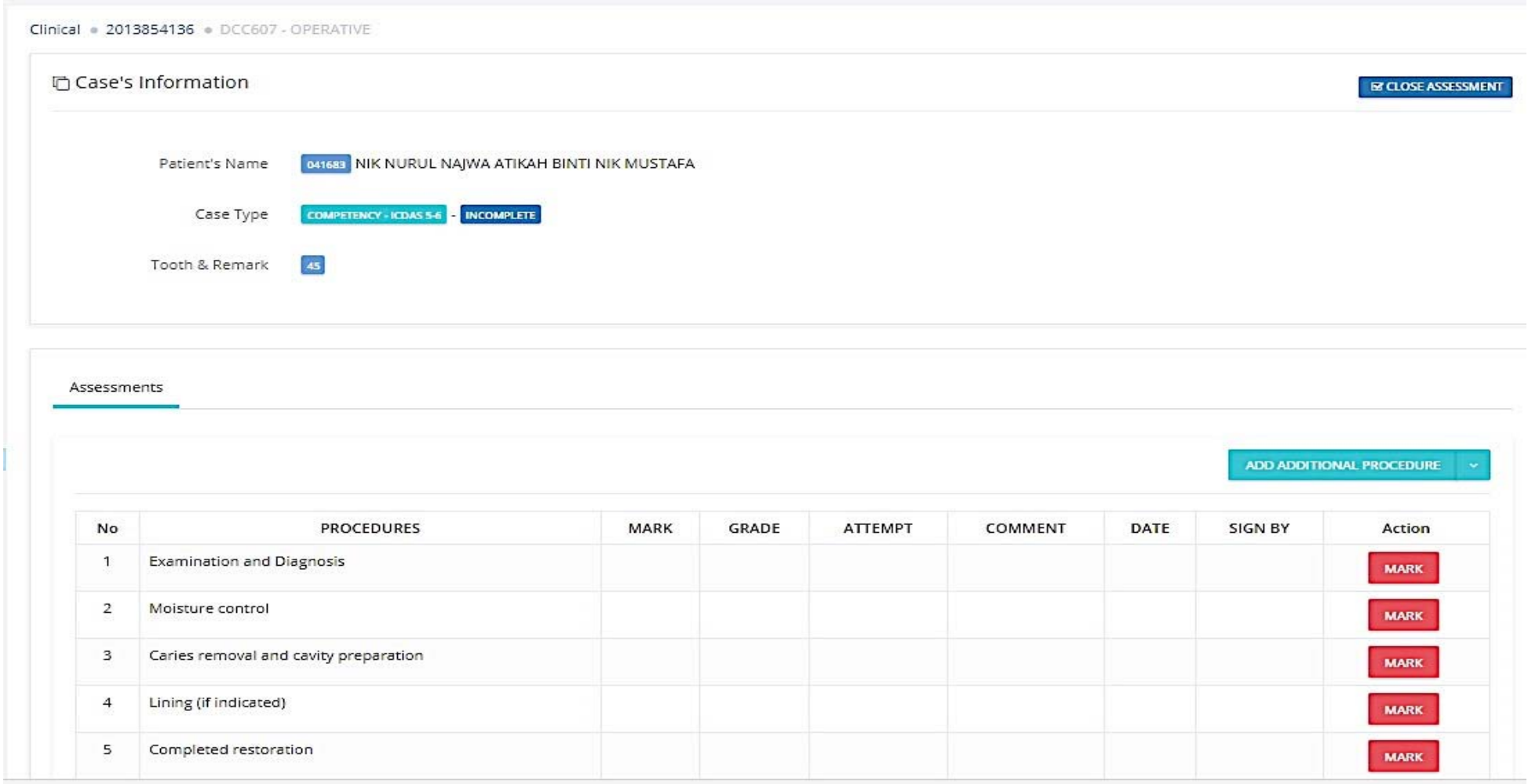
Indications	Contraindications
Vital pulp	Non vital pulp
Asymptomatic pulp or reversible pulpitis symptoms	Symptomatic (history of spontaneous and nocturnal toothaches)
Small pin point pulpal exposure	Large pulpal exposure
Minimal bleeding at the exposure site	Uncontrollable bleeding
Radiograph: NAD	Radiograph: Evidence of periapical pathosis (Thickening of pdl space or periapical radiolucency)
Limited restorative treatment	Extensive restorative treatment planned

