Periodontal Case Study

By Sarah Lemas
Approved by Erica

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Assessment

Section I & II

Patient Information

Patient Information

Patient Profile:

- Age: 30 years old
- Gender: Male
- Ethnicity: Hispanic
- Has Medical/Dental Insurance

Patient Concern:

- Pt. would like to have his thirds removed the LL has a pocket that collects food, and sometimes it smells, and the gum tissue will swell up and become painful. The swelling and pain will go down after a few days.
- It's been 10+ years since pt. has been to the dentist, which was in Mexico.

Health History:

- No health alerts
- Not taking any medications
- Pt. states he is in good health
- Socially drinks 1 beer a month
- Pt. had surgery for a right hernia in 2019, a mesh was placed with no complications

BP: 128/70
HR: 60
Resp: 14

Dental History: It's been 10+ years since the last dental visit in Mexico.

Client Factors:

- **Dental IQ**: Pt understands that brushing and flossing are important but did not understand what periodontal disease is and how it affects systemically.
- **Values**: The Patient values his teeth and their aesthetics.
- **Culture**: The patient understood that Americans are serious about teeth compared to his upbringing. Pt. was excited to get his dental treatment in the USA.
- **Motivation**: Some of the patient's older family members have dentures, and the patient does not want to end up like them. Also, for aesthetic reasons.
- **Fears**: The patient had never been to an American dental office, so he was apprehensive and wasn't too sure what to expect. He also was nervous that a student would get him numb.

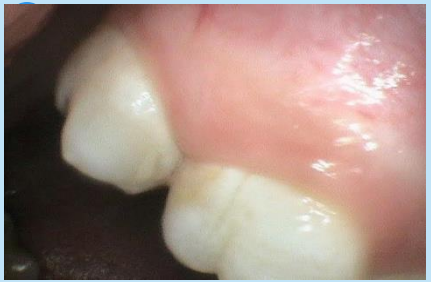
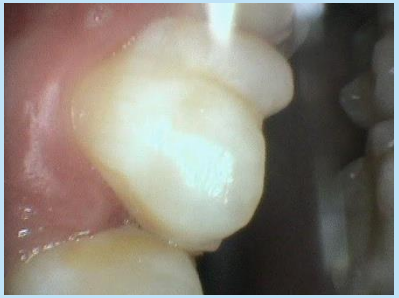
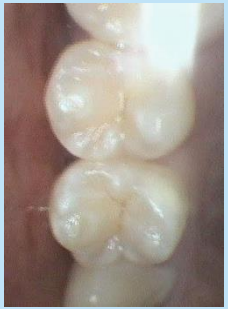
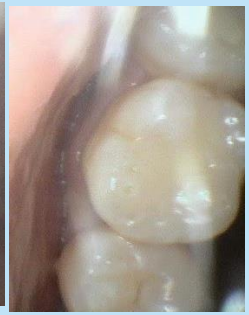
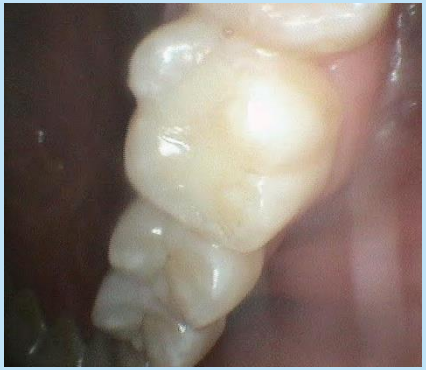
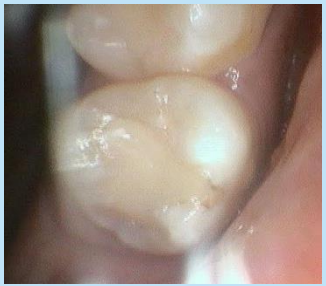
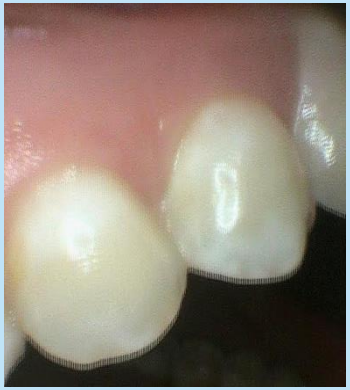
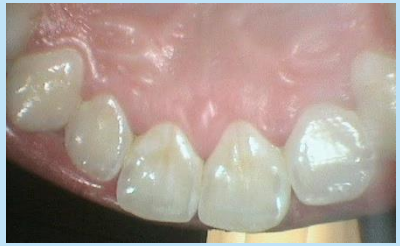
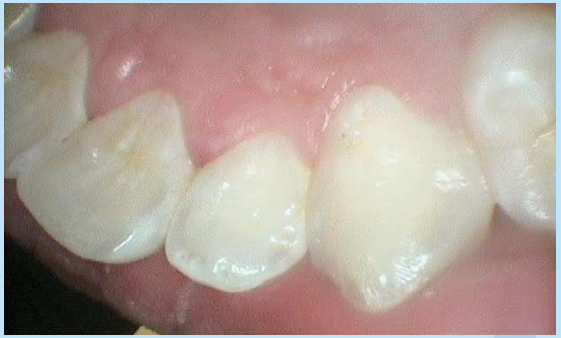
Nutritional and Diet Analysis:

- Overall, the patient is a very healthy eater! Only one simple carb (a cinnamon roll), & pt. had milk with it.
- **ACID ATTACKS** are more of an issue!
  - Coffee every morning with sugar-free creamer
  - Average of 2 afternoon Grapefruit carbonated drinks
  - Along with the Grapefruit drink every night, pt. would have another carbonated soda or Green tea with no creamer
- **Advisement:**
  - To have water after acidic drinks or to cut back on them. Having a yogurt after drinking coffee. Instead of drinking two carbonated drinks a night, try to have one w/ water afterwards.

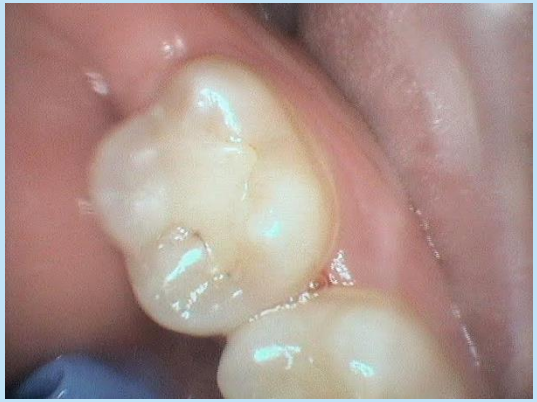
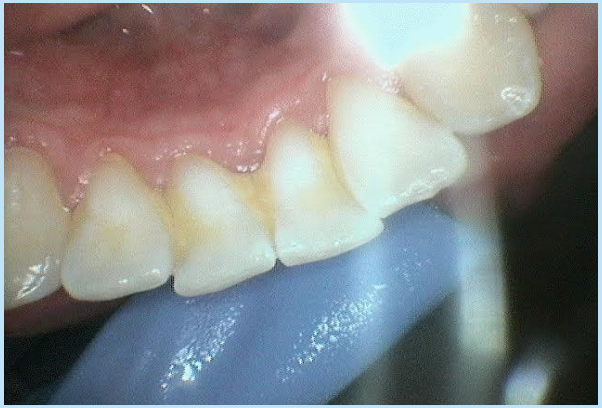
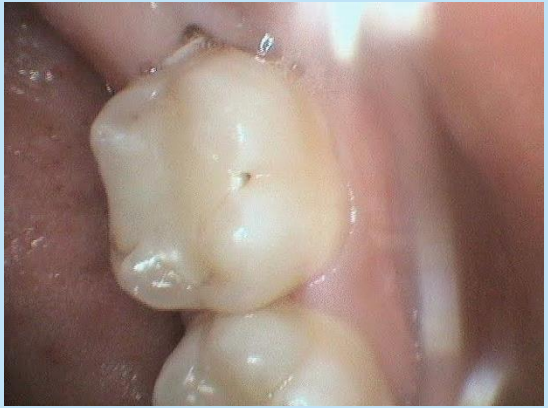
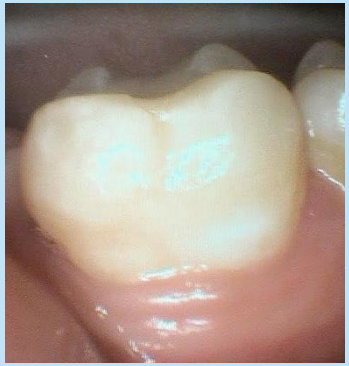
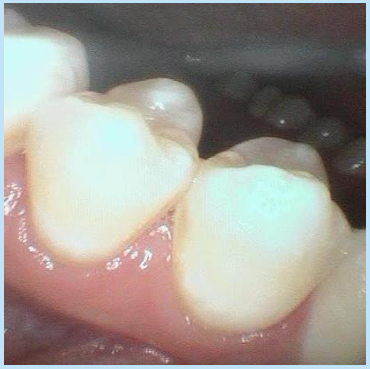
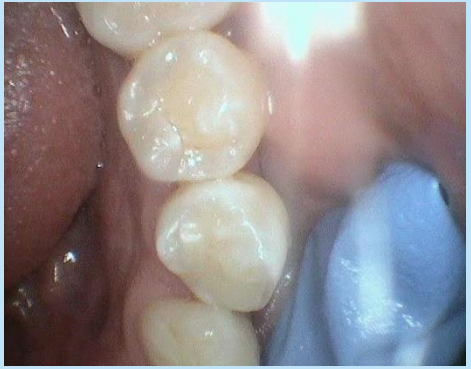
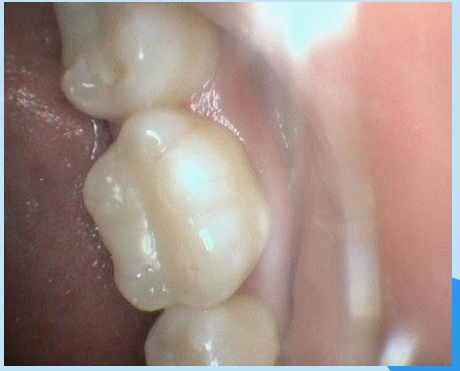
Medical Indications: since the patient is not on any medications, there are no drug interactions. No allergies to medications.

