

Turning That Frown Into a Crown

Evidence Based Dentistry

Prosthodontics

Fall Rounds 2020

5A-5

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11/11/20

Rounds Team

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- Group Leader: Dr. Dix
- Specialty Leader: Dr. Keesler
- Project Team Leader: Vishy Singh
- Project Team Participants: D1: Amanda Toy;
D2: Cameron Young; D3: Alex Wedige

Patient

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- 67 y.o Caucasian female
- CC: “I want my bite back!”
- Pt was a former smoker who quit over 10 years ago
- Has had a fair amount of dental work done over the last 5 years at MUSoD

Medical History

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- Current & past:
 - Conditions: GERD, Fibromyalgia

- Medications:

cholecalciferol (vitamin D3)	1,000 unit/spray
Culturelle(lactobacillus rhamnosus gg)	10 billion cell
multivitamin	capsule
Excedrin Migraine(aspirin-acetaminophen-caffeine)	250-250-65 mg
ProAir RespiClick(albuterol sulfate)	90 mcg/actuation
ketoconazole	2%
B-complex with vitamin C	tablet
valacyclovir	500 mg
Lyrica(pregabalin)	200 mg
duloxetine	60 mg
omeprazole	40 mg
ibuprofen	200 mg

- Treatment considerations: Pt cannot sit for long appointments and prefers afternoons

Dental History

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- Pt since 2016
- Pt has drastically improved her oral hygiene
- Hx of extractions and RCT
- RCT #5 and #14 done in August
- Had a RPD made at MUSoD in 2017 that does not fit due to extractions of abutment teeth in 2018

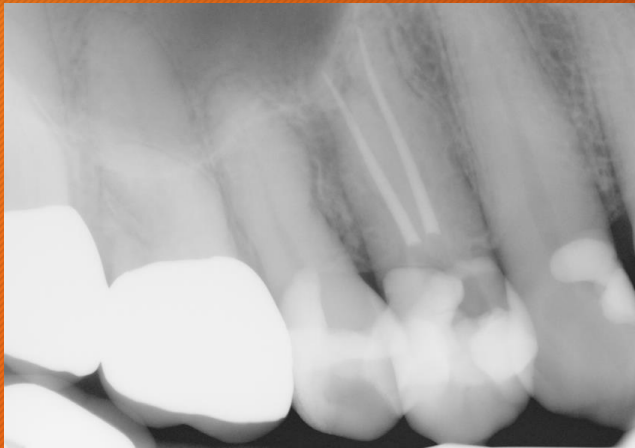
Radiographs

6



Radiographs

7



Radiographic Findings

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- #5 and #14 are endo treated with core build-ups
- #14 will oppose #19 which is a FCC
- #5 will oppose mandibular RPD

Clinical Findings

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- RPD will be Class III mod 1
- Generalized recession with shallow pockets

Specific Findings

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- #5 will oppose denture teeth of lower partial
- #14 will oppose #30 which is a FCC survey crown

Periodontal Charting 8/10/18

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[illegible][illegible]

Diagnosis

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- Pt has reduced biting/ chewing ability after having 26-28 ext and losing her lower partial
- RCT treated #5 and #14 require definitive restorations for protection

Problem List

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- RCT treated 5 and 14 require crowns
- Finish mandibular RPD

D1 Basic Science

■ What is root canal treatment?

- Also known as endodontic treatment
- Treatment for infected pulp of a tooth which results in elimination of infection and protects the tooth from future microbial invasion

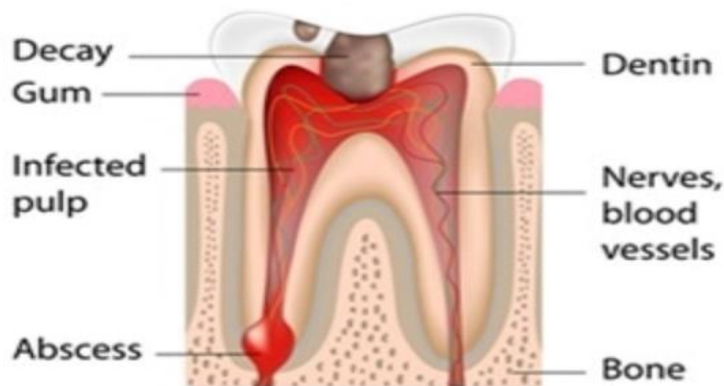
■ Indications:

- Deep decay
- Trauma
- Fractured tooth

■ Advantages:

