New York City College of Technology Department of Dental Hygiene DEN 2300 Case Presentation

Cynthia Yun 12/9/19

Patient Profile

- Ms. R is a 51 year old Hispanic American female.
- She is a retired single who lives in Queens, New York with two daughters. She has dental insurance but needs to pay out-ofpocket for certain procedures.
- Her last dental exam was two months ago. She had horizontal bitewings and three periapical taken at that time.
- Her last hygiene visit was about half a year ago at City Tech.
- Patient states she brushes twice a day with a soft manual toothbrush, using whitening toothpaste with fluoride. She tries to floss at least once a day and uses mouthwash once day.

Patient states that "I'm here for a cleaning to get rid of the stains on my teeth."

She has generalized heavy staining, varying from dark yellow to light brown.

Ms. R wants to understand why she accumulates heavy staining when she does not drink or smoke.

She was also interested in seeing if she was a candidate for Arestin as she has had Arestin placed on a few sites before.



Health History Overview

Blood Pressure: 99/81, Pulse 79, ASA II.

Medical Conditions:

- In remission for Thyroid cancer since 2010
- Suffers from vertigo
- Arthritis on her hands, back and hips
- Allergic to shrimp

Current Medications:

- Levothyroxine 112mg/QD for Thyroid management
- Motrin 200mg on occasion for Arthritis pain management
- Magnesium injection once a month for Vertigo treatment

Explanation of Conditions

Thyroid Cancer:

- It is malignant
- "Cancer cells form in the tissue of the thyroid gland" [1]
 <u>Etiology:</u>
- Exact causes are unknown

Risk Factors:

- Most common in women than men; "between the ages of 25 to 65" [1]
- Have a family history of thyroid cancer
- Frequent or high levels radiation exposure
- Goiter iodine diet

Thyroid Cancer continued..

Signs and symptoms include:

- Swelling of nodule or lump in the neck
- Difficulty with breathing
- Difficulty swallowing and pain when swallowing
- "Tickle in the throat" [2]
- "Even less commonly, hoarseness" of the voice [2]

Sources Citation:

- 1) PDQ® Adult Treatment Editorial Board. PDQ Thyroid Cancer Treatment (Adult). Bethesda, MD: National Cancer Institute. Updated <05/16/2019>. Available at: <u>https://www.cancer.gov/types/thyroid/patient/thyroid-treatment-pdq</u>. Accessed <12/09/2019>. [PMID: 26389296]
- 2) Thyroid Cancer (Papillary and Follicular). (n.d.). Accessed <12/09/2019>, from https://www.thyroid.org/thyroid-cancer/.

Explanation of Conditions continued..

Vertigo:

- A sensation that the environment around you is spinning
- "Temporary or ongoing spells of dizziness" [1]

Etiology:

- "Can be caused by problem in the brain or central nervous system (central vertigo) or inner ear (peripheral vertigo)" [2]
- Is a symptom caused by other conditions

Signs and Symptoms:

- Sensation of disorientation or balance problems
- Nausea or vomiting
- Sweating
- Abnormal eye movements

Sources Citation:

- 1) MacGill, M. (2019, November 13). "Everything you need to know about vertigo." *Medical News Today*. Retrieved from https://www.medicalnewstoday.com/knowledge/160900/vertigo-causes-symptoms-treatments.
- 2) Cunha, J. P. (2019, May 22). Vertigo Treatment, Medications, Causes & Symptoms. Retrieved from https://www.emedicinehealth.com/vertigo/article_em.htm#what_is_vertigo_prognosis.

Explanation of Conditions continued..

Arthritis:

- Inflammation or "tenderness of one or more of your joints" [1]
- "Most types of arthritis cause pain and stiffness in and around affected joint or joints" [2]
 <u>Etiology:</u>
- Cause for many types of arthritis are unknown
- Specific infections

Risk Factors:

- Have family history of some type of arthritis
- Age: as you get older, the risk increases
- Gender; "most types of arthritis are more common in women than men" except gout [2]
- Obesity
- Previous joint injuries

Arthritis continued..