Dental Indications: The patient does have periodontal disease present, and this could lead to system issues in the future if not taken care of.

Before IO Pictures – Maxillary

Before IO Pictures - Mandibular

Section 2: Clinical Assessment

Oral Hygiene: Pt. brushes twice a day, once in the morning and once at night. Uses an electric toothbrush, battery operated. Pt. does not floss daily, maybe 2-3 times a week. Not using fluoride due to lack of knowledge.

EO/IO: Symmetrical facial features, Neck: scattered brown macules 1x1mm-4x5mm, Face: Lower left chin has dark brown papule 3x3x1mm, scattered light brown macules 1x1mm- 2x2mm, Tongue: Dorsal-white coated, bilateral scalloping, L-lateral had two keratinized ulceration 1x1mm and 3x3mm that pt. did not know he had (I looked at it again the following week, and they had cleared) Lymph Nodes: bilateral moveable subman. 1cm, Masseter muscles: bilateral prominent, TMJ: R-popping, L- crepitus w/ no pain, 4 finger opening. Retromolar pad of #17 is part. Erupted and has communication with #18

Section 2: Clinical Assessment

GD: Gen slightly soft red-rolled ging marg. Loc mod red soft bulbous edematous papilla w/ the lower ants and molars. UL recession on buccal of posterior teeth.

HT:

- **Margins**: There is some breakdown on composite fillings present with staining
- **Attrition:** mand. canines (per Dr. Nguyen, no NG needed)
- **Occl Class**:
  - R m: I, c: I,
  - L m: I TT III, c: I
  - OB: Mod
  - OJ: 3mm
  - E2E: 11/21

HT Restorative

Existing Composites:

- 2 – MOB
- 3 – OL
- 14 – DOL
- 15 – OB
- 18, 19 – OL
- 21, 28, 30 – O
- 31 – OLB

Caries:

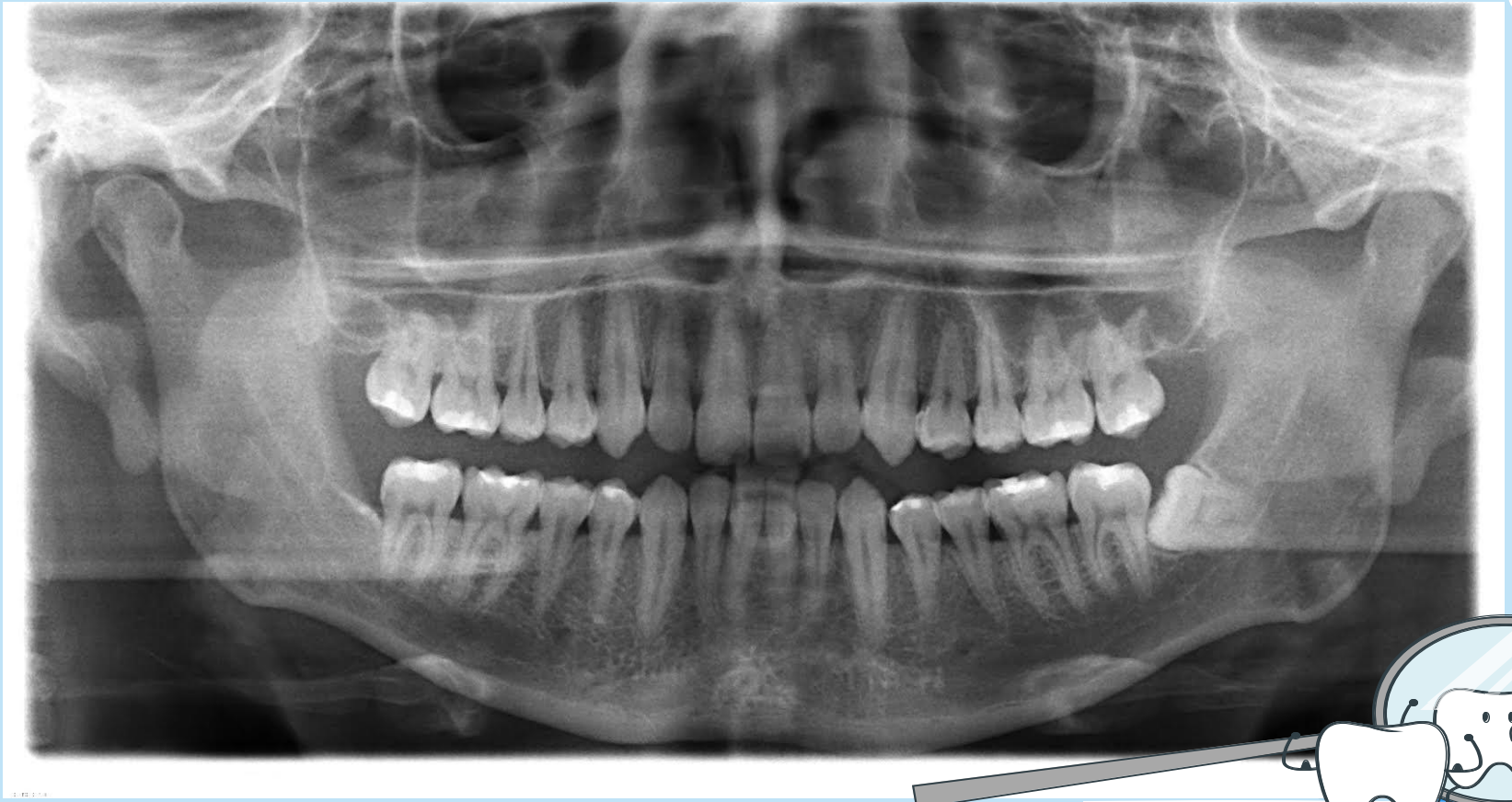
#15 – MO

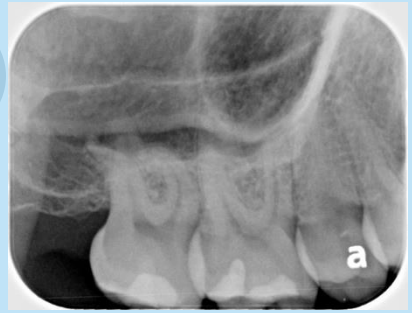
#31 – DL

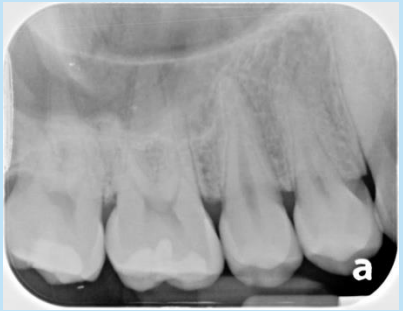
Missing:

