NEW YORK CITY COLLEGE OF TECHNOLOGY
DEPARTMENT OF DENTAL HYGIENE
CASE PRESENTATION

UGILOY HAMRAYEVA

PATIENT PROFILE

R. R. is a 27 years old Hispanic male.

The patient's status is single and employed. PDH is emergency care only.

His dental hygiene visit was on 10/29/20. SRP was done and 4 Bitewings were exposed.

The patient states that he uses a manual toothbrush "up and down and side to side motion" 2x a day with Colgate toothpaste. Pt. flosses sometimes. Pt. states that he uses floss pick for posterior teeth and regular floss for anterior teeth. Pt. cleans his tongue with tongue scraper and sometime uses Listerine Total Care.

CHIEF COMPLAINT

- Pt. did not have any chief complaint
- Pt. is here for dental prophylaxis.
- After pt. was told that we received whitening kits can do in office whitening, pt. seemed interested in bleaching his teeth.
- Mr. R mentioned that he feels "okay" about the appearance of his teeth but prefers whiter teeth.

HEALTH HISTORY OVERVIEW

ASA II. BP: 113/80 P: 85. Covid screening performed and temperature: 97.2F.

Medical conditions:

- Insomnia

Current Medications:

- Escitalopram: 10mg once a day for treatment of insomnia.
- Vitamin D3: 5000mg once a week as a supplement.

INSOMNIA

According to the article "The Pathophysiology of Insomnia," insomnia is inability to get enough sleep for long period of time and is related to difficulty falling asleep, waking up at night many times with difficulty returning to sleep, and waking up early in the mornings.

Due to insomnia having heterogenous characteristics, the etiology of the condition has its roots within other conditions such as depression and cardiometabolic syndrome as well as being able to distinguish between subjective and objective findings.

Due to an inability to get a good quantity and quality of sleep, insomnia can also cause daytime symptoms such as: fatigue, sleepiness during the day, impaired cognitive performance, and mood swings.

It has been determined that there are many precipitating factors and events that triggers insomnia such as genetic vulnerability, impaired neurobiological processes as well as abnormal behavioral and psychological processes.

References:

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4388122/

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INSOMNIA

Based on ICSD and the DSM, there are many subtypes of insomnia: psychophysiological insomnia, paradoxical or idiopathic insomnia, behavioral insomnia of childhood, insomnia due to a mental or a medical disorder, and insomnia due to a drug or substance.

After diagnosis has been confirmed by the symptoms listed previously, either non-pharmacological or pharmacological treatment options can be used to treat insomnia.

The drugs used in the treatment of insomnia such as benzodiazepine receptor agonists and tricyclic antidepressant have significant effects on the oral cavity as well as on the dental hygiene treatment plan.

Mr. R is taking Escitalopram 10mg once a day for the management of insomnia. Escitalopram is a type of Selective Serotonin Reuptake Inhibitor (SSRI).

References:

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4388122/

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SUPPLEMENTS

Vitamin D is a hormone that our body makes, also we can get Vitamin D as a nutrient through food sources. Vitamin D aids in absorption and retention of calcium and phosphorus, which are essential for building bone.

Based on the article "Vitamin D toxicity- a clinical perspective," Vitamin D deficiency and insufficiency is a worldwide public problem due to its prevalence.

Because it's hard to get enough Vitamin D as a nutrient from food sources, it is recommended to take it as a supplement.

There are two forms of Vitamin D: vitamin D2 and D3. The difference between vitamin D2 and D3, is that Vitamin D2 is made from plants, while vitamin D3 is found in animal food and our body.

References:

https://www.hsph.harvard.edu/nutritionsource/vitamin-d/

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6158375/#:~:text=Confusion%2C%20apathy%2C%20recurrent%20vomiting%2C,D%20intoxication%20or%20hypervitaminosis%20D).

SUPPLEMENTS

Vitamin D deficiency can lead to osteopenia, osteoporosis and in older patients increased risk of falling and injury due to falling.

Vitamin D deficiency causes a decline in absorption of calcium and phosphorus absorption, subsequently an increase in parathyroid. In children it results in rickets and in adults- osteomalacia.

Vitamin D deficiency is treated according to its severity: mild, moderate or severe.

Mr. R is currently taking 500mg of Vitamin D3 once a week as a supplement.

References:

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4545131/

DENTAL HYGIENE MANAGEMENT

Local Anesthetic precautions: no interactions have been reported, but caution should be used with Escitalopram.

Effects on dental treatment: xerostomia and toothache has been reported with Escitalopram.

Effects on bleeding: possibly increased risk of bleeding due to impaired platelet aggregation caused by Escitalopram.

Local anesthetic and effects on bleeding of Vitamin D3: no information available. However, key adverse effect on dental treatment is nasopharyngitis.