Signs and symptoms:

- Pain
- Stiffness
- Swelling
- Redness
- Decreased range of motion

Sources Citation:

- 1) Arthritis. (2019, July 19). Retrieved from https://www.mayoclinic.org/diseases-conditions/arthritis/symptoms-causes/syc-20350772.
- 2) Cdc.gov. (2019). *Frequently Asked Questions (FAQs) about Arthritis* | CDC. [online] Available at: https://www.cdc.gov/arthritis/basics/faqs.htm [Accessed 10 Dec. 2019].

Explanation of Conditions continued..

Shrimp Allergies:

- An abnormal response by the body's immune system to proteins in certain shellfish <u>Etiology:</u>
- When the body's immune system "identifies a certain protein in the shellfish as harmful," it will attack it by releasing histamine causing allergy symptoms [1]

Signs and Symptoms:

- "A severe, life-threatening allergic reaction known as anaphylaxis may occur in the most serious cases" [2]
- Tingling in the mouth
- Abdominal pain, nausea, diarrhea, or vomiting
- Congestion, trouble breathing, or wheezing
- Skin reactions including itching, hives, or eczema
- Swelling of the face, lips, tongue, throat, ears, fingers, or hands
- Lightheadedness, dizziness, or fainting

Sources Citation:

- 1) Shellfish allergy. (2019, April 13). Retrieved from https://www.mayoclinic.org/diseases-conditions/shellfish-allergy/symptoms-causes/syc-20377503.
- 2) Michael Kerr and Jacquelyn Cafasso. (n.d.). Shellfish Allergies: Symptoms and Treatments. Retrieved from https://www.healthline.com/health/allergies/shellfish#symptoms.

<u>Thyroid Cancer</u>

- There are "six types of standard treatment" for patients with thyroid cancer such as "surgery, radiation therapy (including radioactive iodine therapy), chemotherapy thyroid hormone therapy, targeted therapy, and watchful waiting" [1]. "The primary therapy for all types of thyroid cancer is surgery" [2]. If surgery is chosen as the treatment method, "after surgery, most patients need to be on thyroid hormone for the rest of their life" [2]. Common procedures include:
 - Lobectomy removal of the lobe involved with the cancer
 - Near-total thyroidectomy removal of all but a small part of the thyroid
 - Total thyroidectomy removal of the entire thyroid gland

2) Ms. R is currently taking 112mg of Levothyroxine once a day for thyroid management. She reported that she "had thyroidectomy in 2007 and in 2010 and is currently in remission for thyroid cancer. She continues to see her specialist every year. Her last had a medical exam was in June 2019 and she last had an MRI for her thyroid in 2018."

Sources Citation:

- PDQ® Adult Treatment Editorial Board. PDQ Thyroid Cancer Treatment (Adult). Bethesda, MD: National Cancer Institute. Updated <05/16/2019>. Available at: <u>https://www.cancer.gov/types/thyroid/patient/thyroid-treatment-pdq</u>. Accessed <12/09/2019>. [PMID: 26389296]
- 2) Thyroid Cancer (Papillary and Follicular). (n.d.). Accessed <12/09/2019>, from https://www.thyroid.org/thyroid-cancer/.

<u>How</u> <u>Conditions</u> <u>are</u> <u>Managed</u>

<u>Vertigo</u>

- 1) The suggested treatment for management of vertigo are:
 - Finding the underlying causes of vertigo may include bacterial infection of the middle ear which the patient will be prescribed antibiotics and Meniere's disease which the patient may be prescribed antibiotics, medication, or placed on a low sodium diet.
 - Self-care remedies include lifestyle changes and herbal remedies.
 - Physical therapy maneuvers include the "vestibular rehabilitation exercises, also referred to as Epley maneuvers" [2] and the Brandt-Daroff exercises which "may help relocate the stray crystals that can lead to vertigo" [1].
- 2) To manage the conditions, Ms. R reports that she "gets a magnesium injection once a month for treatment.