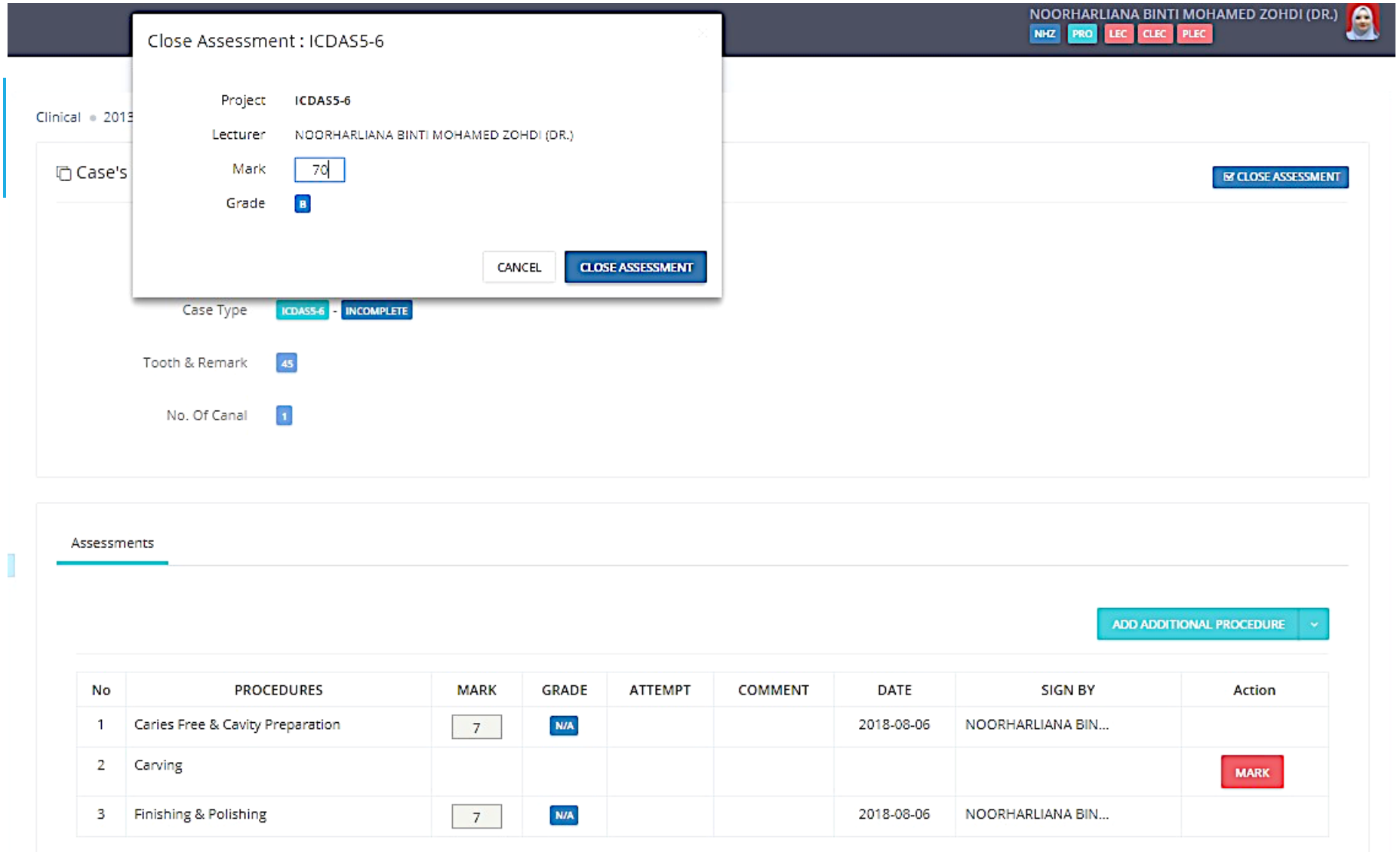
DIRECT PULP CAPPING

COMPETENCY: CARIES MANAGEMENT OF ICDAS 5-6

Supervisor	ALL (Double examiners)
Screening for competency: All lecturers and reconfirm with ODE Lecturers* • must have adjacent and opposing teeth • ICDAS 5-6 for tooth colored restoration/ amalgam • Restorable • Vital: no periapical diseases	
Competency: • Free of plaque and calculus • Stabilized active infection: caries and any pulpal/periapical diseases and periodontal health. • Fair oral hygiene	
Objective: to evaluate student's ability to manage deep caries and justify their management (choice of materials, management procedures and review protocol)	