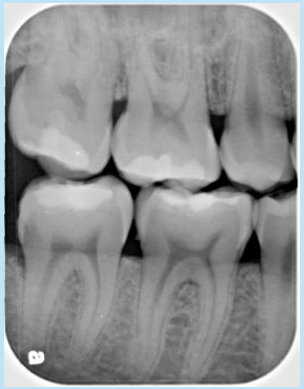
1, 16, & 32

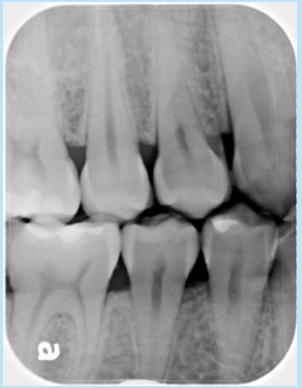
Radiographic Exam

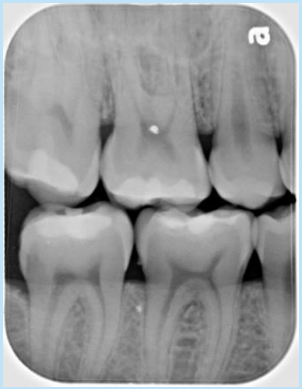


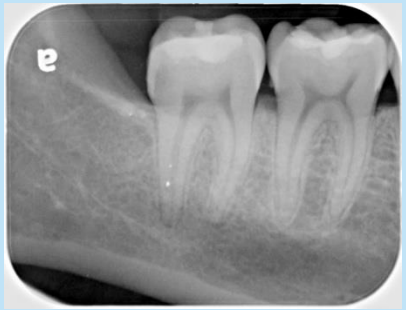


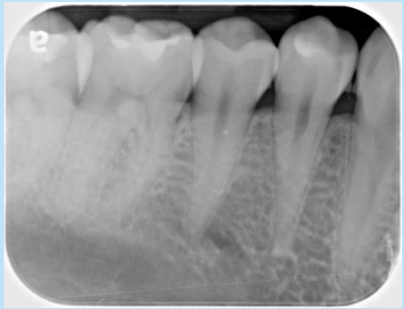






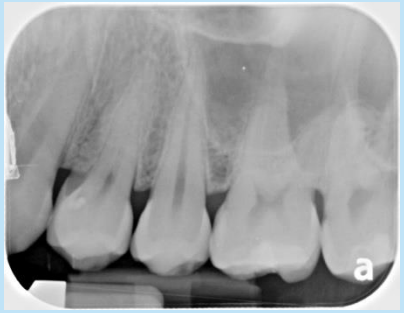


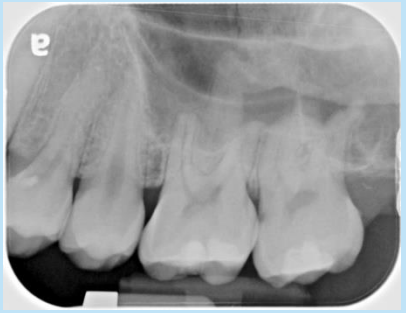


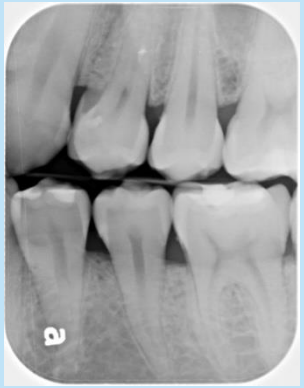


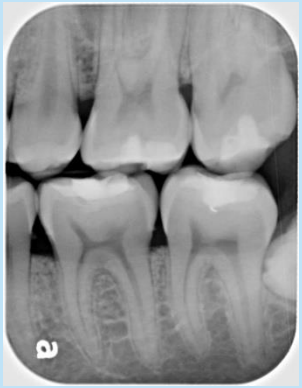
Right Side

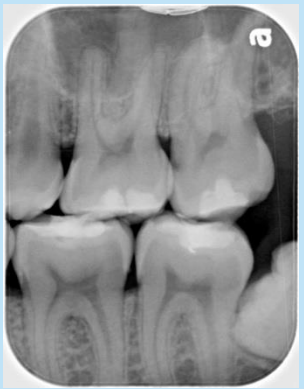
Left Side

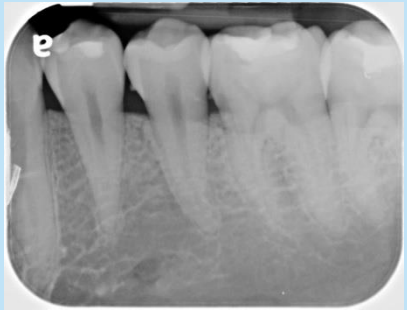


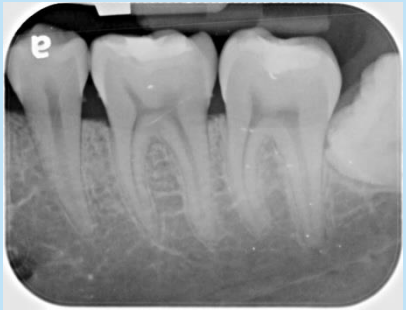




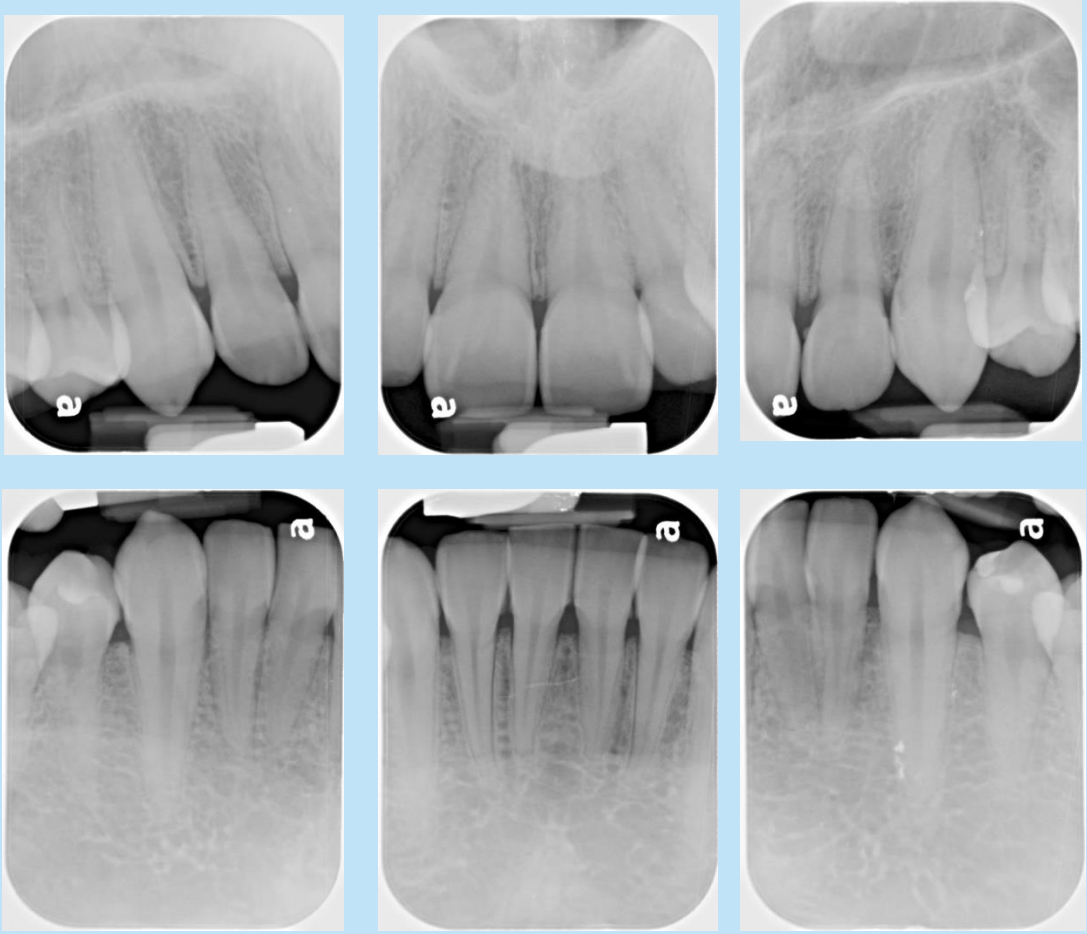






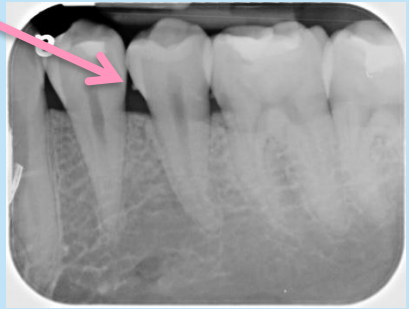


Ants

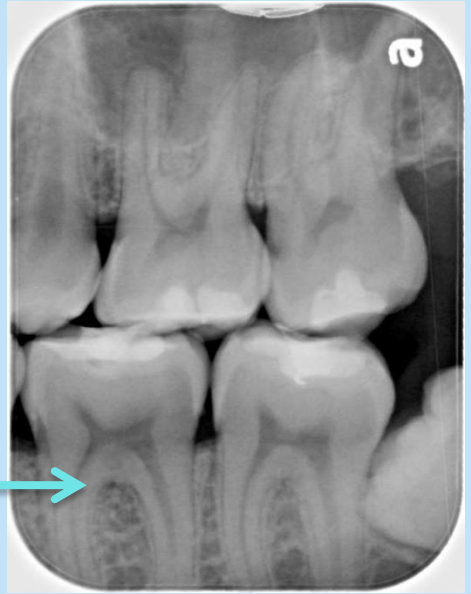


Radiographic Findings:

