

**NEW YORK CITY COLLEGE OF
TECHNOLOGY
DEPARTMENT OF DENTAL HYGIENE
DEN 2300 CASE PRESENTATION**

Student's Name: Erica Lliguichuzhca

Date: December 13, 2019

PATIENT PROFILE

- Age: 23 years old
- Gender: Female
- Ethnicity: Hispanic
- Access to Dental Care: Patient does have insurance, but does not go often to her dentist due to her busy schedule. Patient only goes when she is in pain.
- Social History: Middle class, lives in Queens with her boyfriend and her two children. She has a five year old boy and a 4 month year old baby.
- Any Cultural Influences or Background: Patient comes from a country where flossing is not done or taught at all. To add on, a place where going to a dentist is infrequent. One would go only when having a toothache where the solution would be to remove the tooth. Although patient grew up in the United States her parents grew up in a place where this was believed. Thus, the influences were past down to the patient.
- Last Dental Visit and Dental Hygiene Visit: Last dental visit was in 2016 and last oral hygiene service was Sept 2018
- Radiographic History: 4 BWS in 2016
- Oral Hygiene Routine: Patient brushes her teeth at least two times a day with a soft manual toothbrush using circular motions and Colgate Total. She also tries her best to floss 2-3 times a week.

CHIEF COMPLAINT(S)

- Patient stated, “I need a cleaning, I have not got one in a year”.
- She has 2 wisdom teeth that are not fully erupted at the maxilla and was wondering if her 2 wisdom teeth at the mandible will erupt soon as well.
- The patient was also concerned if she had cavities and why she bleed when brushing her teeth and when she would floss.

HEALTH HISTORY OVERVIEW

Blood Pressure: 91/72, Pulse 84, ASA I

Medical Condition:

- Diagnosed with hypothyroidism since she was born.

Current Medication:

- Levothyroxine sodium 88 mcg/day for hypothyroidism.

HYPOTHYROIDISM

- Hypothyroidism, also known as underactive thyroid disease, is a condition where the person's thyroid gland does not produce the sufficient amount of hormone one needs.
- This condition is an endocrine disorder that occurs when the, “thyroid gland fails to produce or secrete as much thyroxine (T4) as the body needs” (Sims and Frey, 2011).
- T4 is essential to have in the body because it regulates the heart rate, digestion, physical growth and mental development.

RISK FACTORS OF HYPOTHYROIDISM

Risk factors include:

- Being a women. Females are at greater risk then males.
- Being over the age of 50.
- In the United States, the rate of hypothyroidism is higher among Caucasians and Hispanics. It is lower among African Americans (National Institute of Health).
- Having a small body size at birth.
- Having a family history of an autoimmune disease.
- Having Turner Syndrome. This is a genetic disorder where a girl is born with one X chromosome instead of two.

CAUSES OF HYPOTHYROIDISM

- Hashimoto disease.
- Surgery on the thyroid gland.
- Having radiation therapy for treating head or neck cancer.
- The medication Lithium, which is given to treat some psychiatric disorders.
- Pregnancy.
- A viral infection.
- Tumor in the pituitary gland.
- Congenital. A baby can be born with a defective gland or no gland.
- Not having enough iodine in the body.

SYMPTOMS OF HYPOTHYROIDISM

- Fatigue
- Weight gain
- Face getting puffier
- Not being able to tolerate the cold.
- Joint and muscle pain
- Constipation
- Dry skin
- Dry thinning hair.
- Irregular menstrual periods.
- Fertility problems
- Depression
- Slowed heart rate

SIGNS AND SYMPTOMS REGARDING ORAL HEALTH FROM CONDITION AND MEDICATION:

- Oral manifestations may include:
 - Over-retained deciduous teeth
 - Macroglossia: having an unusual large tongue.
 - Anterior open bite
 - Enamel Hypoplasia
 - Enamel defects
 - Poor periodontal health
 - Delayed wound healing
 - Bleeding of gums
- Effects of Levothyroxine:
 - Vomiting
 - xerostomia
 - Sticky feeling in mouth
 - Halitosis
 - Mouth/throat pain
 - Cracked lips
 - Dry tongue
 - Burning sensation in mouth
 - Difficulties with tasting

HOW CONDITION IS MANAGED

- The treatment for hypothyroidism includes prescribing **levothyroxine**, a thyroid hormone medicine. It replaces the hormone the body can no longer make. The doctor will recommend to take the medicine in the morning before eating anything.
- To determine the right dosage the doctor will give a blood test every 6-8 weeks after starting to take levothyroxine. Once the right dosage is determined a blood test will be taken in 6 months then once a year. One has to take this medication for the rest of their life.
- Since the thyroid uses iodine to make thyroid hormone women need more iodine when they are pregnant. If pregnant one has to go to their doctor to determine how much iodine they must take. In the same manner, their dosage of levothyroxine may need to be increased.