COMPETENCY: ICDAS 5-6




NOORHARLIANA BINTI MOHAMED ZOHDI (DR.)
NHZ
PRO
LEC
CLEC
PLEC
Close Assessment : ICDAS5-6
Project
ICDAS5-6
Lecturer
NOORHARLIANA BINTI MOHAMED ZOHDI (DR.)
Mark
70
Grade
B
CANCEL
CLOSE ASSESSMENT
Clinical
Case's
CLOSE ASSESSMENT
Case Type
ICDAS5-6
INCOMPLETE
Tooth & Remark
45
No. Of Canal
1
Assessments
ADD ADDITIONAL PROCEDURE
No
PROCEDURES
MARK
GRADE
ATTEMPT
COMMENT
DATE
SIGN BY
Action
1
Caries Free & Cavity Preparation
7
N/A
2018-08-06
NOORHARLIANA BIN...
2
Carving
MARK
3
Finishing & Polishing
7
N/A
2018-08-06
NOORHARLIANA BIN...

PROBLEMS ENCOUNTERED IN CLINIC

Examination & Diagnosis was not properly done.

- Investigations of complaint tooth, deep caries, large restorations, abutment teeth for RPD/FP.
- Incorrect diagnoses.

Missed caries

- Early caries lesion on occlusal and smooth surface: due to uncleaned tooth surfaces prior to charting
- Proximal caries: Bitewings radiograph is a more superior and sensitive diagnostic method than clinical inspection for detecting proximal lesion.

PROBLEMS ENCOUNTERED IN CLINIC

Examination & Diagnosis was not properly done.

Missed caries

Aggressive caries excavation: Unnecessary sound dentin removal.

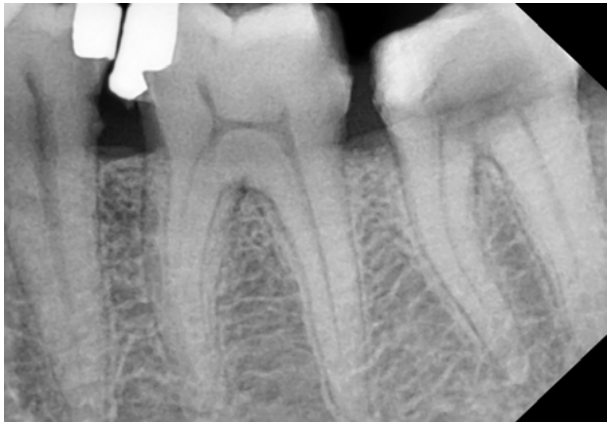
Restorability assessment prior to RCT was not done.

Caries was not stabilized before starting RCT

No pre-endodontic restoration prior to RCT: Tooth was restored with temporary filling e.g: kalzinol

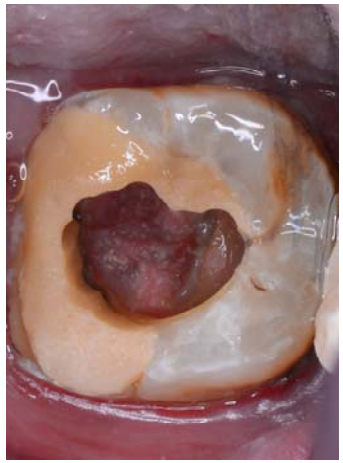
- Old restoration, caries must be removed and restored with new restoration: Pre-endodontic restoration.
- Pulp extirpation is only necessary when there is ACUTE signs and symptoms: pain, tender to percussion, swelling/abscess.

IS THE TOOTH RESTORABLE?