- Radiographic calculus:
  - Premolars
  - Molars
  - Mandibular anteriors

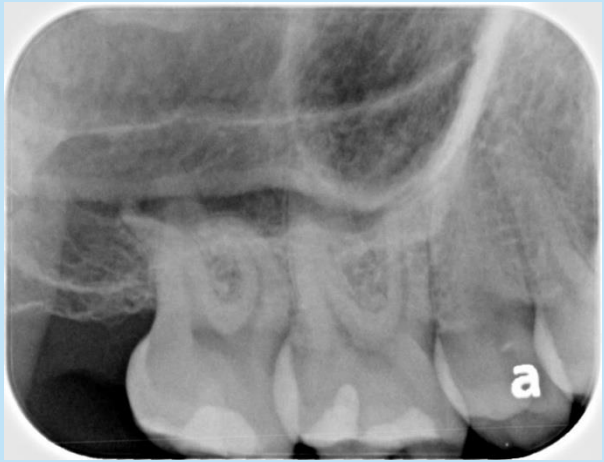


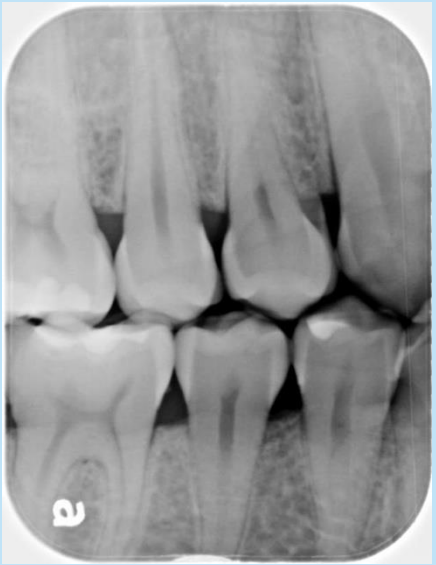
- Furca Involvement
  - Mandibular first molars



Radiographic Findings:

- Horizontal Bone Loss with posterior teeth
- Narly dilacerated maxillary roots!
- Bifurcated roots: #5 & 13
- Pulp Obliteration: #21 & 28





Periodontal Exam

Generalized: Severe BOP, 4-5mm pockets w/ premolars & molars

Localized:

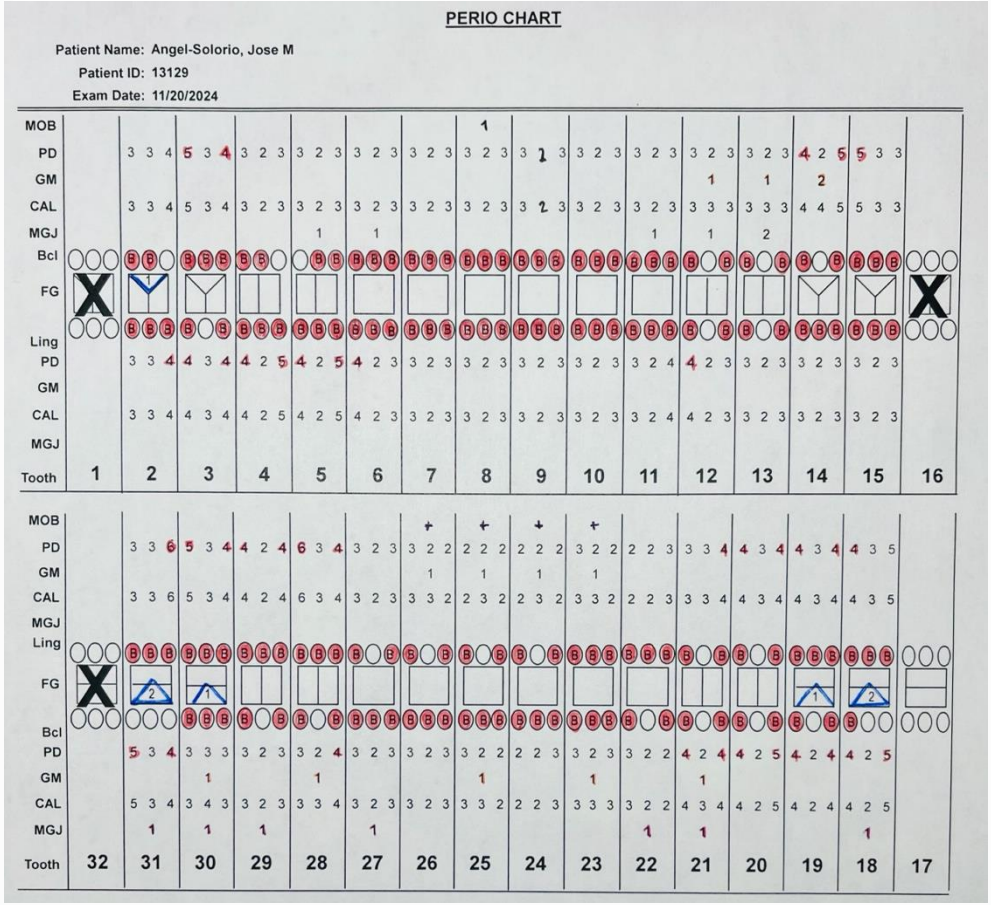
- 6mm pockets w/ LL lingual posterior teeth
- MAG w/ buccal of canines & 1st premolars
- NAG w/ #31- B
- Furcas: Class I w/ 2-B, 19-B, 30-B, Class II w/ 18-B, & 31-B
- Mobility: Class I w/ #8, 23, 24, 25, 26

Bleeding Index: 3 - severe inflammation, redness, w/ spontaneous bleeding

Case Type: Stage II/Grade B

Calc Class: LG III on Max, MOD III on Mand.