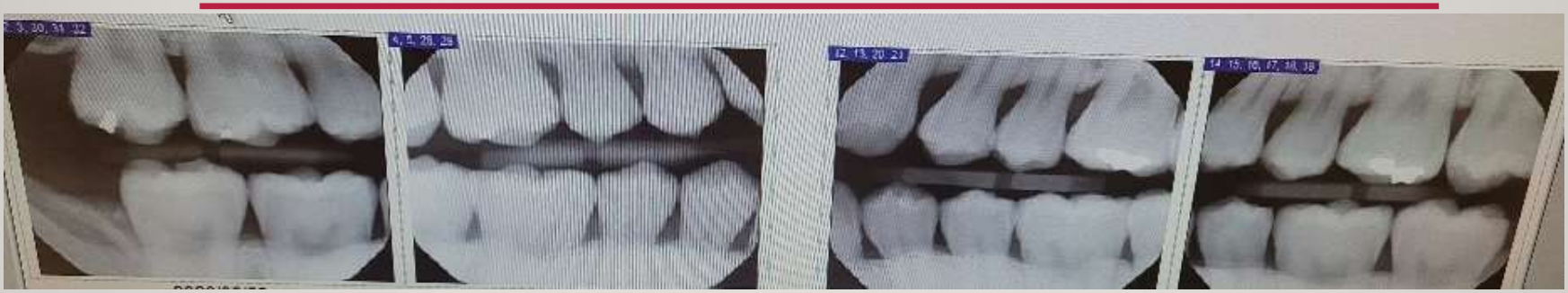
Pt. was asked if he experienced any of the symptoms listed above, and he said he did not. Mr. R was educated about side effects of the drugs he was taking and the effects it may have in the oral cavity.

<u>References:</u>

Lexicomp Drug Information Handbook for Dentistry- Including Oral Medicine for Medically Compromised Patients & Specific Oral Conditions 25th Edition

Assessments

RADIOGRAPHS



- Radiographic evidence of localized <15% bone loss present on molars/premolars on all quadrants.
- No evidence of radiographic caries lesion.
- Amalgam restoration on #2-OL, #3-OL, 314-OL
- Patient does not have: #1, #16, #17 and #32.
- Pt. presents with mandibular and palatine tori which is radiographically evident as radiopacity.
- Localized interproximal subgingival calculus on molars and premolars.

