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

Jenny Lau 11/22/2019

Patient Profile

Ms. A. is a 54-year-old Asian female.

She comes from a middle-class family and works as a seamstress. She lives in Brooklyn, New York with her husband and daughter. She currently has no dental insurance and pays out-of-pocket for care.

Her last dental exam was about 9 months ago in March 2019. She recalls that she had an extraction and a brief cleaning during this visit.

She was seen in the NYCCT dental hygiene clinic in April 2019. Ms. A. had a full mouth series (FMS) taken and was determined to be out of scope of dental hygiene treatment following assessments (dental and periodontal charting).

Ms. A. reported brushing 2 times a day with Crest gum detoxify toothpaste using a manual, soft bristled, Oral-B toothbrush. She rinses once a day with Reach mouth rinse in the morning. She brushes her tongue with her toothbrush.

Chief Complaint

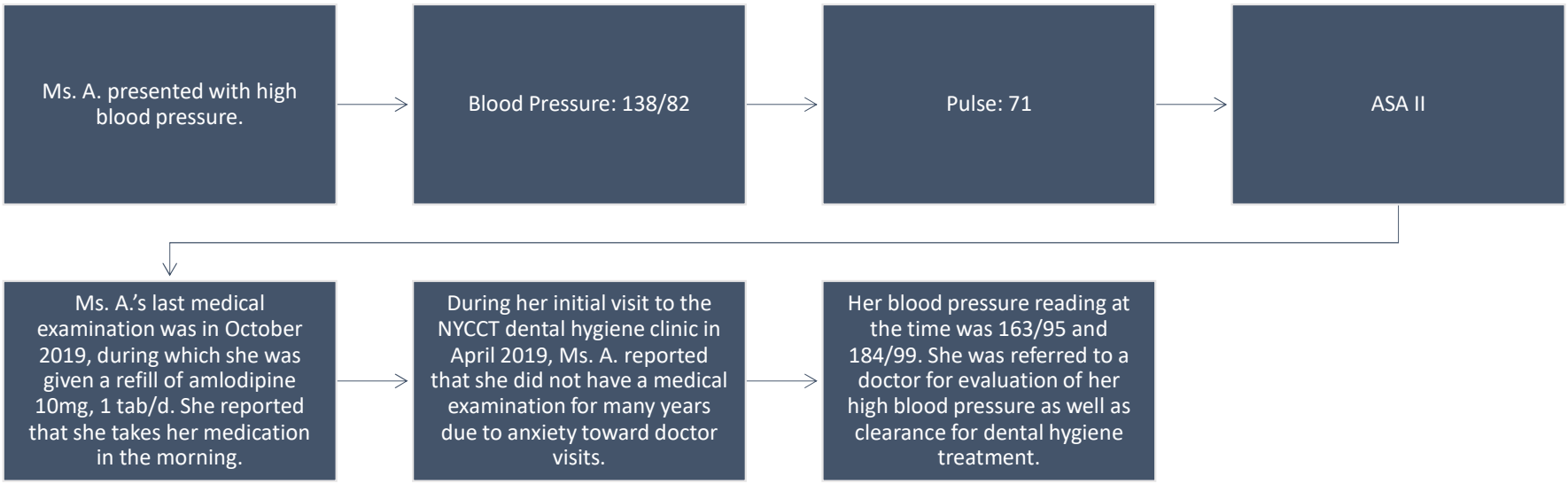
Ms. A. returned to NYCCT for dental hygiene services in December 2019. She complained of on and off pain in the lower right quadrant.

She had moderate staining on the lingual surfaces of her upper anterior teeth due to previously being a regular coffee and tea drinker.

She had visible supragingival calculus on the cervical thirds of her anterior mandibular teeth (teeth #22-27) and generalized material alba.

Ms. A. was concerned about her difficulty accessing around the margins of her crowns during at-home care, specifically in the upper right quadrant.

Health History Overview



Explanation of Condition

The medical condition Ms. A. presented with was high blood pressure, which is currently controlled with medication management.

High blood pressure is elevated arterial blood pressure that can cause damage to major organs including the heart and kidneys. It is usually detected during a routine health checkup. It can be a result of poor diet or an inactive lifestyle. It can also be hereditary and/or due to pre-existing conditions such as diabetes and kidney disease.

This condition affects about 30% of the adult population and is a major contributing risk factor to heart failure, heart attack, stroke, and chronic kidney disease (1).

“In 2010, it was the primary/contributing cause of death for more than 362,000 Americans” (1).

