
Group 6B-5 Presentation

Evidence Based Dentistry Rounds

Specialty

Group

Team

Date

Rounds Team

- **Group Leader: Dr. Cimmermancic**
- **Specialty Leader: Dr. Hoffman**
- **Project Team Leader: Shannon Taylor D3**
- **Project Team Participants:**
 - Joey Brostowitz D2
 - Eleanor Meyer D1
 - Kevin Nitz D1

Patient

- 1-2 slides, patient background
- Age
- Gender
- Ethnicity
- Chief Complaint
- Additional pertinent information
- Information is de-identified throughout presentation

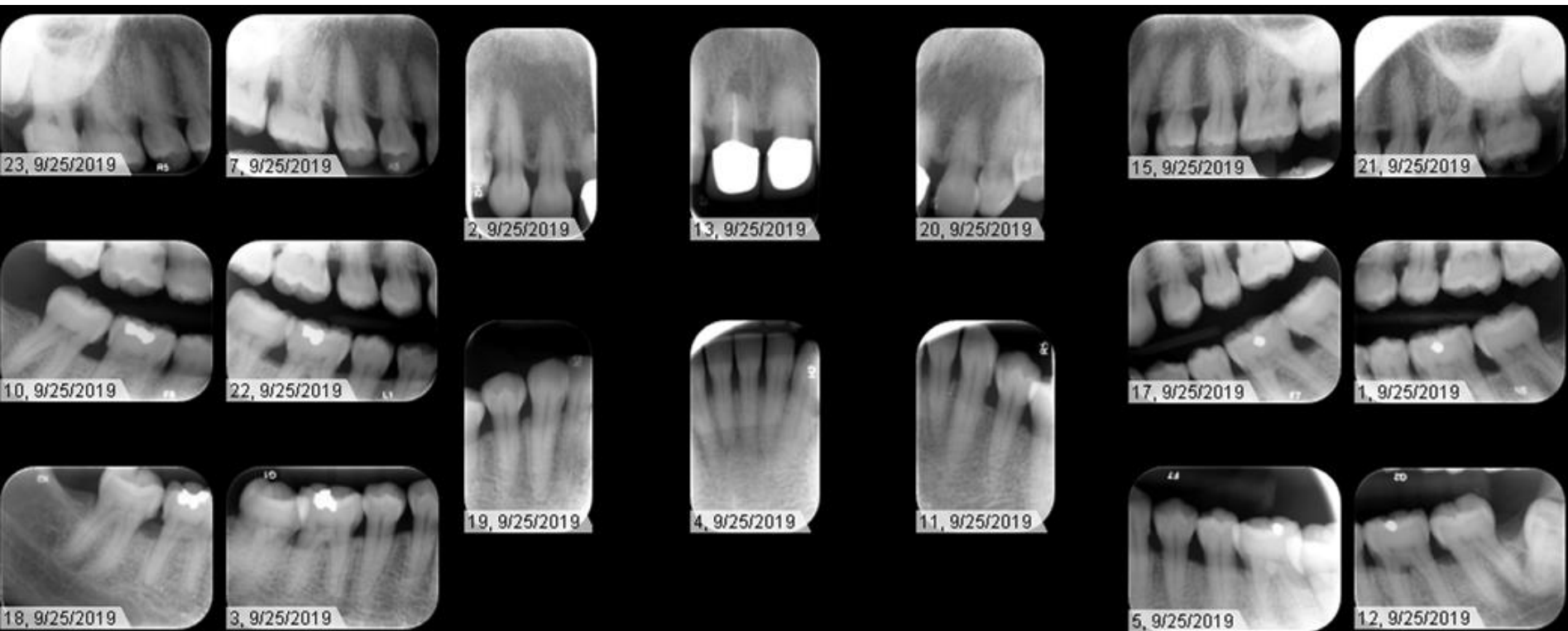
Medical History

- Diagnoses, Conditions, Medications:
 - **Allergies :** General Seasonal
 - Cetirizine 10mg QD
 - Benadryl Allergy 25mg PRN
 - Montelukast 10mg 1 tab every night
 - **Heart Disease:** Hypertension
 - Atenolol 100mg qAM
 - Amlodipine 10mg
 - Hydrochlorothiazide 25mg qAM
 - **Respiratory:** Sleep apnea
 - Uses CPAP machine
 - **Orthopedic:** Bilateral knee replacement 2017
 - Premedication – amoxicillin 500mg 1 hour before each dental appt.
 - **Vitamin Deficiency:** Potassium
 - Potassium chloride 10mg AD
 - **Neurologic:** Psychiatric disease/mental health disorder
 - No formal diagnosis
 - Not able to communicate or identify pain
