NONSURGICAL RETREATMENT

COHEN'S PATHWAYS OF THE PULP 11TH EDITION. CHAPTER 8. (324-386)

Dr. Kholod Almanei

THIS IS A READING GUIDE FOR THE ASSIGNED REFERENCE

11/4/2017

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LECTURE OUTLINE

- Etiology of Posttreatment Disease
- Diagnosis of Posttreatment Disease
- Treatment Planning
- Nonsurgical Endodontic Retreatment
  - ✓ Coronal access cavity preparation
  - ✓ Post removal
  - ✓ Regaining access to the apical area
  - ✓ Finishing the retreatment
- Prognosis of Retreatment

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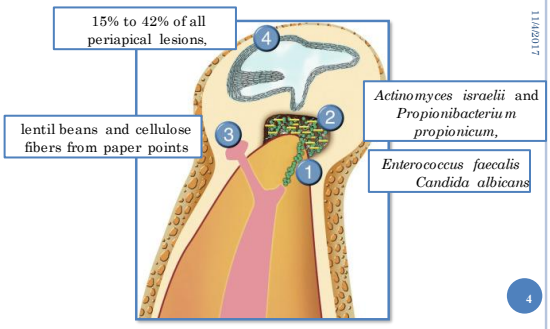
Etiology of Posttreatment Disease



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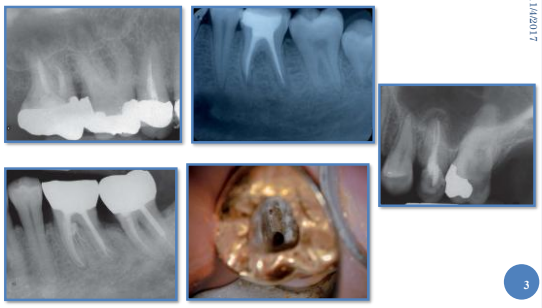
Etiology of Posttreatment Disease



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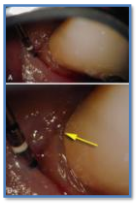
Diagnosis of Posttreatment Disease



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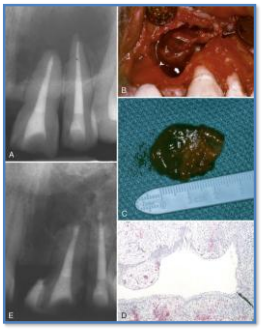
Etiology of Posttreatment Disease

TRUE CASES



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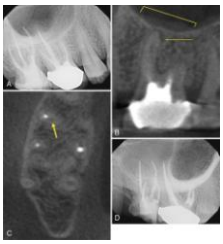
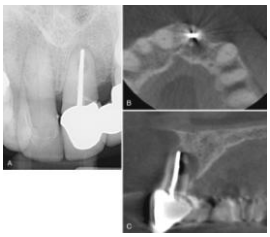
Diagnosis of Posttreatment Disease





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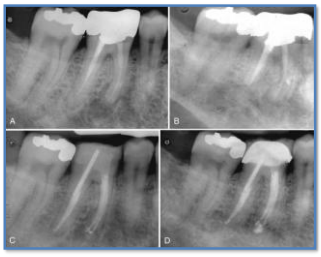
Diagnosis of Posttreatment Disease



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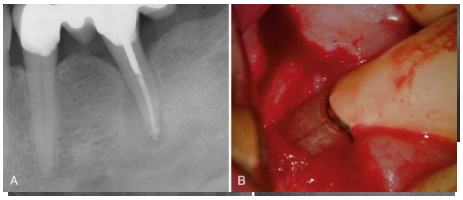
Treatment Planning



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Treatment Planning

Four basic options for treatment

1. D o nothing
2. Extract the tooth
3. Nonsurgical retreatment
4. Surgical retreatment

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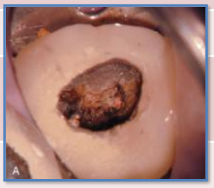
Coronal Access Cavity Preparation