HOW THE PATIENT MANAGES HER CONDITION

- The patient is currently taking levothyroxine , 88 mcg, once a day in the morning before she eats. She gets her blood test done every year to check her hormone levels and if her dosage has to be changed.
- The patient currently gave birth four months ago and was asked if she had to take more medication. She stated that she only took prenatal vitamins and was not advised to take an iodine supplement.
- From the signs and symptoms listed before to my surprise the patient did not present many of them. On the contrary of xerostomia, my patient had a normal amount of saliva. She did, however, have moderate bleeding upon probing which may be due to her condition and/or recently having a baby.

DENTAL HYGIENE MANAGEMENT

- There are no contraindications to dental hygiene care. However, it is very important to detect if the condition is uncontrolled by keeping aware of the signs and symptoms and if they worsen at every visit. Uncontrolled Hypothyroidism may lead to high blood pressure, weakness of the muscles, jaundice, depression, and having “brain fog”. If any of the signs is seen it may be best to not continue the treatment and inform the patient that they need to get their hypothyroidism in check before it worsens even more.
- It is also very important to be aware of all the medication they are taking. There are some medication that may affect the absorption of levothyroxine.
 - Antacids, Bile Acid Sequestrants, Calcium Carbonate, and Ferrous Sulfate (Iron) may decrease T4 absorption.
 - Antidepressants may increase the therapeutic and toxic effects of Levothyroxine.

COMPREHENSIVE ASSESSMENTS

RADIOGRAPHS



- HBW was taken at NYCCT in December 2019
- Generalized mild horizontal bone loss
- Localized mild vertical bone loss on #3-M, 18-M, 19-M, and 20-M

SUMMARY OF CLINICAL FINDINGS

1. Extraoral/Intraoral Examination

- Extraoral WNL : 1 mm round, raised, flesh-colored macule on the right upper lip.
- Intraoral WNL : Mild white coating on tongue and small macules on the hard palate.