 - She didn't complain about knees being bone-on-bone b4 replacement but gets bothered by small things such as mosquito bites
 - Olanzapine 10mg qPM, antipsychotic
 - Ziprasidone HCL 40mg 1 tab 2x per day before meals, sensory/behavior management
- Medical Consults, if any
- Treatment considerations

Dental History

- Chief Complaint
 - Pt's caretaker indicated pt was pushed off a bus ~30 yr ago, injuring her front teeth. Pt was told by previous dentist that she would need to extract #8 but pt and caretaker decided to come to MUSOD to see if eligible for RCT instead
- Oral Hygiene
 - Brushes once a day and flosses sometimes w/ bleeding sometimes
- Disability
 - Intellectual disability for the past 57 years
 - Cognitive and communication disabilities affect function
 - Developmental disability and speech impediment
 - Requires help to communicate her needs
 - Needs assistance to understand more complex ideas/instructions
 - Has a caretaker

Radiographs - FMX taken 9/2019

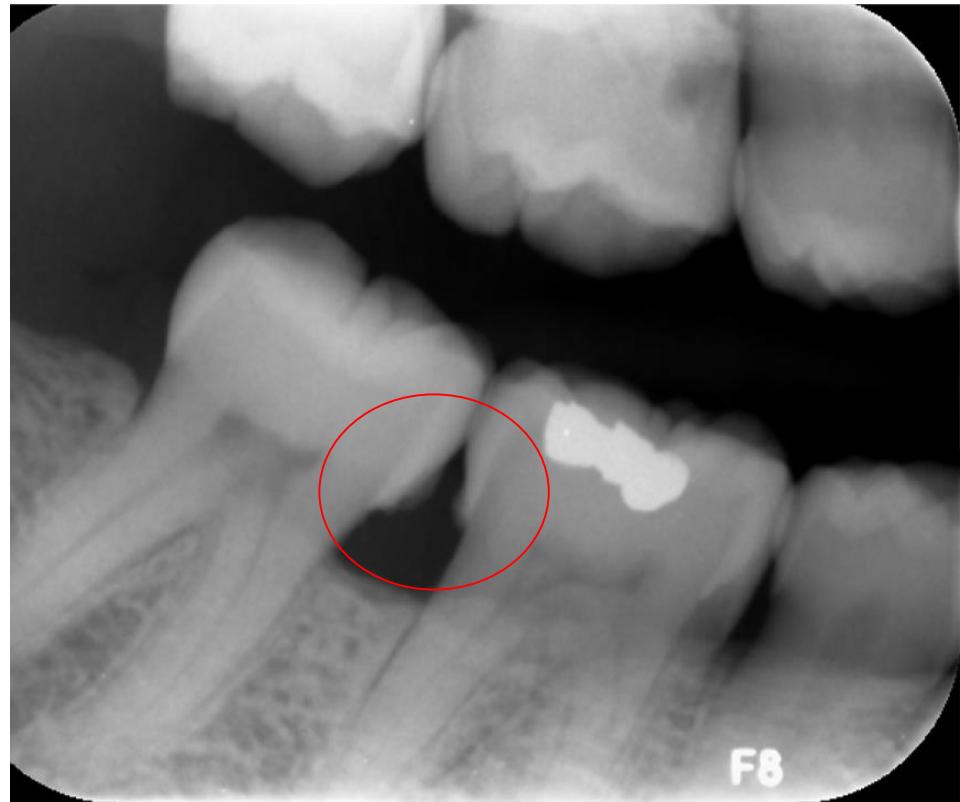


Radiographs - Endodontic Findings

- #8
 - Previously Treated
 - PARL and resorption



Radiographs - Periodontal Findings



- Generalized Calculus
 - specifically #13, 14, 18, 19, 21
- Generalized Bone Loss
 - 2-4mm from CEJ generalized