Periodontal Chart



PERIO CHART

Patient Name: Angel-Solorio, Jose M

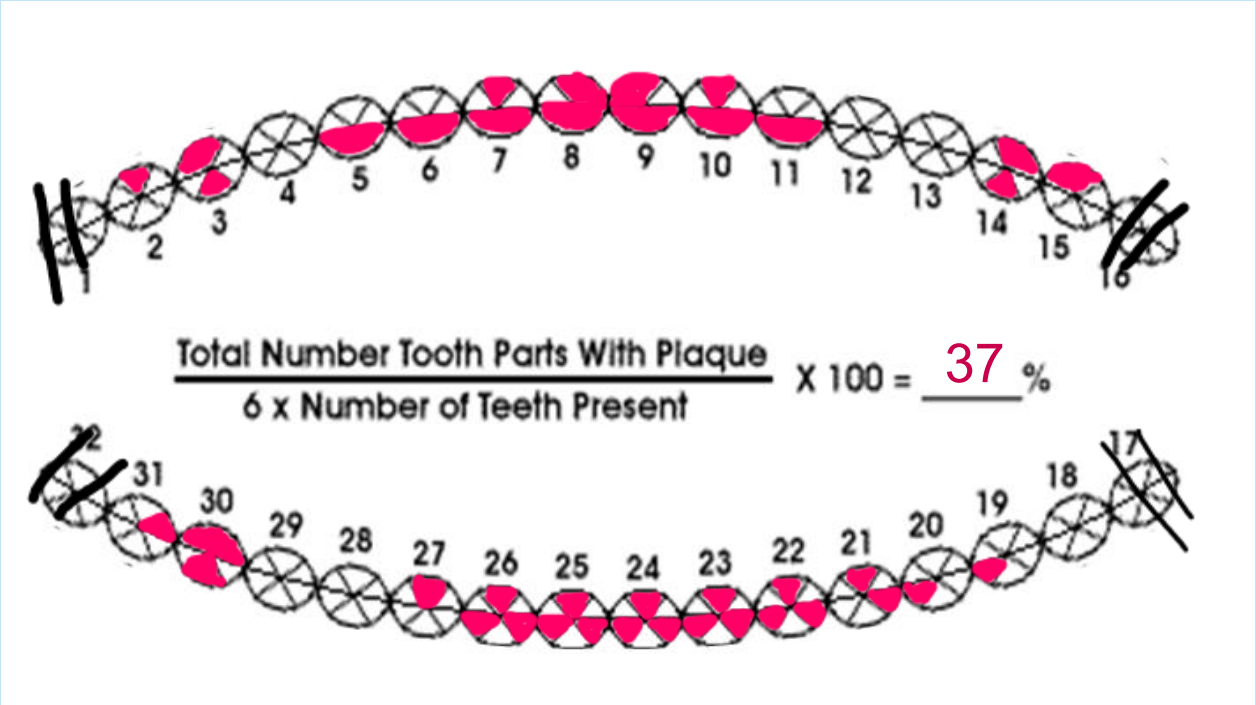
Patient ID: 13129

Exam Date: 11/20/2024

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MOB								1								
PD		3 3 4	5 3 4	3 2 3	3 2 3	3 2 3	3 2 3	3 2 3	3 1 3	3 2 3	3 2 3	3 2 3	3 2 3	4 2 5	5 3 3	
GM												1	1	2		
CAL		3 3 4	5 3 4	3 2 3	3 2 3	3 2 3	3 2 3	3 2 3	3 1 3	3 2 3	3 2 3	3 3 3	3 3 3	4 4 5	5 3 3	
MGJ					1	1					1	1	2			
Bcl																
FG	X															X
Ling																
PD		3 3 4	4 3 4	4 2 5	4 2 5	4 2 3	3 2 3	3 2 3	3 2 3	3 2 3	3 2 4	4 2 3	3 2 3	3 2 3	3 2 3	
GM																
CAL		3 3 4	4 3 4	4 2 5	4 2 5	4 2 3	3 2 3	3 2 3	3 2 3	3 2 3	3 2 4	4 2 3	3 2 3	3 2 3	3 2 3	
MGJ																
Tooth	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
MOB							+	+	+	+						
PD		5 3 4	3 3 3	3 2 3	3 2 4	3 2 3	3 2 2	3 2 2	2 2 3	3 2 3	3 2 2	4 2 4	4 2 5	4 2 4	4 2 5	
GM			1		1		1	1		1		1				
CAL		5 3 4	3 4 3	3 2 3	3 3 4	3 2 3	3 2 3	3 3 2	2 2 3	3 3 3	3 2 2	4 3 4	4 2 5	4 2 4	4 2 5	
MGJ		1	1	1		1					1	1			1	
Tooth	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17

Plaque Map



Maxillary: Majority on the F/L of the ants with some on the posterior teeth.
Mandibular: Mainly on the F/L of ants & IP, LL premolars, & LR molars

Risk Assessment

Oral Health Management by Risk Assessment: Moderate risk due to BOP was greater than 30%, furca involvement, and food getting trapped in the pocket of #17 area.

Caries Risk: Moderate, IP fillings, tooth anatomy

Psychosocial Observation: Pt. is a hard worker who takes care of his Mother and Grandmother in Mexico. Communicative, follow directions, and motivated for overall health.

Referrals:

11/24 - Gave a ref to OS to eval and extract #17 which was in direct communication with #18. Sometimes pt. will get food trapped and cause swelling in the area, which can be achy.

3/25 – Had #17 extracted and had to be on Amoxicillin for one week due to the presence of an infection.

Treatment Planning

Section III

TX Plan, Goals, & Desired Outcome

TX Plan:

D4341: 4 quads

D1330: OHI on flossing & not brushing too hard – causing the recession

D0170 Perio Re-Eval

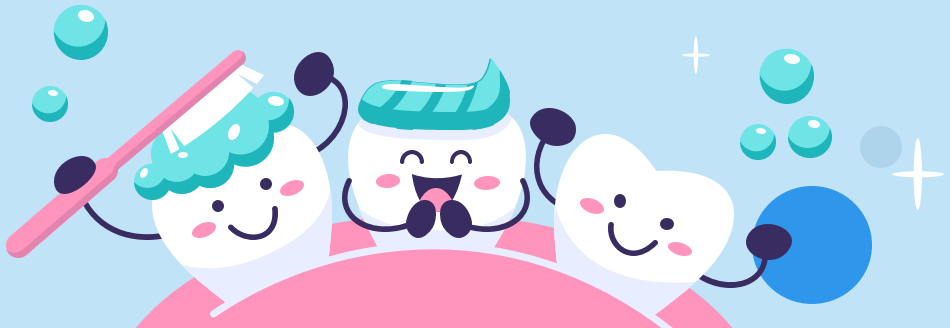
4910: 3 Month PM

Goals:

- Stop disease progression = reduced inflammation
- Establish professional cleanings
- Educate on the importance of proper homecare & creating a daily habit of flossing
- The removal of #17 will also reduce the bacteria load in the area

Desired Outcome:

- Pt understands the TX and ”the why” behind it
- Homecare: flossing more, not pressing too hard on gingiva
- Healthier, pink gingiva, reduced plaque levels & inflammation
- Establish a regular maintenance schedule



Rationale for Treatment

- **Calc Case**: Max-LG. Mand-MOD
- **Case Type III**: Gen 5-6mm pockets w/ posterior teeth, CAL present, & Class I mobility

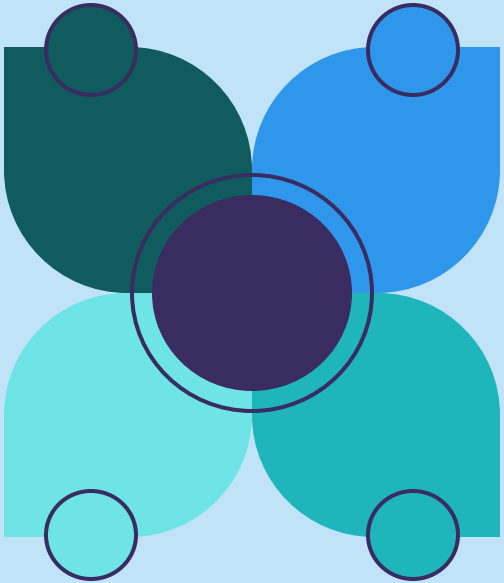
- Lack of professional care for 10+ years
- Severe BOP
- Red Complex bacteria causing Periodontal disease

- Radiographic calc.
- Radiographic furca involvement = bone loss
- Radiographic horizontal bone loss

Initial Therapies

Pt's CC:

- Getting 3rd removed
- Referred to OS
- Pain management and what that meant
- IO hematoma discomfort



TX Needs:

- Pt. liked everything explained before it happened
- Occasionally needed to sit up from lying back for long periods

Psychosocial Needs:

- Dental anxiety because pt. did not know what to expect at first
- We were strangers, so over time, I had to earn the patient's trust
- Hematoma, explanation & that it can happen

Pain Management:

- Local Anesthetic per quadrant
- OTC Tylenol and Advil for the first appt.
- An ice pack for IO hematoma

Prevention Education

Brushing Too Hard UL

- The 2nd appt. went over recession in the UL area and that is could be from brushing too hard on that side.
- Suggested Brushing on that side with non-dominant hand (left hand)
- Also went over Oral B toothbrush that will tell you if you are pushing too hard

Post SRP's Embrasure Spaces

- Pt. noticed that post SRPs, there are new spaces that collect food. (Ants)
- Went over soft pick brushes and how he could keep them in his wallet and use them while he is driving around for work.

Instrumentation Strategy

- Cavitron – for mod supra/subging calc
- Handscaled
  - Gracey's for furca involvement
  - Mini 1/2 for deeper pockets
  - Loma Linda for the Distal of #18 and to get into the pocket that collects food.

Discussion Points

Alternative Therapeutics: RX toothpaste for caries prevention.

Potential Complications: If not used daily the remineralization will not occur. Not to eat or drink anything for 30 minutes after applying. (For extreme usage, Fluorosis)

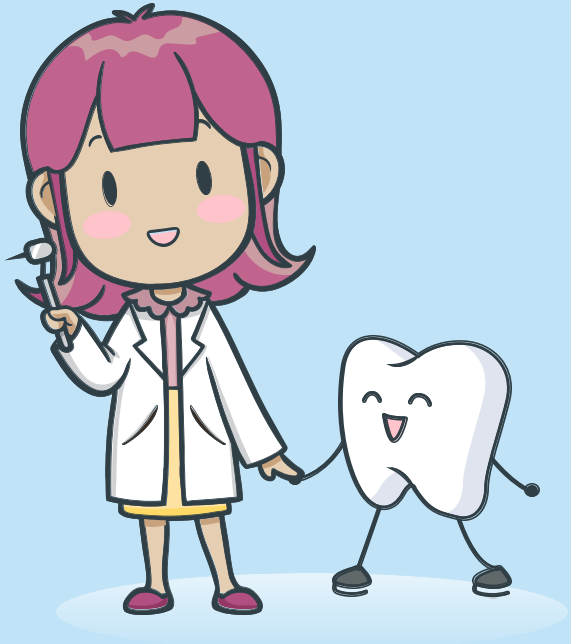
Expectations: If pt. gets resto completed, and using the RX toothpaste daily, less acid attacks, there should be a decrease in caries.