Sources Citation:

- 1) MacGill, M. (2019, November 13). "Everything you need to know about vertigo." *Medical News Today*. Retrieved from https://www.medicalnewstoday.com/knowledge/160900/vertigo-causes-symptoms-treatments.
- 2) Cunha, J. P. (2019, May 22). Vertigo Treatment, Medications, Causes & Symptoms. Retrieved from https://www.emedicinehealth.com/vertigo/article_em.htm#what_is_vertigo_prognosis.

<u>How</u> <u>Conditions</u> <u>are</u> <u>Managed</u> <u>continued..</u>

Arthritis

1) The suggested treatment for management of arthritis are:

- Medications painkillers, nonsteroidal anti-inflammatory drugs (NSAIDs), counterirritants, disease-modifying antirheumatic drugs (DMARDs), biologic response modifiers, and corticosteroids. [1]
- Physical therapy or arthritis-friendly physical activity can improve range of motion and strengthen the muscles surrounding joints" [1], and it can "help relieve arthritis pain and stiffness" [2].
- In more severe cases surgery "joint repair, joint replacement and joint fusion" [1].

2) To manage the condition, Ms. R reports that she "takes 200mg of Motrin on occasion."

Sources Citation:

- 1) Arthritis. (2019, July 19). Retrieved from https://www.mayoclinic.org/diseases-conditions/arthritis/symptoms-causes/syc-20350772.
- 2) Cdc.gov. (2019). *Frequently Asked Questions (FAQs) about Arthritis* | *CDC*. [online] Available at: https://www.cdc.gov/arthritis/basics/faqs.htm [Accessed 10 Dec. 2019].

<u>How</u> <u>Conditions</u> <u>are</u> <u>Managed</u> <u>continued..</u>

Shrimp Allergies

1) The suggested treatment for management of shrimp allergies are:

- Avoid eating shrimp or shellfish entirely
- "If you have severe allergic reaction to shellfish (anaphylaxis)" [1] it is recommended to carry injectable epinephrine with you at all times such as EpiPen, Adrenaclick, or Auvi-Q.
- "For mild reactions such as a rash or itchiness, taking an antihistamine such as Benadryl may be recommended" [2].

2) Ms. R manages this condition by avoiding shrimp.

Sources Citation:

- 1) Shellfish allergy. (2019, April 13). Retrieved from https://www.mayoclinic.org/diseases-conditions/shellfish-allergy/symptoms-causes/syc-20377503.
- 2) Michael Kerr and Jacquelyn Cafasso. (n.d.). Shellfish Allergies: Symptoms and Treatments. Retrieved from https://www.healthline.com/health/allergies/shellfish#symptoms.

<u>How</u> <u>Conditions</u> <u>are</u> <u>Managed</u> continued..

Contraindications to dental hygiene care includes:

Levothyroxine – "No significant effects or complications reported" in regards to dental hygiene care [1]

Vertigo – Spinning, swaying, nausea, dizziness, light headed feeling [2]

Motrin – Healthcare professionals should take into consideration that ibuprofen could diminish the effectiveness of aspirin [1]

Patient management strategies to consider:

Explain the process of the treatment

Raise and lower dental chair slowly

If patient is experiencing vertigo, let the patient sit down

Let patient drink plenty of fluid

Sources Citation:

- 1) Wynn, Richard L., et al. Drug Information Handbook for Dentistry: Including Oral Medicine for Medically Compromised Patients & Specific Oral Conditions. 24th ed., Wolters Kluwer, 2019.
- 2) Metzger, G. K. (2012, August 30). Vertigo. Retrieved December 15, 2019, from WebMD website: https://www.webmd.com/brain/vertigo-symptoms-causes-treatment#2