Retreatment of tooth with full-coverage restoration

Preserve the restoration	
When the crown is considered to be satisfactory	
Cost for replacement can be avoided, isolation is easier, occlusion is preserved, esthetics will be minimally changed	
Restricted visibility, removal of canal obstructions such as posts will be more difficult, clinician may miss something important such as hidden recurrent caries, fracture, or additional canal	

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Nonsurgical Endodontic Retreatment

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Coronal Access Cavity Preparation

- If the access will be primarily cut through metal (amalgam alloy or cast metal) or composite resin, carbide fissure burs are usually chosen.
- When a PFM crown is encountered, a round diamond is used to cut through the porcelain layer. Once the metal substructure is encountered, an end-cutting bur, such as the Transmetal bur or the Great White bur can be used.

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Coronal Access Cavity Preparation

Retreatment of tooth with full-coverage restoration

	Replace the restoration
	If there is a defect or caries associated with the restoration or if the treatment plan calls for a new crown
	Simply removed and replaced later
	Visibility increased, easier removal of canal obstructions and a decrease in the potential for operator error; however, tooth isolation may become a problem.

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Coronal Access Cavity Preparation

CoronaFlex Kit

Kline Crown Remover

Crown-A-Matic & Morrell Crown Remover

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Coronal Access Cavity Preparation

- The clinician must decide how to remove the crown.
- There have been many devices developed specifically for the conservative removal of crowns.

KY Pliers

Roydent Bridge Remover

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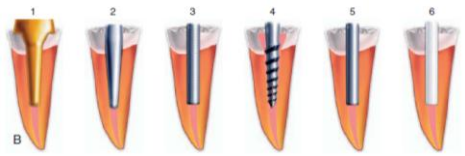
Post Removal

- There are many different types of posts the clinician may encounter during retreatment.
- These can be classified into two categories: prefabricated posts and custom-cast posts.



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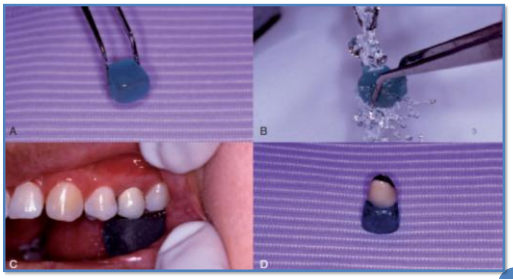
Coronal Access Cavity Preparation



Richwil Crown and Bridge Remover

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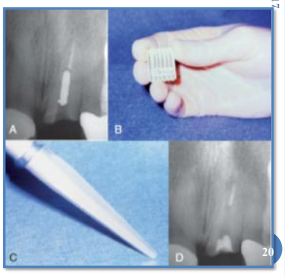
Post Removal Techniques

- Roto-Pro Kit



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Post Removal Techniques

- The first step in post removal is to expose it properly by removal of all adjacent restorative materials.

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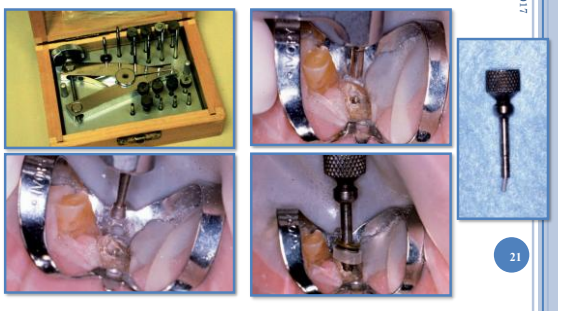
Post Removal Techniques

- Thomas Screw Post Removal Kit

Post Removal Techniques

- Gonon Post Removing System



Post Removal Techniques

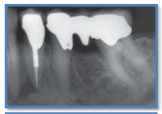
- JS Post Extractor
- Eggler Post Remover

Post Removal Techniques

- Ruddle Post Removal System and Universal Post Remover

Potential Complications of Post Removal

1. Fracture of the tooth
2. Root perforation
3. Post breakage
4. Inability to remove the post
5. Ultrasonically generated heat damage to the periodontium