Consent:

- 11/13/2024 NP Consent Signed
- 11/27/2024 TX Consent Signed

Implementation

Section IV



Appointments

1. 11/4/24: Screener Appt
2. 11/13/24: Initial Appt: Int HH, FMX, PANO, EO, IO, GD
3. 11/20/24: PC, DHCP, Classification, Dr. Exam, OHI
4. 11/27/24: 4341 LL
5. 12/11/24: 4341 UR
6. 2/24/25 4341 UL
7. 3/3/24: 4341 LR
8. 3/31/24: 0170 Perio Re-Eval

Total: 8 Appointments

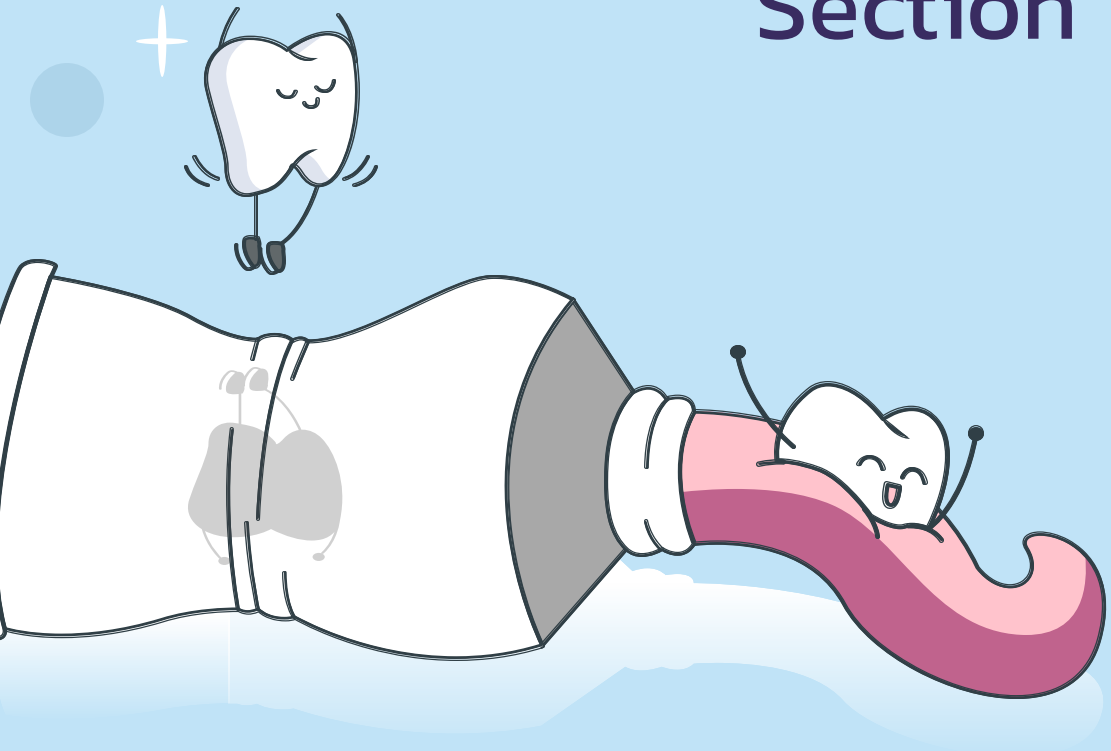
Next Visit: 3 Month PM 4910 (June 2025)

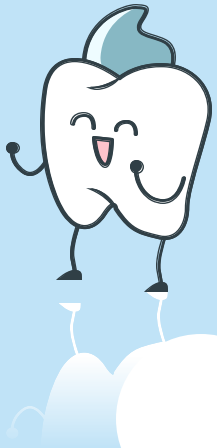
Revisions: Pt's schedule made it hard to schedule because he could only come in the afternoon and sometimes would be 5-10 minutes late due to traffic. I would tell him to be there 15 minutes before appt. Flossing, because it was hard for him to remember to do it, we discusses Flossers and putting them in his car.

Patient Care

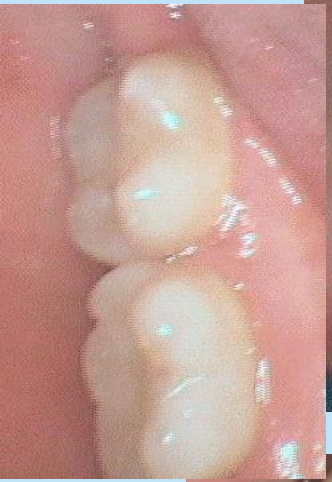
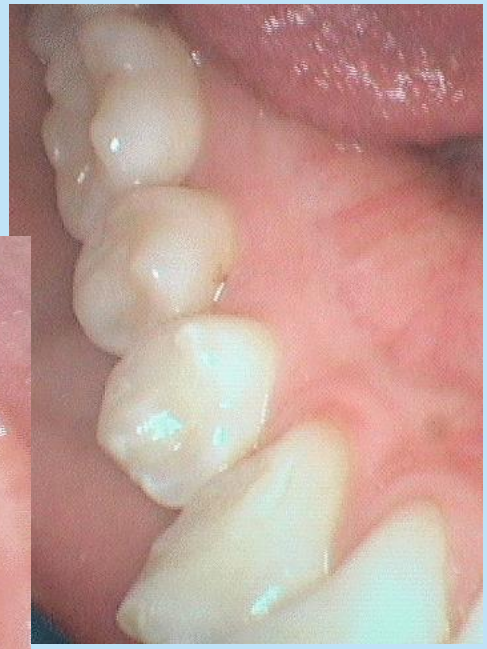
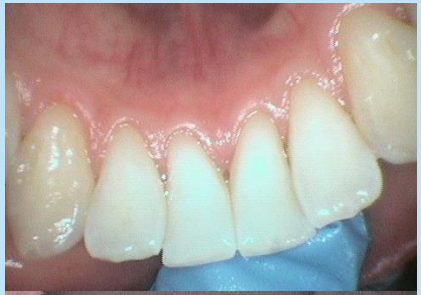
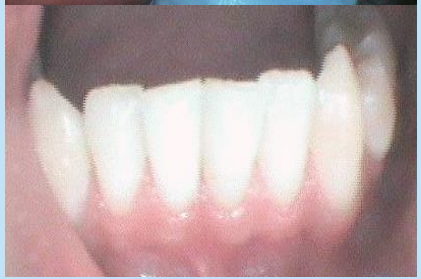
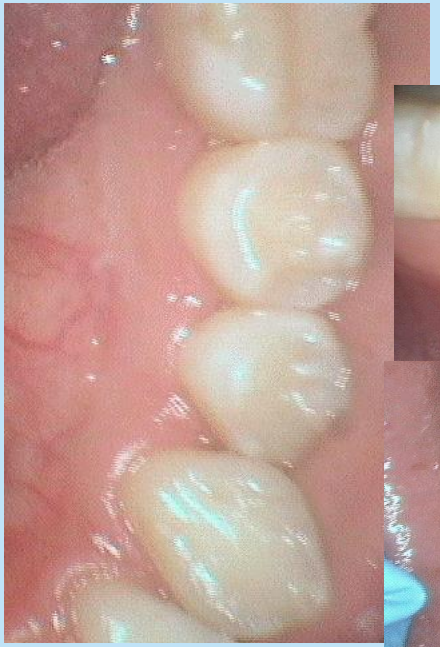
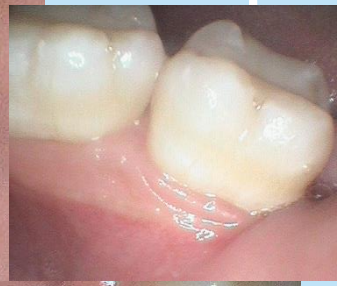
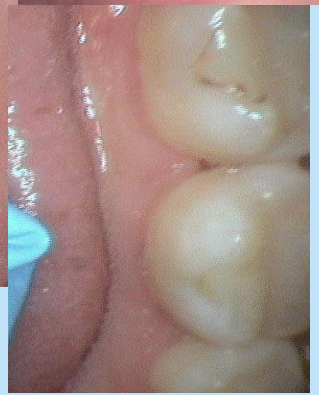
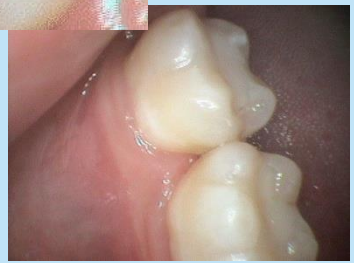
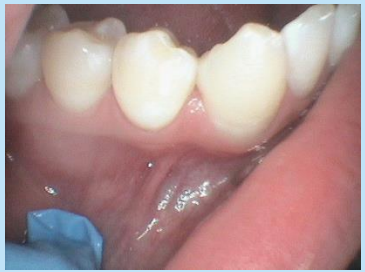
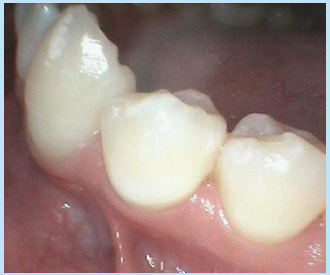
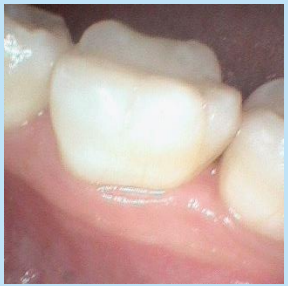
- **Is the pt. more or less motivated?** More motivated now, that the pt understands the progression of periodontal disease, the systemic link, and the importance of getting professional cleanings. (It hit him when the OS had to give him antibiotics)
- **Is the pt. evaluating or noticing his own progress and healing?** The pt. has evaluated his oral health and has seen less bleeding with flossing and brushing.
- **Is the pt. having post-operative pain or sens, and is that a concern being addressed during the appt?** After the first appt. pt did have some pain from the injection sites and took OTC Tylenol and Advil. The other appts, pt. did not see the need for pain meds.
    - **2/26/25:** Pt called me saying that the numbness lasted until the next morning before it completely left. Pt. also noticed swelling inferior to the left eye and felt pressure with it and asked if this was normal. I explained to pt. that the swelling could be a hematoma. I asked pt. if he was in pain, and he said no. Informed pt. to ice area for 15-20 mins on and off for the next 6 hours. Also told pt. that the swelling could last a couple of weeks and there could be bruising in the area. Told pt. to call if anything had changed. (I informed Carolyn and Erica of the situation)
    - I saw pt. the following week and the swelling had gone down with no bruising present.
- **Self Care:** Pt. is still brushing 2x's daily, flossing more, and getting the professional care needed.