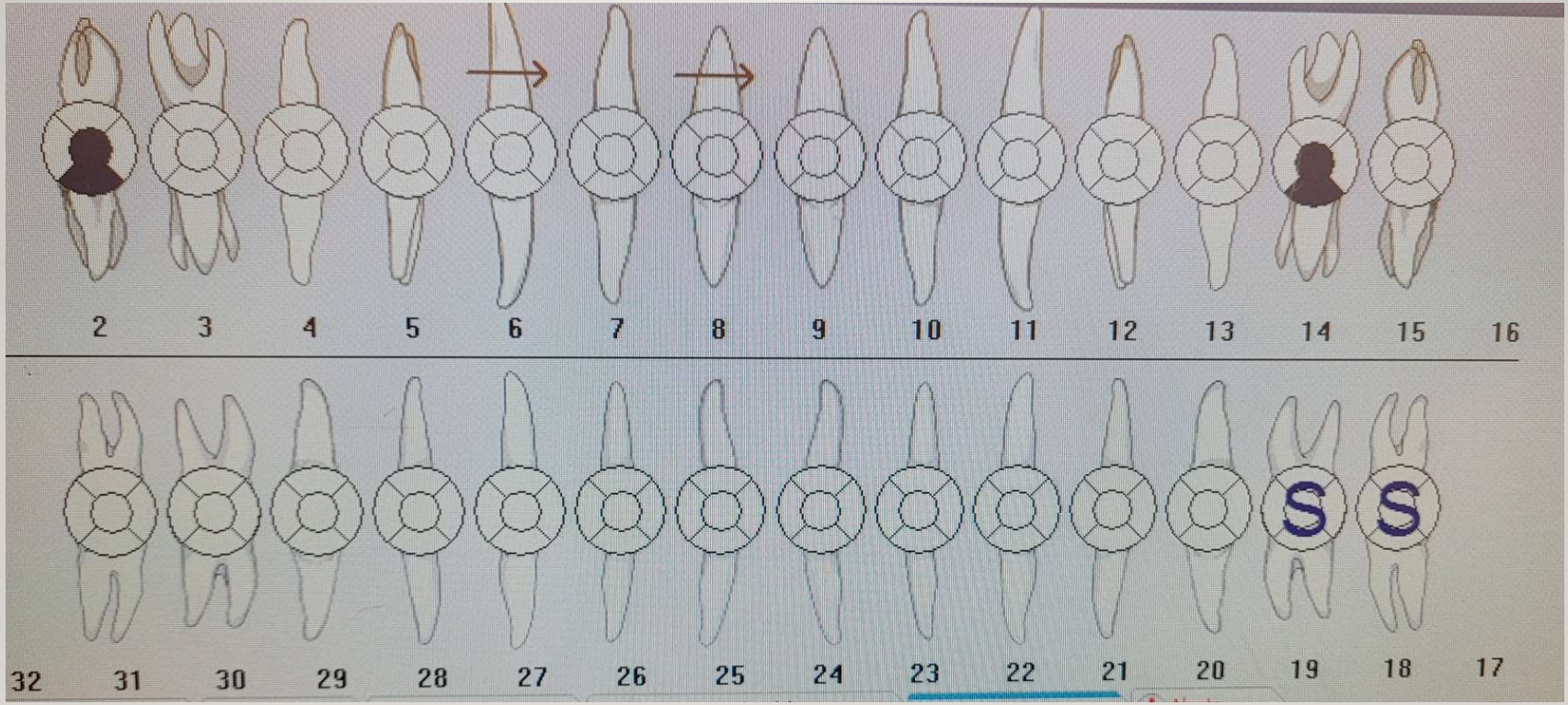
SUMMARY OF CLINICAL FINDINGS

EO/IO Findings: macules on the right ear. Pt. was educated about what macules are and importance of monitoring any changes. Red asymptomatic 1x1 lesion on buccal mucosa adjacent to tooth #2 and 2x2 lesion adjacent to pterygomandibular fold. Pt. was shown these lesions and told he had hard food like chips recently. On the second visit both lesions have been resolved. Pt. also presented with bilateral mandibular tori and mandibular and maxillary bilateral exostosis, palatine torus, slightly coated tongue.

Occlusion: Class I- left side/III- right. Overjet: 1mm. Overbite: 10% overbite.

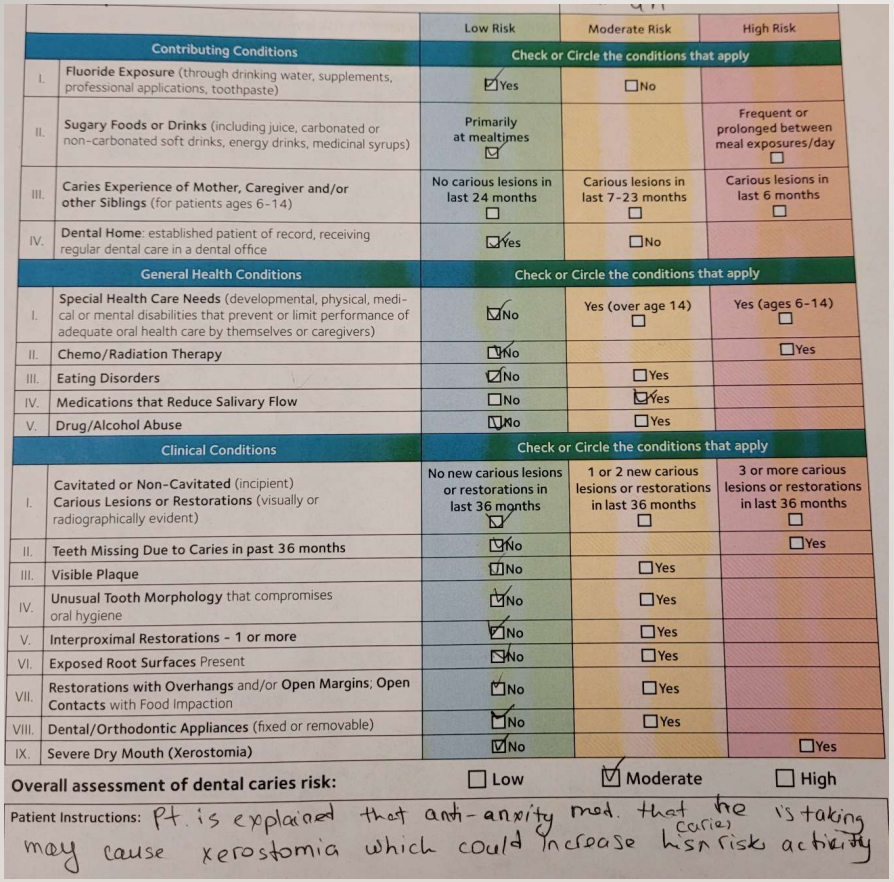
Deposits: Localized moderate supragingival calculus was detected on lingual of #22-25 and #21. Localized light grainy subgingival calculus was detected on mandibular posterior teeth. Localized heavy interproximal biofilm was noted on both appointments. Pt. presented with generalized mild enamel hyperplasia.