Factors to be considered prior to RCT:

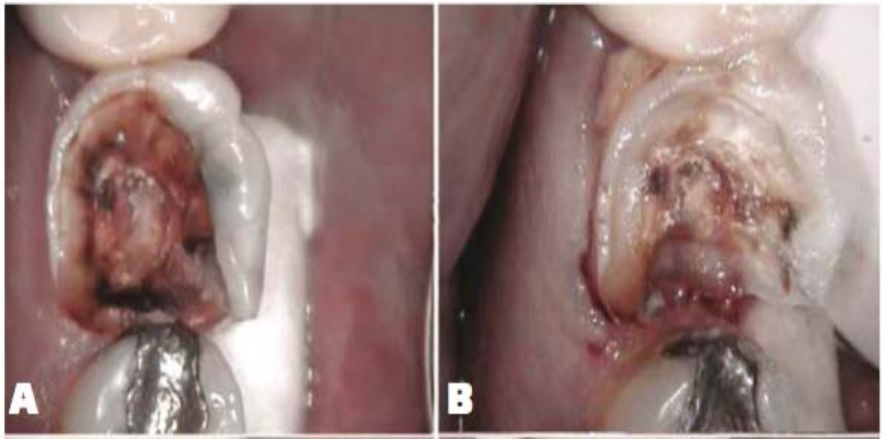
1. Restorability of the tooth:
   - Restorative prognosis
   - Endodontic prognosis
   - Periodontal prognosis
   - Occlusion
2. Treatment plan/ definitive restorations after completing root canal treatment
3. Quality of coronal seal before, during and after root canal treatment
   - Leaking of fillings and recurrent caries may allow ingress of bacteria



IS THE TOOTH RESTORABLE?

What is the restorative prognosis?

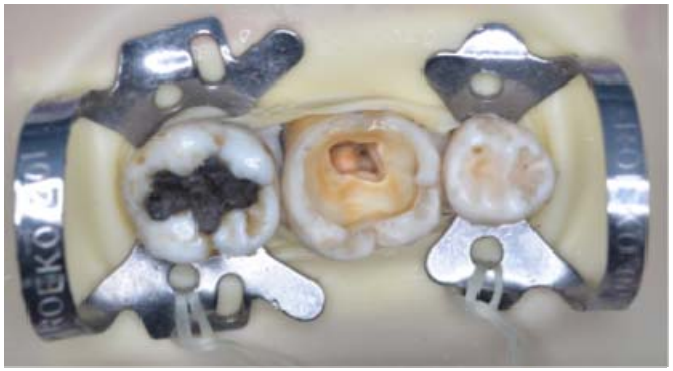
- Favourable (restorable), questionable (additional treatment needed e.g. crown lengthening, orthodontic extrusion), unfavourable (non-restorable)
- Extension of caries/crack
- Remaining sound tooth structure (ferrule), crown-root ratio
- tooth fracture, cracked tooth: extension of the crack line/ location of fracture

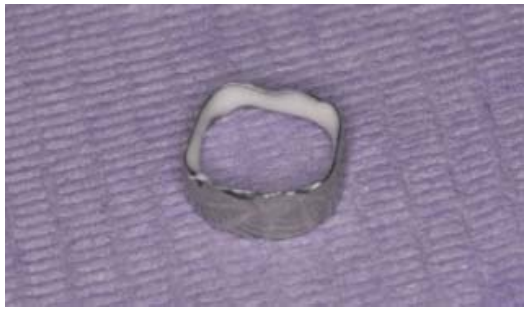


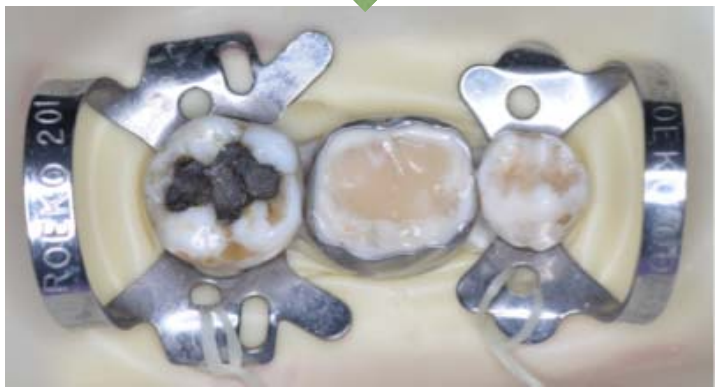
PRE-ENDODONTIC RESTORATIONS AND TEMPORARIZATION

- Temporary seal and prevent marginal leakage before, during and after treatment before final restoration is placed.
- Facilitate placement of rubber dam and clamps/ optimal isolation.
- Prevent contamination of the canal with infected (carious) dentine.
- Prevent saliva contamination of the canal due to leaky restoration.
- Prevent fracture of the tooth/dressing in between visits.
- Prevent further breakdown of the tooth by caries or fracture.