Periodontal Charting - Maxillary

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																FURCA
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- Significant Clinical Attachment Loss, generalized
 - Deepest Pockets per section = 5-7mm in all quadrants
- Generalized Bleeding on Probing
- Furcation Involvement

Periodontal Charting - Mandibular

																PROGNOSIS
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																PLAQUE
	1															FURCA
																MOBILITY

- Significant Clinical Attachment Loss, generalized
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Clinical Findings

- Comprehensive Exam
 - Buttressing bone apparent from clenching at night causing slow progressive bone loss
 - Medication induced gingivitis (amlodipine and olanzaopine)
- Periodontal Exam
 - Oral Hygiene Status (40 form)
 - Heavy plaque, sub/supra calculus, and moderate staining
 - Gingival Description (50 form)
 - Marginal Shape = Enlarged and Rolled
 - Color = Red and pigmented (ethnic)
 - Attached Zone = inadequate
 - Papillary Shape = bulbous (posteriors) and blunted (anteriors)
 - Consistency = spongy (generalized)

Problem List

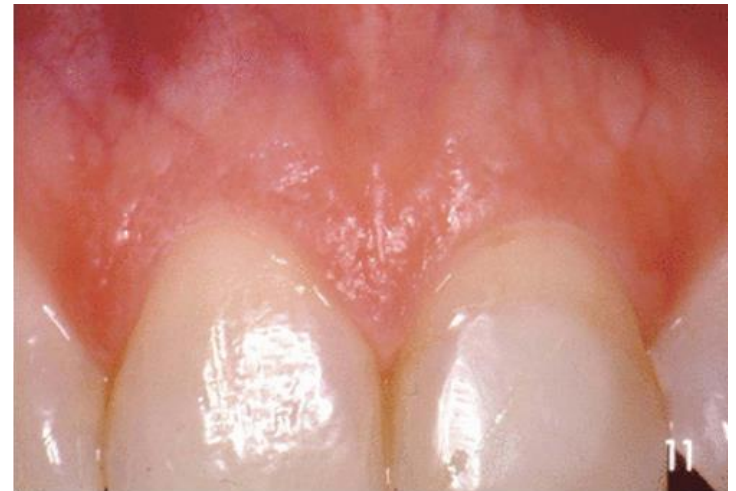
- Pain
- Caries
- Perio Disease
- Periapical Radiolucency
- Home Care

Diagnosis and Treatment Plan

- Periodontal
 - Diagnosis
 - Chronic Periodontitis , generalized <30%
 - Treatment Plan
 - SRP UR, UL, LL, LR
 - Perio re-eval 4 to 6 weeks post last SRP
- Endodontics
 - Diagnosis
 - Asymptomatic Apical Periodontitis
 - Treatment Plan
 - RCT retreatment for #8 due to lack of ability to communicate pain and the obvious radiographic presentation of apical resorption
 - Prognosis guarded

D1 - What is periodontal disease?

- Diseases that impact the gingiva and supporting structures of the gingiva
- Healthy gingiva -
 - pale pink/coral color
 - knife-edged FGM
 - pointed interdental papillae
 - 1-3 mm probe depth, no BOP



Highfield, J. 2009. Diagnosis and classification of periodontal disease. Australian Dental Journal. 54: S11-S26.

Plaque-induced periodontal diseases

Gingivitis

- 10-20 days without any oral hygiene procedure will allow plaque biofilms to reach subgingivally and begin breaking down host tissues
- Immune response kicks in
- Results in inflammation, BOP, redness, increased gingival crevicular fluid - reversible



Periodontitis

- Plaque extends to and damages PDL and alveolar bone, large periodontal pockets
- Shift to motile, anaerobic, gram negative bacteria
- Irreversible damage



ALT D1 Basic Science: What are the different types of anesthesia that can be used in the dental setting?

- Local anesthesia
 - Injected or place topically
 - Reduced sensation and pain in the area applied
- Sedation methods can be implemented when treating patients with a complex history
- Minimal sedation
 - Patient can maintain their own airway
 - Capable of responding to touch and communication, with impaired cognition and coordination
 - Produced by <50% nitrous oxide or oral sedative normally prescribed for insomnia or anxiety

ADA House of Delegates. "Guidelines for the Use of Sedation and General Anesthesia by Dentists." *ADA*, 2007, www.ada.org/~media/ADA/Member%20Center/Files/anesthesia_guidelines.ashx.