DENTAL CHARTING



- Amalgam restoration on #2-OL, #14-OL
- #1, #16, #17 and #32- missing teeth
- Diastema between #6-7 and #8-9
- Sealant placed on #19 and #18

CARIES RISK ASSESSMENT



		Low Risk	Moderate Risk	High Risk
Contributing Conditions		Check or Circle the conditions that apply		
I.	**Fluoride Exposure** (through drinking water, supplements, professional applications, toothpaste)	☑Yes	☐No	
II.	**Sugary Foods or Drinks** (including juice, carbonated or non-carbonated soft drinks, energy drinks, medicinal syrups)	Primarily at mealtimes ☑		Frequent or prolonged between meal exposures/day ☐
III.	**Caries Experience of Mother, Caregiver and/or other Siblings** (for patients ages 6-14)	No carious lesions in last 24 months ☐	Carious lesions in last 7-23 months ☐	Carious lesions in last 6 months ☐
IV.	**Dental Home**: established patient of record, receiving regular dental care in a dental office	☑Yes	☐No	
General Health Conditions		Check or Circle the conditions that apply		
I.	**Special Health Care Needs** (developmental, physical, medical or mental disabilities that prevent or limit performance of adequate oral health care by themselves or caregivers)	☑No	Yes (over age 14) ☐	Yes (ages 6-14) ☐
II.	**Chemo/Radiation Therapy**	☐No		☐Yes
III.	**Eating Disorders**	☑No	☐Yes	
IV.	**Medications that Reduce Salivary Flow**	☐No	☑Yes	
V.	**Drug/Alcohol Abuse**	☐No	☐Yes	
Clinical Conditions		Check or Circle the conditions that apply		
I.	**Cavitated or Non-Cavitated** (incipient) **Carious Lesions or Restorations** (visually or radiographically evident)	No new carious lesions or restorations in last 36 months ☑	1 or 2 new carious lesions or restorations in last 36 months ☐	3 or more carious lesions or restorations in last 36 months ☐
II.	**Teeth Missing Due to Caries in past 36 months**	☑No		☐Yes
III.	**Visible Plaque**	☐No	☐Yes	
IV.	**Unusual Tooth Morphology** that compromises oral hygiene	☑No	☐Yes	
V.	**Interproximal Restorations - 1 or more**	☑No	☐Yes	
VI.	**Exposed Root Surfaces** Present	☑No	☐Yes	
VII.	**Restorations with Overhangs** and/or **Open Margins**; **Open Contacts** with Food Impaction	☑No	☐Yes	
VIII.	**Dental/Orthodontic Appliances** (fixed or removable)	☑No	☐Yes	
IX.	**Severe Dry Mouth (Xerostomia)**	☑No		☐Yes

Overall assessment of dental caries risk: ☐ Low ☑ Moderate ☐ High

Patient Instructions: Pt is explained that anti-anxiety med. that he is taking may cause xerostomia which could increase his caries risk activity

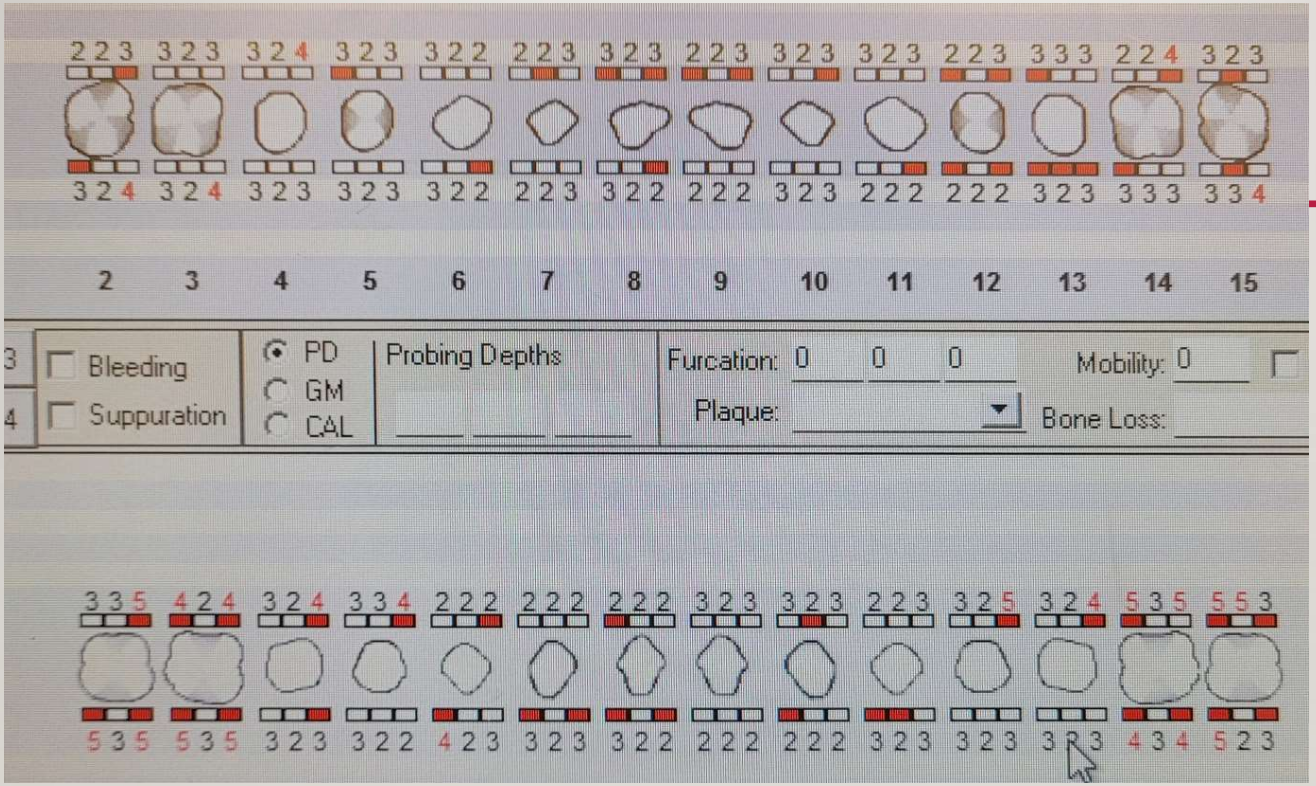
- There are no clinically visible suspicious carious lesions.
- There is no radiographic evidence of suspicious carious lesions