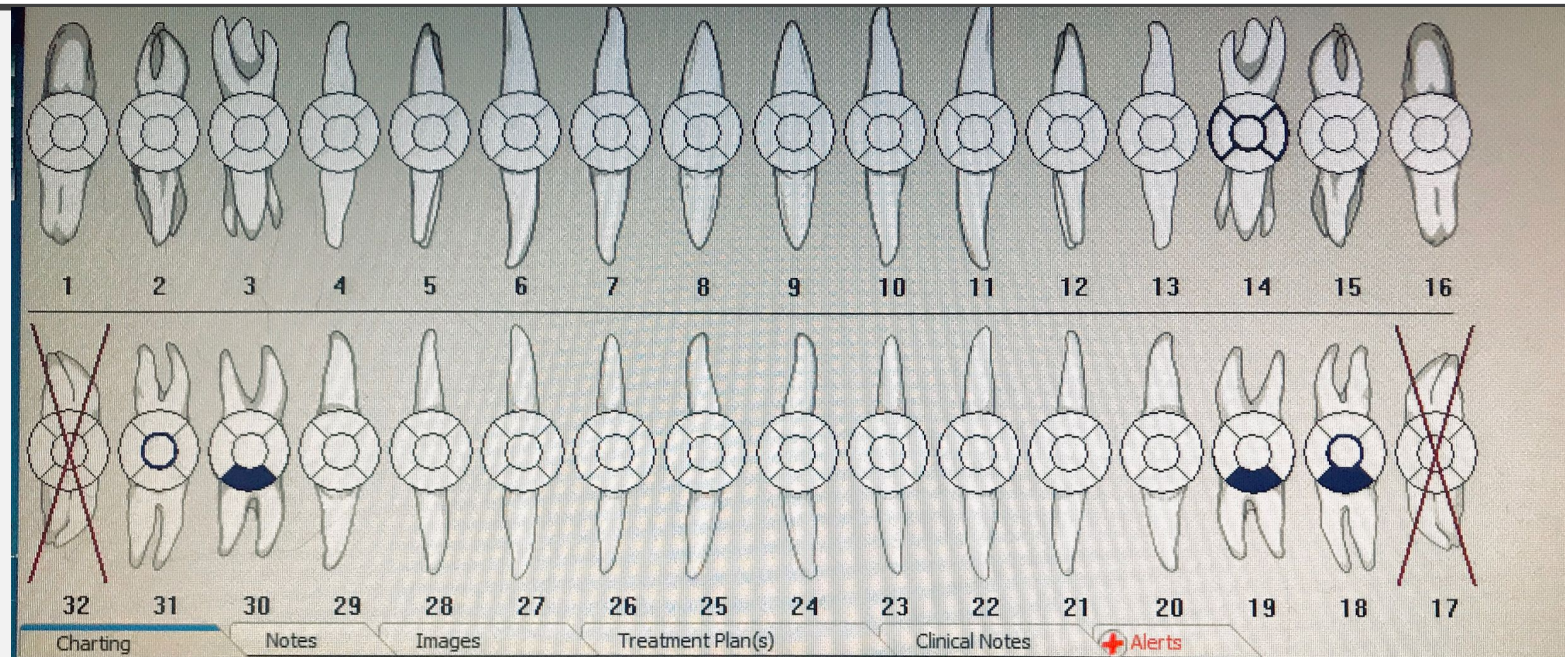
2. Occlusion

- Bilateral Class I of Occlusion
- Overjet: 4 mm
- Overbite: 30%

3. Deposits

- Generalized moderate subgingival calculus at the interproximals with generalized light yellow stain.
- Case value of patient: Medium

DENTAL CHARTING



- Class I Amalgam restorations on #18-B, 19-B, and 30-B
- Class I and II Composite filling on #14-DOB, 19-O, and 31-O
- Mild localized attrition at the anteriors
- Tooth #1 and #16 not fully erupted.
- Tooth #17 and #32 were not seen clinically, but were seen on HBWs.

CARIES RISK ASSESSMENT

- No clinical or radiographic evidence of caries present. Thus, no ADA CAMBRA Form was completed with patient nor adult referral was given to patient for caries.

GINGIVAL DESCRIPTION & PERIODONTAL STATUS

- Gingival Description:
 - Generalized pink and slightly red with moderate biofilm at the gingival margin; slightly enlarged, inflamed, spongy, non-stippled with moderate bleeding upon probing.
 - Localized moderate red and soft papilla between teeth #7 and #8 with moderate bleeding upon probing. Patient stated no pain at this location, but subgingival calculus was detected.

DENTAL HYGIENE DIAGNOSIS

- Condition patient presents based on clinical and radiographic findings:
 - Type II active periodontitis due to generalized 4-5 mm probing depths and localized 6 mm probing depth on tooth #19 with moderate bleeding upon probing and radiographic evidence of generalized mild horizontal bone loss and localized mild vertical bone loss on #3-M, 18-M, 19-M, and 20-M

DENTAL HYGIENE CARE PLAN

- Patient Management and appointment scheduling: Care will involve 2 visits.
- Oral self-care:
 - 1st visit- flossing will be introduced because high probing depths reading, moderate subgingival calculus and moderate disclosing solution was found at the interproximals.
 - 2nd visit- Since disclosing solution was also found at the gingival margin modified bass will be introduced and flossing will be discussed and see if patient was able implement it.

DENTAL HYGIENE CARE PLAN CONT.

- Dietary guidance
 - Although patient did not present caries, dietary guidance will be discussed with patient to help prevent from caries occurring.
 - Patient's medication will also be discussed because it was found that it may cause xerostomia; although patient presented with normal saliva production. It will be helpful for the patient to be aware of what they may get and what it may lead to.
 - Xerostomia may lead to caries, periodontal disease, halitosis, and so on.

DENTAL HYGIENE CARE PLAN CONT.

- Debridement- using ultrasonic and hand scaling
 - 1st visit: Quadrant I
 - 2nd visit: HBW and Quadrants II-IV
- Pain management
 - While probing patient stated she did not feel pain. However, if patient feels slight pain 20% Benzocaine (topical) will be applied and if pain still continues Oraquix (2.5% Lidocaine and 2.5% Prilocaine) will be applied.