Periodontal Re-Evaluation
Section V

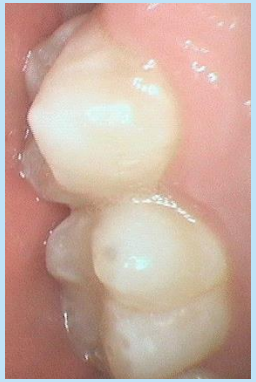
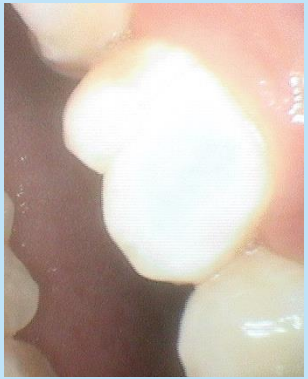
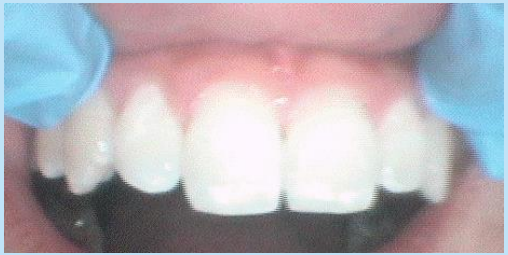
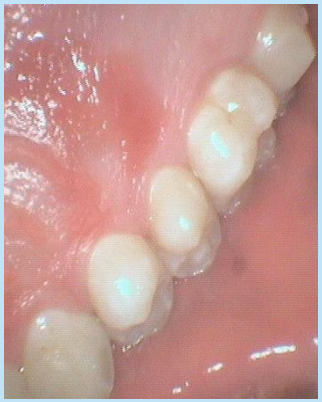
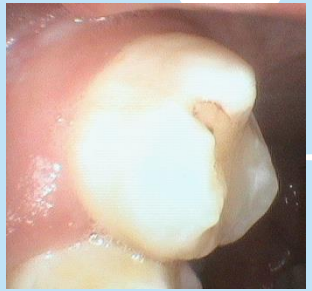
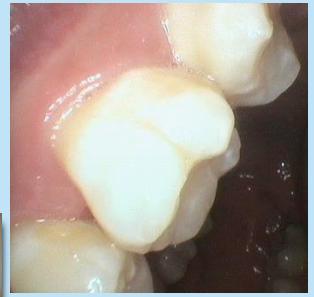
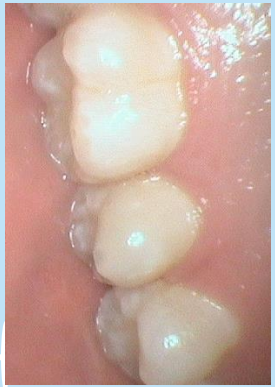
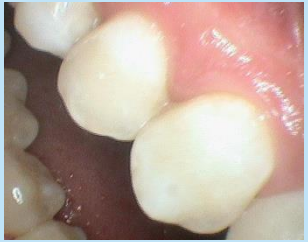
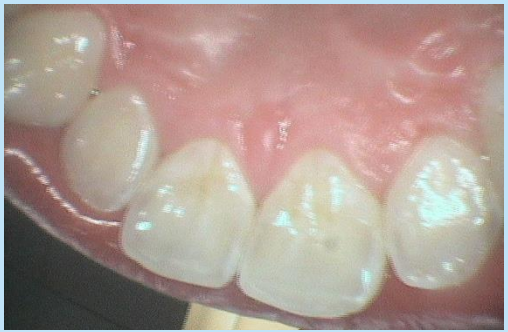
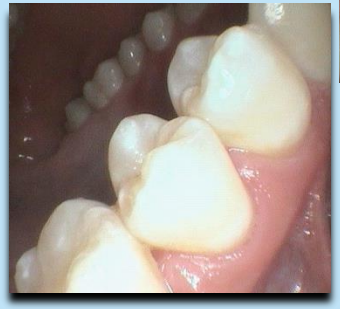
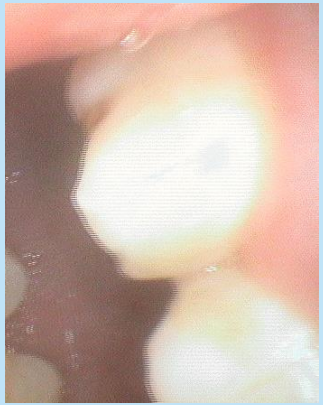




Mandibular Post Op IOP

Maxillary Post Op IOP

Rev HH, CC, EO, IO (any changes)

HH Rev: No changes, no new surgeries, no medications.

CC: None at the moment

EO: NSF

IO: Pizza burns on the palate, more severe on the right side near premolars and molars, left side only near terminal molars

GD: Gen pink firm stippled rolled ging marg w/ pink firm pointed papilla. Loc pizza burns on the max hard palate, more severe on the right w/ premolar and molar area, left only near terminal molars.

Old GD: Gen slightly soft red-rolled ging marg. Loc mod red soft bulbous edematous papilla w/ the lower ants and molars.

Perio Exam: Gen 2-3mm pockets w/ loc 4mm pockets w/ posts. Loc IP slight BOP w/ posts. Class I Furcas: Buccals of #2, 3, 15, Ling of #14, 18 & 30, Class II Furcas: #30, 31 – B. Recession: 1-2mm Facials: 5, 15, 23, 24, 25, Ling 1mm of #3, 19, 23 & 3mm Ling #3m. (No temp sens)

Plaque Score: 28%, down 10%

Home Care: Pt. has started flossing more, and I recommend, based on the plaque map and evidence from above, brushing at a 45-degree angle at the gum lines of the buccal max molars and man ling molars. (Let the pizza cool down before eating)

Therapeutic Outcomes

The pt's response was amazing! With his **home care improvements** and professional cleanings, there was a change in all areas. The **PC pockets shrank**, there was significantly **less BOP, GD went from red and edematous to pink and firm**, **plaque score went down by 10%** and the pt. was very motivated by these changes.