<u>Dental</u> <u>Hygiene</u> <u>Management</u>



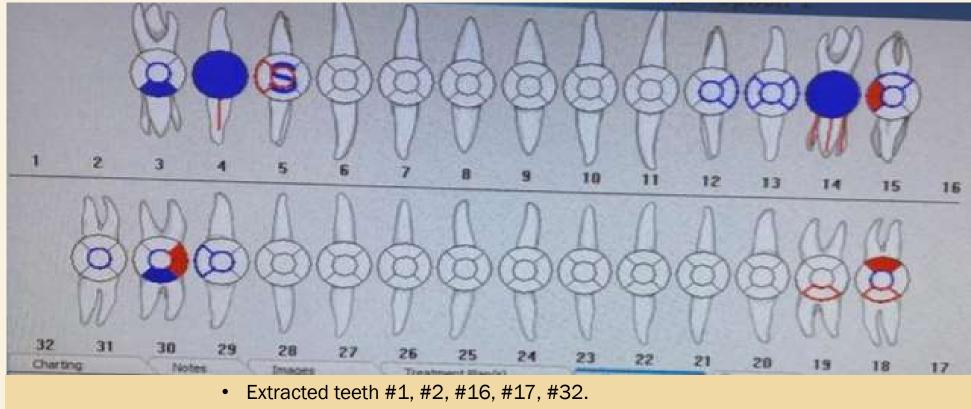
COMPREHENSIVE ASSESSMENTS

RADIOGRAPHS



Summary of Clinic Findings

- 1) Extraoral/Intraoral Examination: There were no significant findings during extraoral examination. Intraorally, patient has unilateral linea alba on the left side and a fissured tongue.
- 2) She bilateral Class I occlusion, a 4mm overjet and a 50% overbite.
- 3) She has generalized attrition and the patient stated that she has bruxism. She reported not using the night guard because she did not like wearing it.
- 4) She has suspicios lesions found on #15M, #18L, and #30M.
- 5) Deposits:
 - Generalized moderate subgingival calculus to posterior region and localized minimal supragingival calculus on mandibular lingual anteriors
 - Generalied extrinsic dark yellow to light brown stains due to drinking tea





Charting

- Sealant on #5
 - Suspicious lesions on #15M, #18L and #30M
- Class I amalgam restorations on #3 and #30.
- Class I and Class II composite restorations on #3, #5, #12, #13, #15, #18, #19, #29 #30, #31,
 - Root canal treatment and PFM on #4 and #14.

Pat	ient Na							
Bir	th Date:	and the state of the	Date: 11/12/19					
g	:51		Initials:					
		Low Risk	Moderate Risk	High Risk				
	Contributing Conditions		r Circle the conditions the					
ι.	Fluoride Exposure (through drinking water, supplements, professional applications, toothpaste)	Yes		асарру				
Ι.	Sugary Foods or Drinks (including juice, carbonated or non-carbonated soft drinks, energy drinks, medicinal syrups)	Primarily at mealțimes 🗹		Frequent or prolonged between meal exposures/day				
I.	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				
/.	Dental Home: established patient of record, receiving regular dental care in a dental office		□No					
	General Health Conditions	Check or Circle the conditions that apply						
	Special Health Care Needs (developmental, physical, medi- cal or mental disabilities that prevent or limit performance of adequate oral health care by themselves or caregivers)	MNO	Yes (over age 14)	Yes (ages 6-14)				
	Chemo/Radiation Therapy	10No		Yes				
	Eating Disorders	Мо	Yes					
	Medications that Reduce Salivary Flow	□No	☑Yes					
	Drug/Alcohol Abuse	⊠No	Yes					
	Clinical Conditions	Check o	r Circle the conditions th	at apply				
	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				
	Teeth Missing Due to Caries in past 36 months	☑No		Yes				
	Visible Plaque	MNo	Yes					
	Unusual Tooth Morphology that compromises oral hygiene	12No	Yes					
	Interproximal Restorations - 1 or more	□No	Yes					
	Exposed Root Surfaces Present		Yes					
	Restorations with Overhangs and/or Open Margins; Open Contacts with Food Impaction	⊠ No	Yes					
-	Dental/Orthodontic Appliances (fixed or removable)	⊠ No∕	Yes					
	Severe Dry Mouth (Xerostomia)	Mo 	1000 1000 1000 1000 1000 1000 1000 100	Yes				
/e	rall assessment of dental caries risk:	Low	Moderate	M High				

<u>Caries Risk</u> <u>Assessment</u>

- Overall assessment for dental caries risk presents patient as having a high risk
- Clinically, there were suspicious lesions on #15M, #18L, and #30M.
- The radiographs provided by the patient were poorly printed and therefore cannot provide radiographic evidence of decay.