CONSENT FOR TREATMENT/TREATMENT PLAN

| Visit 1: <u>10/18/19</u> (Date) | Visit 2: _____ (Date) | Visit 3: _____ (Date) | Visit 4: _____ (Date) |
|--|---|--|--|
| Patient Education: <input type="checkbox"/> TB manual <input type="checkbox"/> power assisted <input checked="" type="checkbox"/> Interdental Aid <u>FLOSS</u> <input type="checkbox"/> Toothpaste _____ <input type="checkbox"/> Rinse _____ Radiographs: Digital <input type="checkbox"/> FMS <input type="checkbox"/> BWS (V/H) <input type="checkbox"/> Pan Debridement: <input checked="" type="checkbox"/> Quadrant(s) <u>I</u> <input type="checkbox"/> Whole Mouth Pain Management: <input type="checkbox"/> Topical <input type="checkbox"/> Oraqix <input type="checkbox"/> Local Anesthesia Coronal Polish: <input type="checkbox"/> Engine <input type="checkbox"/> Air Polisher: Agent _____ Other: <input type="checkbox"/> Topical Fluoride: _____ <input type="checkbox"/> Arestin: _____ <input type="checkbox"/> Sealant(s): _____ <input type="checkbox"/> Impressions _____ | Patient Education: <input checked="" type="checkbox"/> TB manual <input type="checkbox"/> power assisted <input type="checkbox"/> Interdental Aid _____ <input type="checkbox"/> Toothpaste _____ <input type="checkbox"/> Rinse _____ Radiographs: Digital <input type="checkbox"/> FMS <input checked="" type="checkbox"/> BWS (V/H) <input type="checkbox"/> Pan Debridement: <input type="checkbox"/> Quadrant(s) <u>II-IV</u> <input type="checkbox"/> Whole Mouth Pain Management: <input checked="" type="checkbox"/> Topical <input checked="" type="checkbox"/> Oraqix <input type="checkbox"/> Local Anesthesia Coronal Polish: <input checked="" type="checkbox"/> Engine <input type="checkbox"/> Air Polisher: Agent _____ Other: <input checked="" type="checkbox"/> Topical Fluoride <u>Fuon de gel</u> <input type="checkbox"/> Arestin: _____ <input type="checkbox"/> Sealant(s): _____ <input type="checkbox"/> Impressions _____ | Patient Education: <input type="checkbox"/> TB manual <input type="checkbox"/> power assisted <input type="checkbox"/> Interdental Aid _____ <input type="checkbox"/> Toothpaste _____ <input type="checkbox"/> Rinse _____ Radiographs: Digital <input type="checkbox"/> FMS <input type="checkbox"/> BWS (V/H) <input type="checkbox"/> Pan Debridement: <input type="checkbox"/> Quadrant(s) _____ <input type="checkbox"/> Whole Mouth Pain Management: <input type="checkbox"/> Topical <input type="checkbox"/> Oraqix <input type="checkbox"/> Local Anesthesia Coronal Polish: <input type="checkbox"/> Engine <input type="checkbox"/> Air Polisher: Agent _____ Other: <input type="checkbox"/> Topical Fluoride: _____ <input type="checkbox"/> Arestin: _____ <input type="checkbox"/> Sealant(s): _____ <input type="checkbox"/> Impressions _____ | Patient Education: <input type="checkbox"/> TB manual <input type="checkbox"/> power assisted <input type="checkbox"/> Interdental Aid _____ <input type="checkbox"/> Toothpaste _____ <input type="checkbox"/> Rinse _____ Radiographs: Digital <input type="checkbox"/> FMS <input type="checkbox"/> BWS (V/H) <input type="checkbox"/> Pan Debridement: <input type="checkbox"/> Quadrant(s) _____ <input type="checkbox"/> Whole Mouth Pain Management: <input type="checkbox"/> Topical <input type="checkbox"/> Oraqix <input type="checkbox"/> Local Anesthesia Coronal Polish: <input type="checkbox"/> Engine <input type="checkbox"/> Air Polisher: Agent _____ Other: <input type="checkbox"/> Topical Fluoride: _____ <input type="checkbox"/> Arestin: _____ <input type="checkbox"/> Sealant(s): _____ <input type="checkbox"/> Impressions _____ |

The findings of my assessments were explained to me and I authorize my student dental hygienist to perform the procedures delineated in the treatment recommendations above and I understand that 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, purpose, timing and cost of these procedures, available treatment alternatives, and the advantages and disadvantages of each, including no treatment was discussed. I understand that additional treatment and/or referrals may be deemed appropriate in order to treat my oral condition. I understand that the dental hygiene clinic has the right to discontinue treatment and deny appointment scheduling after (2) missed appointments within the academic semester. In this event, I will be provided with a list of regional hospitals/clinics for continuation of care. I have read and understand the above statement and all my questions concerning my treatment have been satisfactorily answered.