The pt. understands that to keep this stable, 3-month PM is needed to break up the red complex bacteria from spreading. Pt. also understands the importance of good home care in coordination with a well-balanced and less acidic diet.

Future Care Recommendations: 3-month PM 4910 for the next year and re-eval. This pt. along with continued homecare, may be able to do 6-month recare appts. I don't see a need for future referrals

Beginning Goals: Establish a dental home, establish regular recare visits, learn proper brushing/flossing techniques, remove calc to bring down bacteria load, reduce swelling, stop caries progression, and motivate pt. to keep up the work.

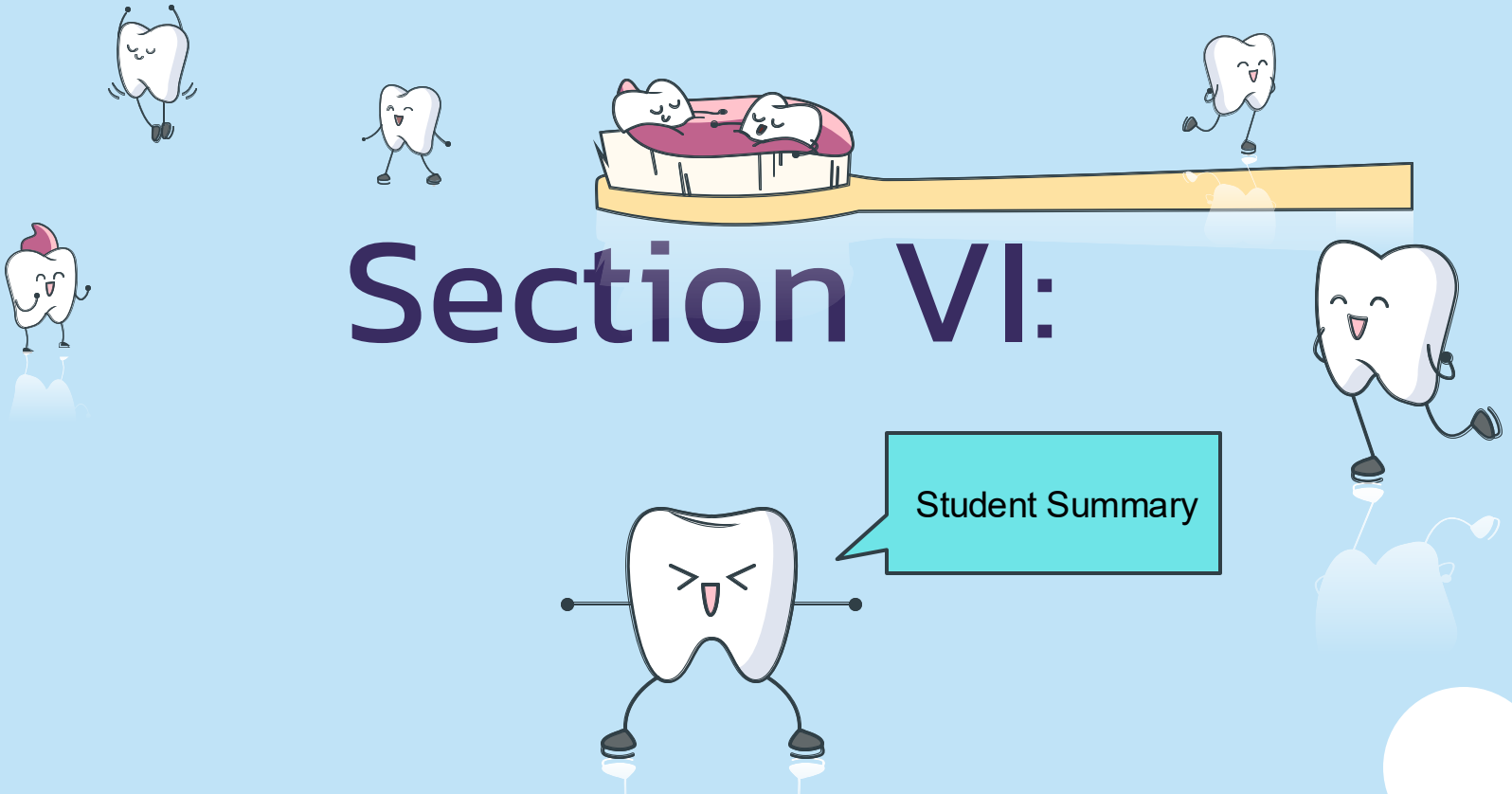
Beginning Goals & Comparison

GOALS:

1) Establish a dental home
2) Establish regular recare visits
3) Learn proper brushing/flossing techniques,
4) Remove calc to bring down bacteria load,
5) Reduce swelling,
6) Stop caries progression
7) Motivate pt. to keep up the work.

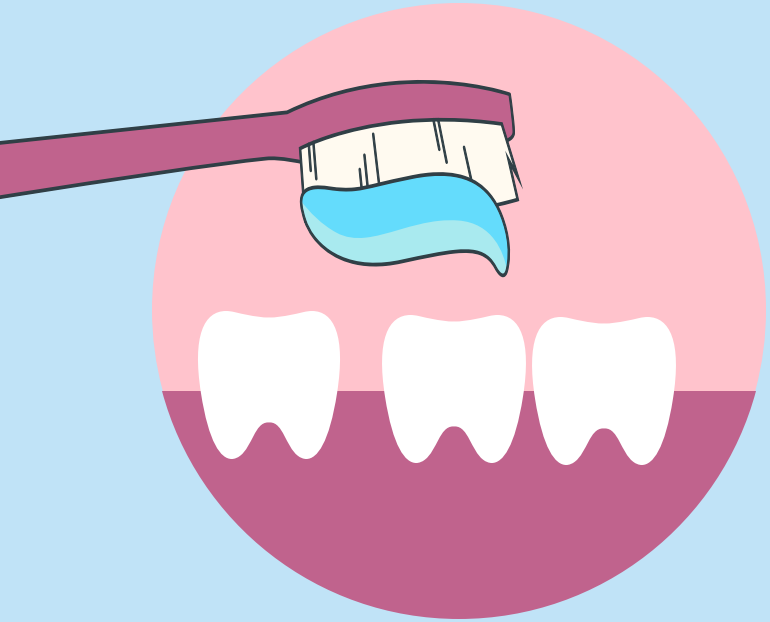
Outcomes:

1) Pt. did not miss one appt. and is motivated to cont. care
2) 3-month PM will be scheduled in June
3) Pt. is using proper tech w/ brushing/flossing
4) NSPT done
5) Swelling was reduced
6) Caries will be taken care of next semester (approved by Dr. Nguyen)
7) Pt. is motivated by the results



Section VI:

Student Summary



1. What was learned from treating the case?
    - That carbonated grapefruit is just as bad as lemon mineral water. They are also more corrosive than sodas when left in the mouth for two minutes straight! (Lussi et al., 2023)
        - Grapefruit pH level is 2.9-3.75
        - Lemon Juice pH is 2-3
    - Cultural Plays a role in Oral Health within the US
        - Hispanic adults have a higher prevalence of oral disease than non-Hispanic Whites.
        - In households where Spanish was the primary language, tooth decay was as high as 70% compared to 47% in primarily English-speaking households. (Ramos-Gomez & Kinsler, 2022)
        - This pts household language was Spanish, but grew up in the US and speaks fluent English.
2. What modifications would enhance treatment outcomes?
    - Regular RX Fluoride toothpaste usage in conjunction with 2 topical applications within 12 months has a decreased caries rate compared to those who do not. (Jurasic et al., 2022)
    - Pt was a little hesitant about the Fluoride varnish while using the RX toothpaste because he had never had it before; I wish I had known about the above study to show him.

References

Jurasic, M., Gibson, G., Orner, M., Wehler, C., Jones, J., & Cabral, H. (2022). Topical fluoride effectiveness in high caries risk adults. *Journal of Dental Research*, *101*(8), 898–904. https://doi.org/10.1177/00220345221081524

Lussi, A., Megert, B., & Shellis, R. P. (2023). The erosive effect of various drinks, foods, stimulants, medications and mouthwashes on human tooth enamel. *SWISS DENTAL JOURNAL SSO – Science and Clinical Topics*, *133*(7/8), 440–455. https://doi.org/10.61872/sdj-2023-07-08-967

Ramos-Gomez, F., & Kinsler, J. J. (2022). Addressing social determinants of oral health, structural racism and discrimination and intersectionality among immigrant and non-English speaking Hispanics in the United States. *Journal of Public Health Dentistry*, *82*(S1), 133–139. https://doi.org/10.1111/jphd.12524