ADA House of Delegates. "Guidelines for the Use of Sedation and General Anesthesia by Dentists." *ADA*, 2016, http://www.ada.org/~media/ADA/Education%20and%20Careers/Files/anesthesia_use_guidelines.pdf

An Updated Report by the American Society of Anesthesiologists Task Force on Sedation and Analgesia by Non-Anesthesiologists; Practice Guidelines for Sedation and Analgesia by Non-Anesthesiologists. *Anesthesiology* 2002; 96:1004–1017 doi: <https://doi.org/10.1097/00000542-200204000-00031>

ALT D1 Basic Science: What are the different types of anesthesia that can be used in the dental setting?

- Moderate Sedation

- Patient can maintain their own airway
- Capable of responding to communication if another stimulus like touch is present

- Deep Sedation

- Patient may not be able to maintain their airway
- Patient will not respond unless there is a painful stimulus

- General Anesthesia

- Patient is no longer conscious and becomes unarousable
- May not be able to maintain airway and cardiovascular function may become altered

ADA House of Delegates. "Guidelines for the Use of Sedation and General Anesthesia by Dentists." *ADA*, 2007, www.ada.org/~media/ADA/Member%20Center/Files/anesthesia_guidelines.ashx.

ADA House of Delegates. "Guidelines for the Use of Sedation and General Anesthesia by Dentists." *ADA*, 2016, http://www.ada.org/~media/ADA/Education%20and%20Careers/Files/anesthesia_use_guidelines.pdf

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D2 Pathology

Scaling and Root Planing - *The Gold Standard*

D4341- "instrumentation of the crown and root surfaces of the teeth to remove plaque and calculus from these surfaces. It is indicated for patients with periodontal disease and is therapeutic, not prophylactic, in nature." – ADA

Indications

"Chronic Periodontitis"

Clinical loss of periodontal attachment and/or

Radiographic evidence of crestal bone loss or changes in crestal lamina dura and/or

Radiographic evidence of root surface calculus

Limitations

The Body

The Clinician

Lang NP. Indications and rationale for non-surgical periodontal therapy. *Int Dent J*. 1983 Jun;33(2):127-36. PMID: 6347903.

Zappa, U., et al. "Root substance removal by scaling and root planing." *Journal of Periodontology* 62.12 (1991): 750-754

The “Central Element”

In Periodontal Disease Control

Mechanically removes bacteria and disrupts ecology of the biofilm

Removes plaque, calculus, and endotoxin infected cementum

To a biologically acceptable level

Reduces inflammation

Reduces/maintains pocket depth

Increases/ maintains clinical attachment levels

Pretreatment for other periodontal surgical

Definitive treatment for chronic periodontitis via non-surgical periodontal therapy



Smiley, Christopher J., et al. "Systematic review and meta-analysis on the nonsurgical treatment of chronic periodontitis by means of scaling and root planing with or without adjuncts." *The Journal of the American Dental Association* 146.7 (2015): 508-524.

Dental Scaling and Root Planing for Periodontal Health: A Review of the Clinical Effectiveness, Cost-effectiveness, and Guidelines [Internet]. Ottawa (ON): Canadian Agency for Drugs and Technologies in Health; 2016 Oct 17. PMID: 27929624.

D3 PICO

- Clinical Question:

PICO Format

P:

I:

C:

O:

PICO Formatted Question

Clinical Bottom Line

Search Background

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

Search Background

- MESH terms used:

Article 1 Citation, Introduction

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

Article 1 Synopsis

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

Article 1 Selection

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

Article 2 Citation, Introduction

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

Article 2 Synopsis

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

Article 2 Selection

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

Levels of Evidence

- ☐ **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)

Double click table to activate check-boxes

Template Revised
9/10/2020

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

Conclusions: D3

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

Based on your D3's bottom line recommendations, how will you *advise* your patient?

How will you *help* your patient?

Discussion Questions

- 1-2 slides
- List posted discussion questions
- Questions may also be from Group Leader or Specialist

Discussion Questions

THANK YOU