- Avoid extractions
- Natural appearance
- Normal biting force

Root Canal Treatment



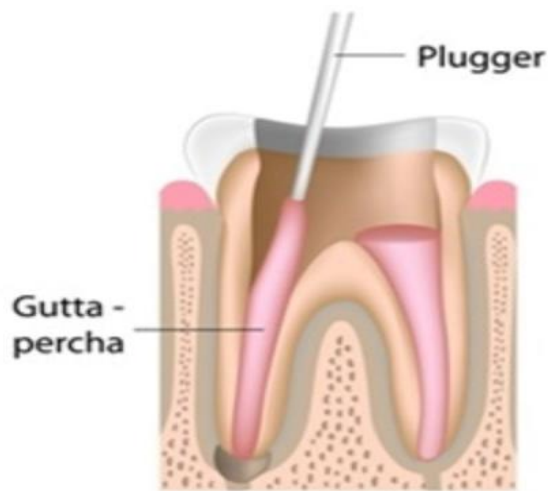
Infected tooth



Opening made in tooth



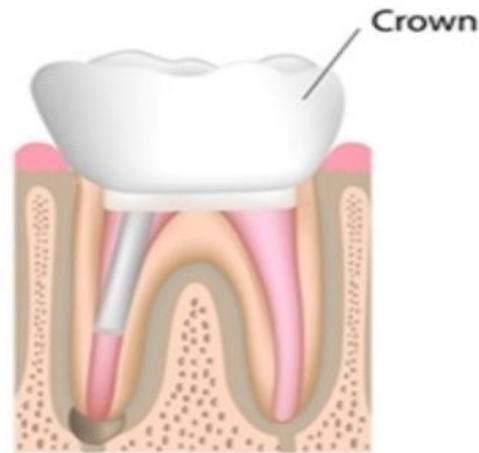
Infected tissue removed; Canals cleaned



Canals filled with a permanent material (gutta-percha)



Opening sealed with filling. In some cases, a post is inserted for extra support



New crown cemented onto rebuilt tooth

D2 Pathology: What are the contributing factors for bruxism?

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- **Bruxism can be defined as:**
 - *“a repetitive jaw-muscle activity characterized by clenching or grinding of the teeth and/or by bracing or thrusting of the mandible”*
- **2 circadian manifestations:**
 - Sleep bruxism
 - Awake bruxism
- **Prevalence:**
 - Higher in females
 - Most common in younger children and decreases with age
- **Complex, controversial, and most likely multifactorial**

D2 Pathology: What are the contributing factors for bruxism?

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- **Current hypotheses that etiology of sleep bruxism involves central nervous system disturbances**
 - Alcohol, Nicotine, Caffeine, Antidepressant, Antipsychotics, Amphetamine use
 - Can be diagnosed/tracked using polysomnography
- **Awake bruxism is harder to diagnose and study**
 - Reliant on anecdotal reports and questionnaires from patient
 - Controversial but some studies suggest major contributory factors include increased stress and anxiety
 - Certain neurologic disorders increase susceptibility
- **Protective?**
 - Hypothesis that acid influx into esophagus (decreasing pH) during GER causes increase in rhythmic masticatory muscle activity (RMMA) which may act to prevent aspiration or mucosal injury from acidic secretions

D3 PICO

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- Clinical Question:

PICO Format

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P:

I:

C:

O:

PICO Formatted Question

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Clinical Bottom Line

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Search Background

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- Date(s) of Search:
- Database(s) Used:
- Search Strategy/Keywords:

Search Background

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- MESH terms used:

Article 1 Citation, Introduction

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- Citation: Authors, Title, Journal, Date, Volume, Page Numbers.
- Study Design:
- Study Need / Purpose:

Article 1 Synopsis

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- 1-2 slides
- Method
- Results
- Conclusions
- Limitations

Article 1 Selection

27

- 1 slide
- Reason for selection
- Applicability to your patient
- Implications

Article 2 Citation, Introduction

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- Citation: Authors, Title, Journal, Date, Volume, Page Numbers.
- Study Design:
- Study Need / Purpose:

Article 2 Synopsis

29

- 1-2 slides
- Method
- Results
- Conclusions
- Limitations

Article 2 Selection

30

- 1 slide
- Reason for selection
- Applicability to your patient
- Implications

Levels of Evidence

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- ☐ **1a** – Clinical Practice Guideline, Meta-Analysis, Systematic Review of Randomized Control Trials (RCTs)
- ☐ **1b** – Individual RCT
- ☐ **2a** – Systematic Review of Cohort Studies
- ☐ **2b** – Individual Cohort Study
- ☐ **3** – Cross-sectional Studies, Ecologic Studies, “Outcomes” Research
- ☐ **4a** – Systematic Review of Case Control Studies
- ☐ **4b** – Individual Case Control Study
- ☐ **5** – Case Series, Case Reports
- ☐ **6** – Expert Opinion without explicit critical appraisal, Narrative Review
- ☐ **7** – Animal Research
- ☐ **8** – In Vitro Research

Strength of Recommendation Taxonomy (SORT)

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☐	A – Consistent, good quality patient oriented evidence
☐	B – Inconsistent or limited quality patient oriented evidence
☐	C – Consensus, disease oriented evidence, usual practice, expert opinion, or case series for studies of diagnosis, treatment, prevention, or screening

Optional footer for reference citations or other notes. Delete if not needed.

Template Revised 9/10/2020

Double click table to activate check-boxes

Conclusions: D3

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How does the evidence apply to this patient?

- Consider/weigh:
 - Literature
 - Group Leader & Specialist experience
 - Patient circumstances & preferences

Based on the above considerations, how will you advise your D4?

Conclusions: D4

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- Suggest the patient lean towards FCC or PFM for #14 because esthetics will be less of concern
- Suggest PFM with metal occlusal for #5 in order to maximize the life of mandibular RPD
- Keep up the good work with hygiene
 - RPDs are tricky - ensure proper hygiene understanding
 -

Discussion Questions

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- Any questions?



THANK YOU

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