GINGIVAL DESCRIPTION AND PERIODONTAL STATUS

Gingival Description: Gingiva is generalized red color with generalized moderate gingival marginal inflammation. Interdental papillae fill interdental spaces except in the areas of diastema #6-7 and #8-9. Interdental papillae are bulbous between #4-5 and #30-31. Marginal gingiva is rolled on lingual aspect of #28-31 and buccal aspect of #28-31. Coronal migration of marginal gingiva was observed on the mandibular posterior teeth.

Periodontal Status: Patient is classified as Type I/Grade A periodontitis due to <15% bone loss. There were generalized 2-3mm sulci and localized 2-5mm sulci on posterior teeth. There was generalized moderate bleeding upon probing. No recession was noted.

PERIODONTAL CHARTING



- Generalized moderate bleeding upon probing.
- No recession, no furcation and no mobility was noted.
- Generalized 2-3mm sulci and localized 2-5mm sulci on posterior teeth.

DENTAL HYGIENE DIAGNOSIS

Periodontal Diagnosis:

Patient is classified as Type I/Grade A periodontitis due to:

- Severity <15% bone loss.
- Progression of a disease was determined by heavy biofilm deposits with low level of destruction and patient's age over % of bone loss.
- Generalized moderate bleeding on probing and exploring.
- Generalized moderate inflammation on all quadrants. Localized 2-5mm pocket depth on posterior teeth.
- Localized moderate supragingival calculus was detected on lingual of #22-25 and #21. Localized light grainy subgingival calculus was detected on mandibular posterior teeth after 3months recall.
- Diastema between anterior teeth-patient had difficulty flossing

DENTAL HYGIENE DIAGNOSIS

Risk for Caries:

Patient is at moderate risk for caries due:

- Pt. is taking Escitalopram, a medication that can cause xerostomia.
- Pt. has several amalgam restorations.
- Pt. does not have any clinically or radiographically evident caries lesion.
- The patient brushes twice a day and flosses sometimes.
- Pt. states that he eats sugary food or drink primarily at the mealtime.

DENTAL HYGIENE CARE PLAN

Visit One:

- PI/OHI: Modified Bass method of toothbrushing. Demonstration of flossing technique.
- Exposure of digital radiographs FMS.
- Debridement of quadrant: UR with hand instrumentation only.
- Use of topical 20% Benzocaine as needed.

Visit Two:

- PI/OHI: Demonstration of the use of soft pick and recommend rinse.
- Maxillary and mandibular alginate impression
- Debridement of quadrants: UL, LL, LR with hand instrumentation only.
- Engine polish with fine paste and 5% Varnish

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(Date)	(Date)	(Date)
Patient Education:	Patient Education:	Patient Education:
☑ TB manual D power assisted	D TB manual D power assisted	D TB manual D power assisted
☑ Interdental Aid floss	D Interdental Aid	D Interdental Aid
D Toothpaste D	D Toothpaste	D Toothpaste
Rinse	☑ Rinse	D Rinse
Radiographs: Digital	Radiographs: Digital	Radiographs: Digital
D FMS D BWS (V/H) D Pan	D FMS D BWS (V/H) D Pan	D FMS D BWS (V/H) D Pan
Debridement:	Debridement:	Debridement:
☑ Quadrant(s) UR	D Quadrant(s)	D Quadrant(s)
D Whole Mouth	☑ Whole Mouth	D Whole Mouth
Pain Management:	Pain Management:	Pain Management:
☑ Topical as needed	☑ Topical as needed	D Topicl
D Oraqix	D Oraqix	D Oraqix
D Local Anesthesia	D Local Anesthesia	D Local Anesthesia
Coronal Polish:	Coronal Polish:	Coronal Polish:
D Engine	☑ Engine	D Engine
D Air Polisher: Agent	D Air Polisher: Agent	D Air Polisher: Agent
Other:	Other: 5% Varnish	Other:
D Topical Fluoride:	D Topical Fluoride:	D Topical Fluoride:
D Arestin:	D Arestin:	D Arestin:
D Sealant(s):	D Sealant(s):	D Sealant(s):
D Impressions	D Impressions maxillary mandibular	D Impressions

acer

IMPLEMENTATION

Visit One:

- At first visit pt. was demonstrated how to brush using the Modified Bass method of brushing using a soft manual toothbrush on a typodont. Then patient was given a new toothbrush to demonstrate the technique looking at the mirror. Pt. was able to angle the bristles of the brush correctly at 45 degrees and do sweeping motion after vibrating motion.
- Pt. was also demonstrated how to use waxed floss on posterior and mandibular anterior teeth. After sanitizing hands patient was asked to demonstrated flossing technique. He was able to successfully demonstrate the technique.
- Debridement of the UR with hand instruments only was initiated but not completed with residual calculus being noted on #2-D and between #2-3. No pain management was necessary.
- No referral given

IMPLEMENTATION

Visit Two (revisit):

- Pt. medical history was reviewed and Mr. R is still taking Escitalopram 10mg once a day and Vitamin D3 5000mg once per week . Intraoral: lesions that were noted during the initial visit have resolved.
- Gingival statement on the quadrants previously scaled UR: Inflammation and bleeding has decreased with mild inflamed gingiva.
- Pt. reported that he started using powered toothbrush and wanted to review how to use powered toothbrush. A sample powered toothbrush was obtained from clinic to demonstrate how to use powered toothbrush correctly.
- Pt. was recommended to use soft pick in the areas of diastema. Pt. was given a couple of samples of soft pick to try.
- Debridement of quadrant LR, UL, LL with hand instrumentation only. No pain management was necessary.
- Mandibular and maxillary alginate impression are taken.
- Treatment plan modified: #18 and #19 sealants were placed using rubber dam to cover deep pits and fissures.
- Engine polished with fine paste.
- 5% Varnish applied and post op instruction were given to the patient.