Miguerechca, Enca. J. Brisch 10/18/19
 Patient/Guardian Student (PRINT NAME) Attending Faculty Date

IMPLEMENTATION

- Preventive Services Included:
 - Oral self-care instructions-
 - On the 1st visit the patient's flossing technique was seen and adjusted. Everything was well except the patient was not going all the way under the sulcus. The patient was able to implement flossing, but not everyday. She stated that the days she did not was because she forgot. However, it's getting better..
 - On the 2nd visit we went over flossing again and this time there was no need to adjust the technique and then modified bass was taught to the patient. Patient really liked this toothbrush technique because she noticed the disclosing solution coming right off the gingival margin.

IMPLEMENTATION

- Debridement performed
 - 1st visit- hand scaled and ultrasonic Quadrant I
 - 2nd visit- hand scaled and ultrasonic Quadrant II-IV using 20% Benzocaine
 - Engine Polish and Fluoride gel applied.
- Challenges
 - Contrary to the effect of levothyroxine, my patient had very fast saliva build-up meaning that her teeth were slippery making it hard to hand scaled. To fix this issue, I would dry her teeth with the air water syringe and dry with gauze.

EVALUATION OF CARE

- From the 1st to the 2nd visit, goals that were made with the patient seemed to be accomplished.
 - One of the goals was for the patient to implement flossing more times during the week than she stated in the beginning. She was flossing 2-3x/week before. At her second visit she stated that she was flossing 4-5x/week; some progress was made.
 - Progress was seen with the disclosing solution. Compared to the 1st visit, there was less disclosing solution found at the interproximals.
 - The gingiva tissue of QI, seen in the second visit was slightly less red, less inflamed, and less bleeding upon exploring and slight biofilm at the gingival margin.

REFERRALS

- No referral was given to the patient.

CONTINUED CARE RECOMMENDATIONS

- Recare interval that I am recommending to this patient is 4 months. This is because the patient presented with active Type II periodontitis, generalized mild horizontal bone loss, moderate amount of subgingival calculus, and moderate bleeding upon probing.
 - From the recare we can see if the bone loss has stabled and if the amount of bleeding has decreased.
- In addition, because of the condition and medication she takes it is best to evaluate her in 4 months.
 - Her condition makes gingival tissue heal at a longer rate than those who do not have it (wound delayed healing).
 - Her medication may lead to xerostomia and its best to monitor this at every visit she comes. At the recare, we can see if the patient has her condition under control.

FINAL REFLECTION

- I believe patient comfort went really well. Before beginning to scale the patient's teeth I informed her that if she felt uncomfortable to let me know and she agreed. While scaling a couple of teeth I did seem to notice that the patient would squint her eyes. I then asked her if she wanted topical to help with the pain. After applying 20% benzocaine on the patient's gingiva she was no longer squinting her eyes and even asked if she can get the topical for the next visit.
- Oral hygiene care also seemed to go well. The patient was able to properly floss and brush her teeth with the right technique. She was also able to implement flossing more times in a week than she used to. The disclosing solution being found more at the interproximals pushed her to do more flossing (stated by the patient).

FINAL REFLECTION CONT.

- There were a few things that went wrong and wish I could have done differently.
 - One of those being, having a thorough discussion about the patient's condition and medication. It was brought up, but I wish I would have explained to her more. Even though she showed no signs or symptoms it is better to have explained what may happen if she ever did stop taking her medication.
 - Another thing I wish I could have done differently was add mouth rinse in her treatment plan. It was slightly explained at the first visit, but it should have been emphasized since those with hypothyroidism have delayed wound healing. Because toothbrushing teeth only covers 20% of the mouth; a mouthrinse will cover the rest and help with the wound healing and prevent from it getting infected by bacteria.

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