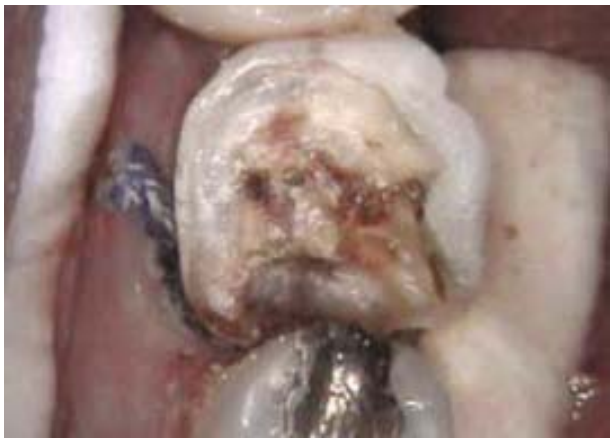
PRE-ENDO RESTORATION (GIC + ORTHODONTIC BAND)



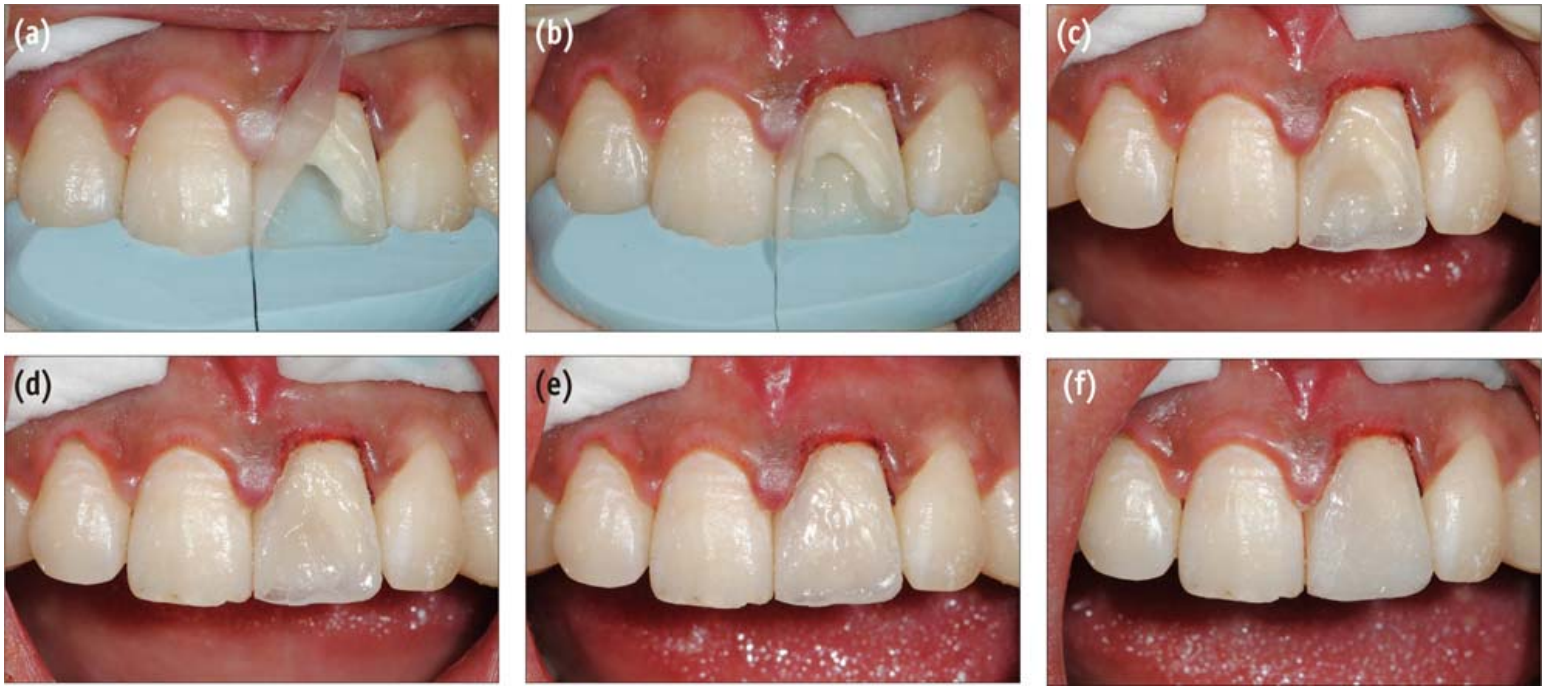




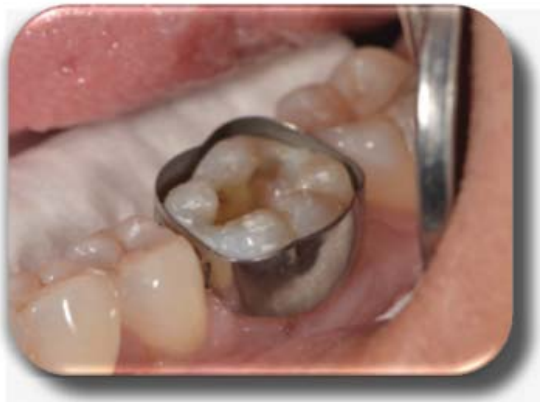
PRE-ENDODONTIC TREATMENT: COMPOSITE BUILD UP