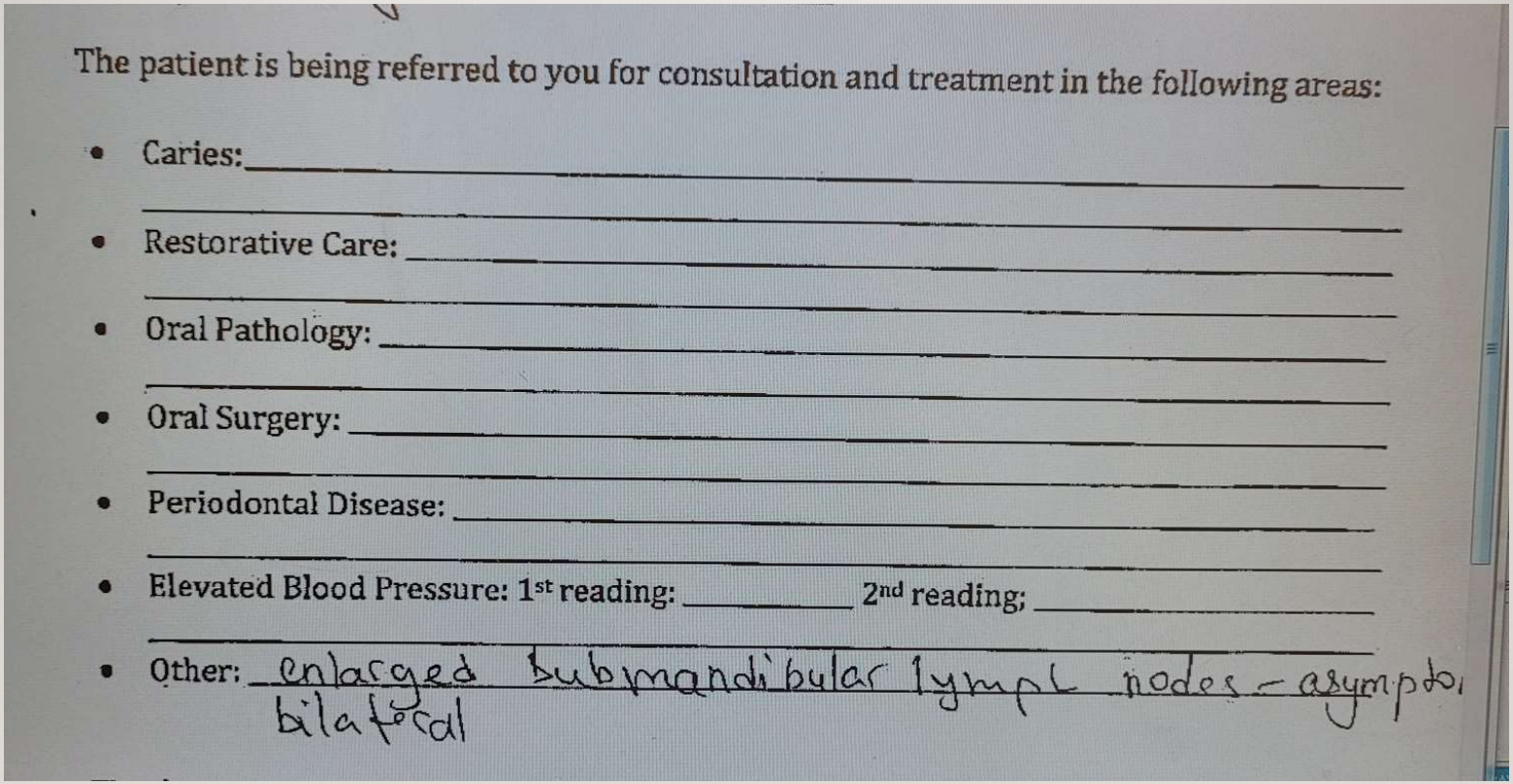
IMPLEMENTATION

Visit Three (limited Focus Visit)

*Due to the patient being interested in whitening, when we received the kits, he was notified. On third visit, pt. came for whitening evaluation, and it was determined that he qualified for the whitening treatment.

- Pt. medical history was reviewed and Covid screening performed (Temp 95.2F). Mr. R is still taking Escitalopram 10mg once a day and Vitamin D3 5000mg once per week .
- Pt. is using electric toothbrush 2x a day with Colgate toothpaste and flossing once a day.
- EI/IO: bilateral submandibular gland enlargement-asymptomatic. IO: Pt. presented with bilateral mandibular tori and mandibular and maxillary bilateral exostosis, palatine torus, slightly coated tongue. No caries lesions noted. Pt. was evaluated for whitening and bone growth on mandible and maxilla did not interfere with the placement of the whitening tray.
- Gingival statement: localized mild gingival inflammation on the buccal of anterior teeth.
- Patient has white striation on some of his teeth.
- A2 shade matched the patient's teeth color. Desired effect by the patient after whitening B1.
- Consent for whitening was read to the patient. Possible side effect were discussed with the patient. Consent was signed by the patient.
- Pt. stated that he prefers to do two 10min whitening sessions for 5 days. Pt. stated that he is coming back for re-evaluation in 5 days.
- Referral was given to the patient for further evaluation of bilaterally enlarged submandibular glands.

REFERRAL



The patient is being referred to you for consultation and treatment in the following areas:

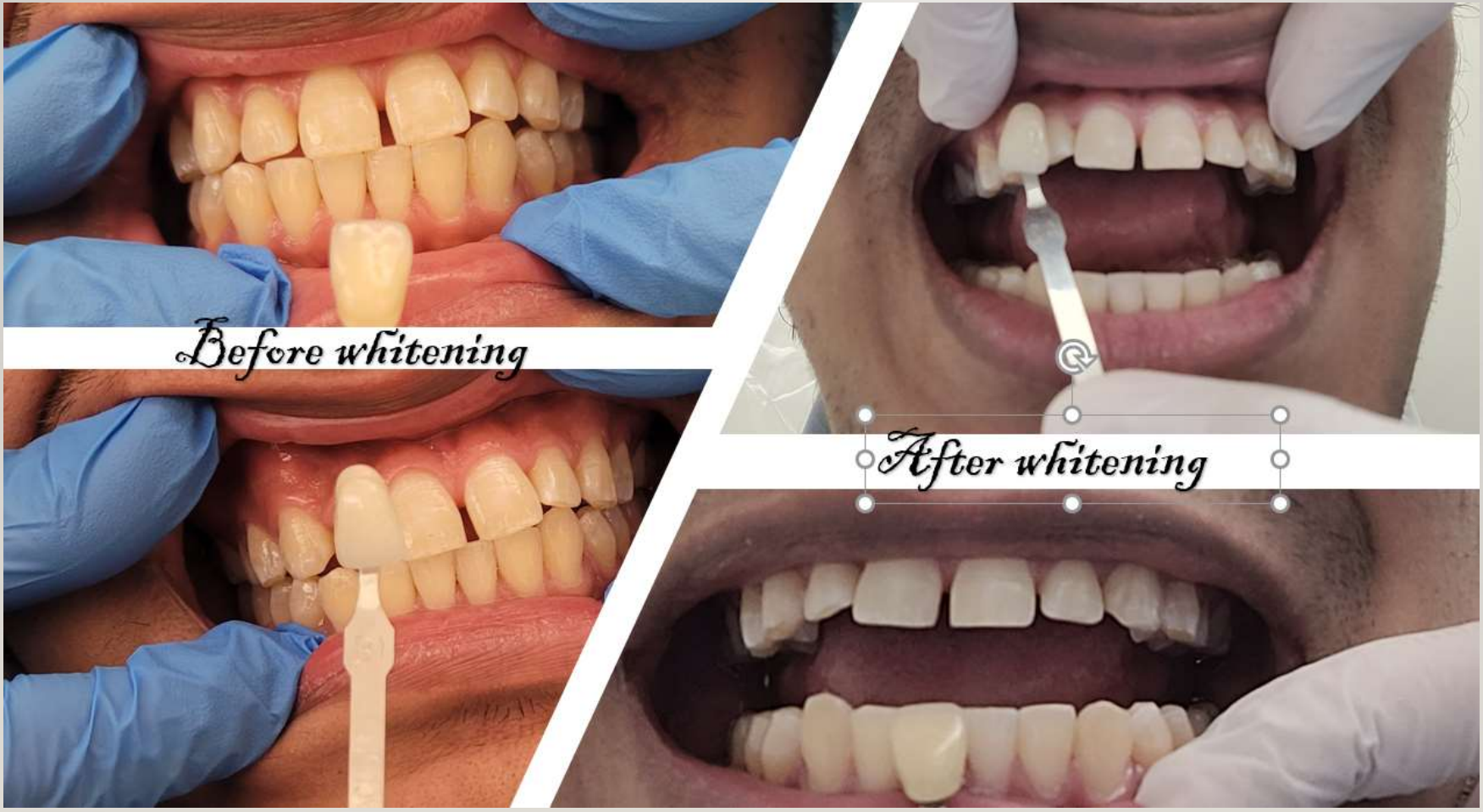
- Caries: _____
- Restorative Care: _____
- Oral Pathology: _____
- Oral Surgery: _____
- Periodontal Disease: _____
- Elevated Blood Pressure: 1st reading: _____ 2nd reading: _____
- Other: enlarged bilateral submandibular lymph nodes - asympto