<u>Gingival</u> <u>Description</u> <u>&</u> <u>Periodontal</u> <u>Status</u> Gingival Description: Pink, stippled, fits snuggly around tooth, knife edged interdental papilla, with no presence of inflammation.

Minimal bleeding upon probing.

Patient has a Type I periodontal assessment.

Plaque Mobility Bone Loss GM CAL MGD PD Furcation PD GM CAL	32 4 32 4 32 4		23 313 0 0 23 323 5 6	323 32	23 323 2		313 32 0 324 42 11 1	3 324		423 423	Buccal Lingual
1 2 6 5	3 T Bleeding 4 T Suppuration	C GM C GM	Probing D	epths	Furcation Plaque		0 0	M Bone	obility: <mark>0</mark> Loss:		
Plaque Mobility Bone Loss GM CAL PD Furcation PD GM GM GAL MGD				313 31 423 32			323 32 C 323 32			134 24	Lingual Bud
	31 30	29	28 27	26 2	5 24	23	22 2	1 20	19	18	Buccal

Periodontal Charting

- There were generalized 2-3mm probing depths and localized 4mm probing depths in the posterior region
- There were localized minimal bleeding upon probing

Dental Hygiene Diagnosis



Ms. R was a heavy case value with Type I periodontal assessment and is at high risk for caries.

- Clinically, she had generalized moderate subgingival calculus in the posterior region and localized minimal supragingival calculus on mandibular lingual anterior.
- Clinically, she had extrinsic dark yellow to light brown stains due to drinking tea.
- Her periodontal assessment indicates that she is a Type I active gingivitis due to the localized 4mm probe depths in the posterior regions, with minimal bleeding on probing. Radiographic evidence shows minimal bone loss on maxillary molars.
- She has a high risk for caries due to multiple risk factors such as she has three or more carious lesions in and three or more restorations in the last 36 months.



After thorough oral interview and assessment, the dental hygiene care plan recommended to the patient includes:
Two visits for debridement
Afternoon appointments only because patient uses "Access-aride" service
Teach the patient how to properly use floss thread and power brush for oral self-care
Oraqix for pain management
Engine polish with coarse paste
2% sodium fluoride treatment
Arestin candidate, revisit in one or two weeks to evaluated pocket depths

Consent for Treatment/Treatment Plan

Ask 1: <u>423/19</u> (Date) Patient Education: TB manual Dower assisted Arinterdental Aid <u>4055</u> Toothpaste Radiographs: Digital FMS DBWS (V/H) DPan Debridement: V Quadrant(s) <u>422-24</u>)	Visit 2: [Date] Patient Education: E Patient Education: E E TB manual II power assisted Interdental Aid	Visit 3: (Date) Patient Education: To manual Dpower assisted Interdental Aid Toothpaste Radiographs: Digital FMS D BWS (V/H) C Pan Debridement:	
Quadrant(s) (1 22-24-24) Whole Mouth Pain Management: Topical Oraqix Local Anesthesia Coronal Polish: Engine Air Polisher: Agent Other: Topical Fluoride: Arestin: Sealant(s): Impressions	_ DArestin:		Arestin:

The findings of my assessments were explained to me and Lauthorize my student dental hydicolst to perform the procedures delineated in the treatment recommendations above and Lunderstand th modifications to care and photographs may be required based on my individual needs. A thorough discussion with my student hygienist and/or clinical faculty supervisor, the nature, surpose timing as these procedures, available treatment alternatives, and the advantages and disadvantages of each, including no treatment was discussed. I understand that additional treatment and/or referra ed appropriate in order to treat my oral condition. I understand that the dental hyginne clinic has the right to discontinue treatment and deny appointment scheduling after (2) missed academic semester. In this event, I will be provided with a list of regional hospitals/clig cs for continuation of care. I have read and understand the above statement and all m cost of

its within the m) treatment have been satisfactorily answered.