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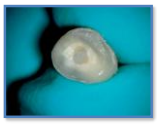
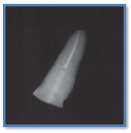
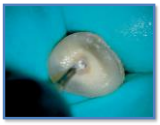
Post Removal Techniques

Tooth-colored posts

- GyroTip


- Ceramic and zirconium posts



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Regaining Access to the Apical Area


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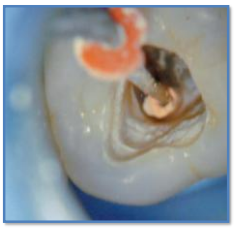
Regaining Access to the Apical Area

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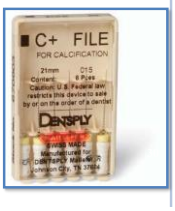
Regaining Access to the Apical Area



Regaining Access to the Apical Area


Chloroform


Eucalyptol

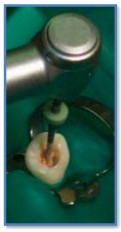

Halothan

Rectified Turpentine

Xylene

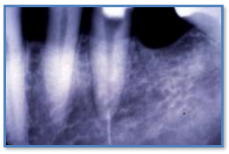
Regaining Access to the Apical Area

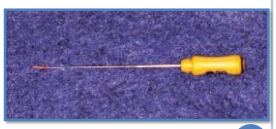
- Using rotary systems to remove gutta-percha in the canals



Regaining Access to the Apical Area

- To avoid overextending root filling materials into the periodontium, it is recommended that a radiograph be made to gain a preliminary measurement.





Regaining Access to the Apical Area

FIG. 25-38 Metal carrier retreatment. A, Preoperative radiograph. B, Metal carriers exposed by careful excavation of gutta-percha. C, Use of the Touch 'n Heat instrument to heat the carriers and soften the gutta-percha. This allowed removal of one of the carriers using modified bright forceps. The other could not be removed using heat or solvents. D, Ultrasonic troughing around the carrier to facilitate grasping it with forceps. E-I, Carriers removed and condensed with a radiograph. G, Metal carriers showing gutta-percha still adhering to them. H, Final obturation of the tooth.

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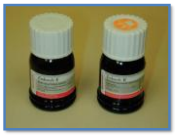
Regaining Access to the Apical Area

- The Resilon polymer is reported to be soluble in chloroform and may be removed by heat application.
- After the Resilon core has been removed, it has been recommend the use of a resin solvent such as Endosolv-R to attempt elimination of the unfilled resin sealer.



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Prognosis of Retreatment

92%-98%

- Absence of PA lesion

74%-89%

- Presence of PA lesion

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Regaining Access to the Apical Area

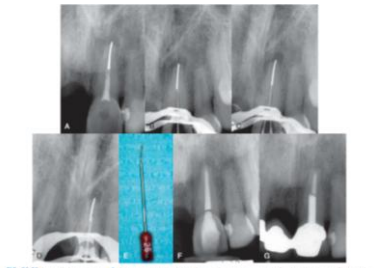

FIG. 25-50 Post-off silver point case. A, Preoperative radiograph showing apical periodontitis and a split silver cone (resin-off) obturation technique. B, The cone was initially bypassed but could not be loosened. C, The braided Hedstroem file technique was attempted but was unsuccessful. D, A Brasseler Endo Extractor tube is cemented to the cone with cyanoacrylate cement. E, The silver point is removed. F, Immediate postobturation radiograph. G, One-year follow-up showing apical healing. (From Gutmann JL, Dumsha TC, Lovdahl PE (eds): Problem solving in endodontics: prevention, identification, and management, ed 4. St Louis, Mosby, 2006.)

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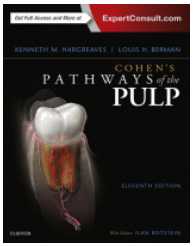

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