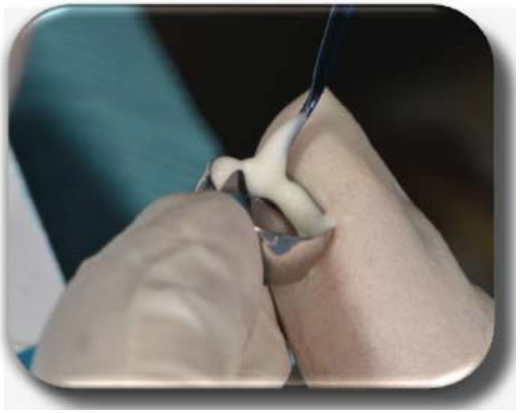


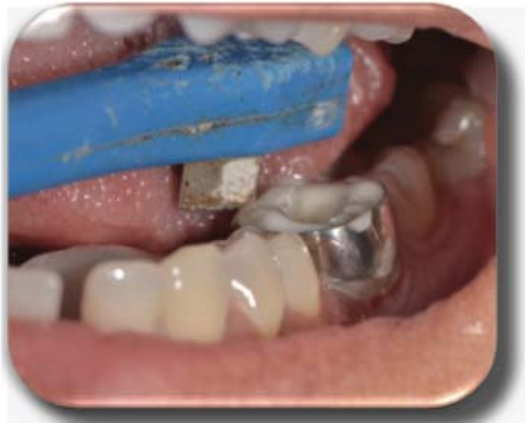
COMPOSITE BUILD UP ON FRACTURED ANTERIOR TOOTH

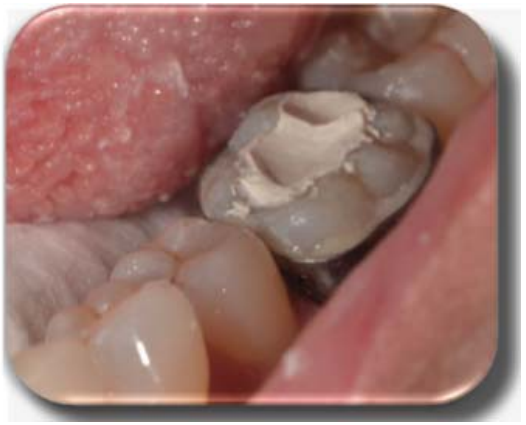


PRE-ENDODONTIC RESTORATION: CRACK TOOTH



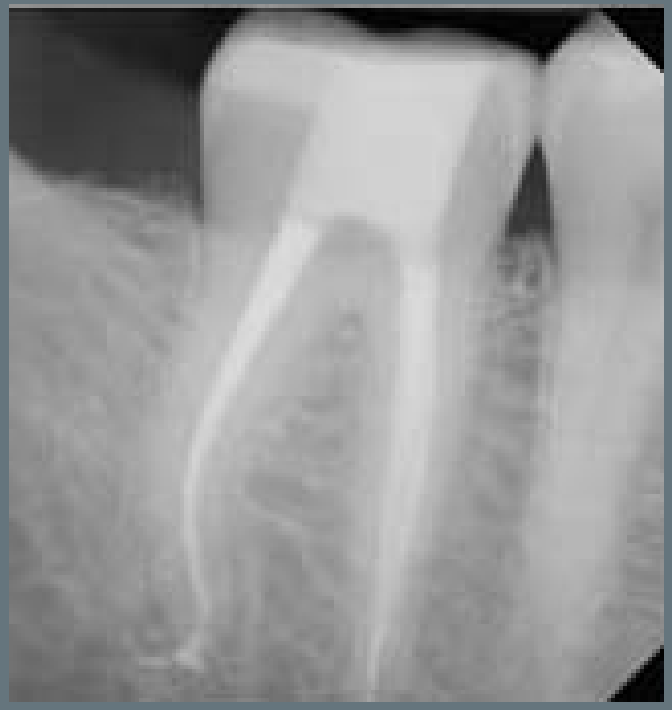






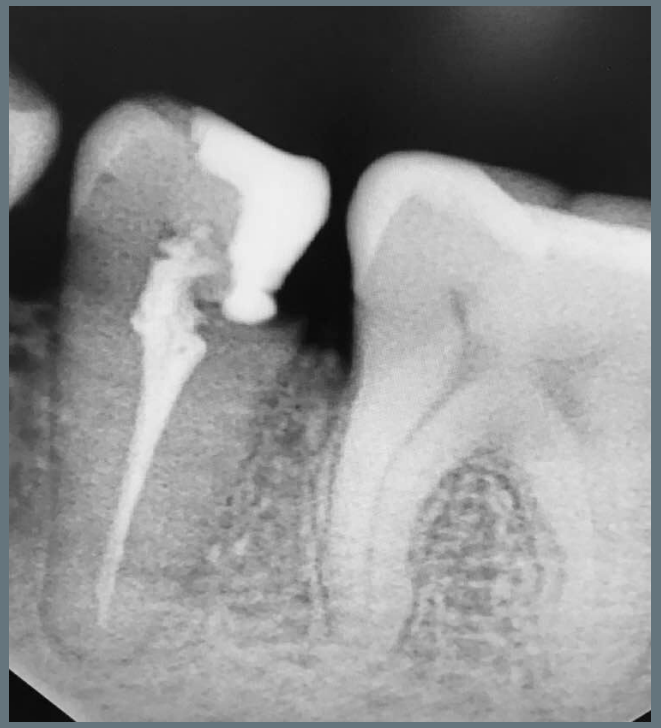
CORONAL SEAL AFTER RCT: GOOD

- Excess gp removed 1-2 mm below CEJ (for single canal) or at canal orifices for multirooted canal.
- Canal orifices and pulpal floor are sealed with 1-2 mm thickness of resin composite (flowable composite ie: SDR) or glass ionomer cement. Must be assessed by periapical radiograph prior to coronal build up.
- Composite core (incremental or bulkfill)
- Coronal seal placed as soon as possible after RCT.
- Under rubber dam isolation



CORONAL SEAL AFTER RCT: POOR

- GP seen above CEJ
- Canal orifices and pulpal floor are not properly sealed with radiopaque material.
- Evidence of marginal leakage/gap
- Done without rubber dam isolation



ENDODONTICS

REQUIREMENT	Supervisor
Anterior/ Single canal tooth	
• Pre-Endodontic Restoration	ALL
• E&D (with PA xray)	Endodontist and Restorative specialist
• Access cavity	Endodontist and Restorative specialist
• Working length (with PA xray)	ALL
• Canal cleaning and shaping	ALL
• Obturation (with PA xray)	Endodontist and Restorative specialist
• Semi-permanent/permanent restoration (with PA xray)	ALL

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