IMPLEMENTATION

Visit Four (limited Focus Visit)

- Pt. medical history was reviewed and Covid screening performed (temp 96.6F). Mr. R is still taking Escitalopram 10mg once a day and Vitamin D3 5000mg once per week .
- Pt. is using electric toothbrush 2x a day with Colgate toothpaste and flossing once a day.
- EI/IO: bilateral submandibular gland enlargement-asymptomatic. IO: Pt. presented with bilateral mandibular tori and mandibular and maxillary bilateral exostosis, palatine torus, slightly coated tongue. No caries lesions noted. Pt. was evaluated for whitening and bone growth on mandible and maxilla did not interfere with the placement of the whitening tray.
- Gingival statement: Gingiva is pink. Marginal gingiva is not enlarged and fits snugly around the teeth with interdental papillae filling interdental spaces. Gingiva is stippled and firm with no signs of inflammation.
- Pt. is evaluated after two 10 min whitening sessions for 5 days.
- The maxillary teeth has changed the shade from A2 to B1, but the mandibular teeth have not changed the shade from A2. Pt. is satisfied by the results.
- Pt. stated that he still has some whitening gel left. He is recommended to continue the treatment for three more days to achieve desired effect.

BEFORE & AFTER WHITENING



IMPLEMENTATION

The challenge that I faced with the treatment of Mr. R was time management.

Mr. R was a medium case value, but on the second visit after faculty check-in, it was determined that patient qualified for sealant placement.

I was able to accomplish mechanical and educational part of the treatment as well as taking both alginate impressions but had limited time to place the sealant. Pt. did not want to take another day off for the third visit.

I decided to place the sealant at the second visit. With the help of fellow student and faculty, I was able to place the sealant quickly.

Although I was able to accomplish more than I had planned, I felt like I was rushing the whole time.

EVALUATION OF CARE-OUTCOME OF CARE-PROGNOSIS

Mr. R was somewhat compliant with the OHI because patients PI score didn't change from 1.2 Fair. At the last visit (limited focus care), Mr. R gingival tissue has improved a lot. Although PI score has not been taken, pt. gingiva tissue showed no signs of inflammation.

If he continues to implement the OHI and have regular dental care, he can accomplish having healthy and stable oral health.

CONTINUED CARE RECOMMENDATIONS

The recare recommendation interval given to the patient is 3 months.

A 3-months re-care was recommended to the patient because pt. was classified as Stage I/Grade A. Also at the initial visit, pt. was classified as a heavy case value pt. By recommending 3-months recall, we would be able to stabilize the periodontal health of the patient as well as monitor OHI incorporation and improve case value.

FINAL REFLECTION

As I reflect on Mr. R's case, I realized the importance of continues reinforcement on OHI and motivation. Mr. R was happy to hear that his oral health had improved and felt really good about the appearance of his teeth.

I learned from his case how vital it is to spend more time on OHI, explain and demonstrate each procedure. It is not only the patient who has to work. If the clinician does not work hard to motivate the patients, there is a great chance that of not seeing the results expected.