+ (DRINT NAME

Rus Attentine Family

Implementation – Treatment

Patient was recommended two visits for complete debridement. After patient showed interest in Arestin, it was explained that she may need to have two additional visits, one to evaluate sites for Arestin placement and another for post-treatment evaluation.

1) Preventative Services:

- Oral self-care instructions patient was taught how to properly use thread floss and how to properly use a power brush. (Treatment plan was modified during the second visit after the patient purchased a power brush in clinic.
- Fluoride Therapies at home fluoride mouthwash was recommended to the patient after discovering suspicious lesions and after the ADA CAMBRA assessment.
- Sealants She was not a candidate for sealants as she has had restorative done in the posterior region.
- Dietary Guidance After the ADA CAMBRA assessment, it was recommended to the patient to rinse her mouth with water after eating sweets and drinking tea.

Implementation - Treatment continued..

Patient was recommended two visits for complete debridement. After patient showed interest in Arestin, it was explained that she may need to have two additional visits, one to evaluate sites for Arestin placement and another for post-treatment evaluation.

2) Debridement Performed

- During the first visit, hand scaling and ultrasonic were performed on #22, #23 and #24. Benzocaine topical was given for pain management. The anterior scaler, gracey 11/12, gracey 13/14 and the FSI-Slim Line Insert were used for debridement.
- During the second visit, hand scaling and ultrasonic were performed were used on the rest of quadrant 3 and on quadrants 1, 2 and 4. Oraqix was given for pain management. The anterior scaler, gracey 11/12, gracey 13/14, FSI-Slim Line Insert and Thinsert were used to debride and lavage.

<u>Evaluation of</u> <u>Care –</u> <u>Outcome of</u> <u>Care –</u> <u>Prognosis</u> The patient was recommend a total of two visits for complete debridement and it was completed according to the treatment plan.

During the second visit, when the new plaque index score was completed, the oral self-care taught from the previous visit proves to be effective as her plaque index score has improved from 0.67 to 0.5.

If the patient continues to floss everyday, use the power brush she purchased and was taught to use in clinic, and sees a dentist for the referrals her overall oral self-care will improve. Her plaque index score will improve and her pocket depths will improve too.

Referrals

Patient was given a referral to evaluate suspicious lesions found on #15M, #18L and #30M.

Referral was given because the suspicious lesions were visible clinically.

She is also at a high risk for caries as she has had restorations done in the past.

Continued Care Recommendations

Patient was given a recommendation of three months recare. She will be returning in two months for evaluation of the Arestin sites posttreatment.

> Three months recare is necessary to evaluate the suspicious lesions after referral has been given to her.

Final Reflection

What went right? Why?

- During the initial visit for recare, the patient's chief complaint was about the stains she has on her teeth. She wanted to figure out why she had so many stains. After an oral interview, we came to a conclusion that the staining came from drinking tea daily.
- On the third visit, after a brief oral interview and an intraoral examination, the patient was evaluated for having herpetic lesions. This was confirmed by an oral pathologist. She was not aware that they were herpetic lesions. She thought they were just blisters and she was in pain.

Final Reflection continued..

What went wrong? Why?

 Patient was given 2% sodium fluoride tray treatment instead of a 5% fluoride varnish. Patient would benefit more from getting a varnish treatment for the restorations and suspicious lesions but I failed to remember to modify the treatment plan. Instead I continued with my original plan.

What could I have done differently?

 After the ADA CAMBRA assessment, I did not prescribe any fluoridated dentrifice or oral rinse. I should have prescribed fluoridated mouthwash and anti-cavity instead of just recommending it to her.