“Individuals with high blood pressure often have no signs or symptoms of the condition” (1). However, if symptoms present, these may include occipital headaches, dizziness, visual disturbances, weakness, tinnitus (ringing in the ears), and/or tingling of the hands and feet (3).

How Condition is Managed

Once detected, high blood pressure is usually easily treated.

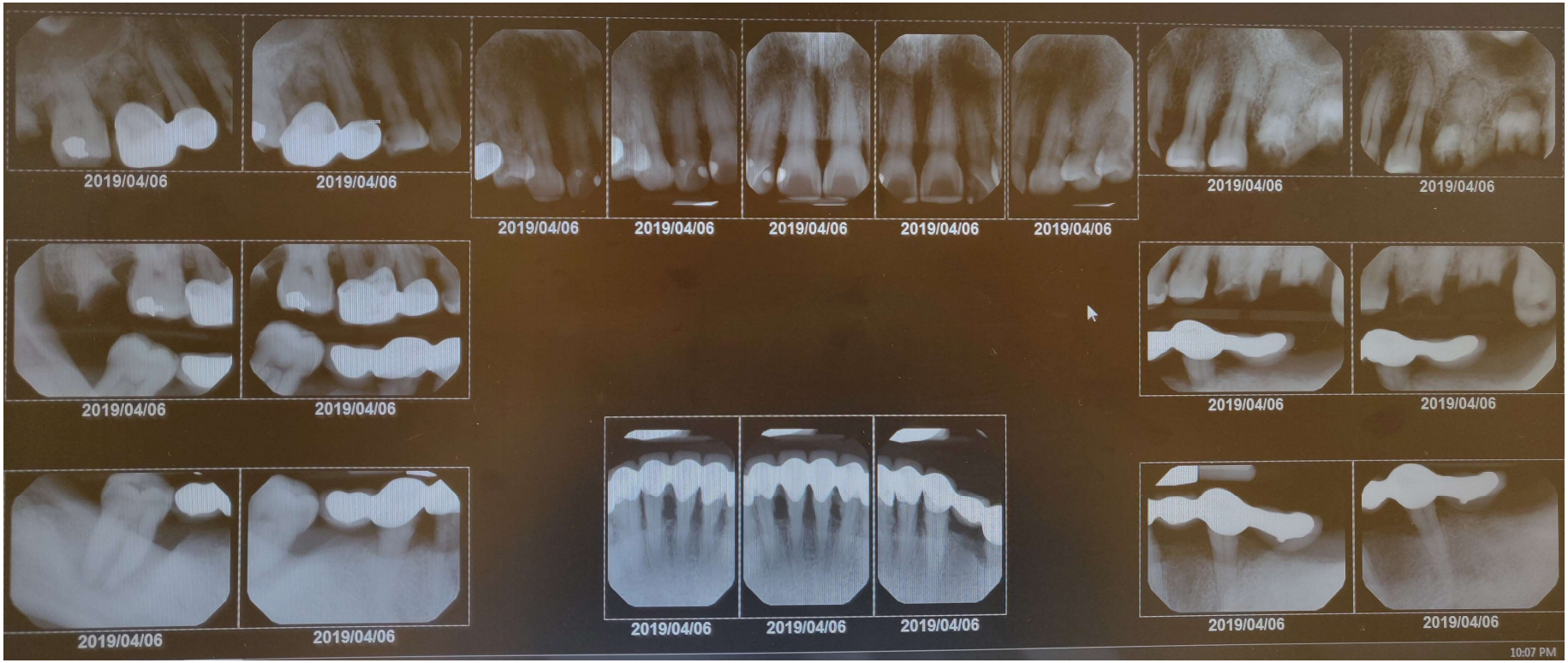
- Ms. A. met the criteria for high blood pressure/hypertension, based on the *2017 ACC/AHA guideline*, *JNC7 Guideline*, and *JNC8 Panel Member Report*, as her blood pressure readings exceeded 140/90 during her visit in April 2019 (2).
- The first line treatment for high blood pressure is advising the patient in diet modification, exercise, and relaxation techniques. If blood pressure levels remain persistently high or become progressively higher, medication management (i.e. beta blockers, calcium channel blockers, diuretics, ACE inhibitors) may be needed to reduce the workload on the circulatory system (3).
- Ms. A. was given a blood pressure fact sheet and referred for a medical examination. She stated that she had been aware of her medical condition since her last medical examination many years ago, but she did not follow-up with treatment.
- Additionally, she was advised to modify her diet and exercise. She was informed that her regular caffeine intake may contribute to her high blood pressure.
- During Ms. A.'s most recent visit to the NYCCT dental hygiene clinic, her blood pressure was under control and significantly lower than her initial reading, as she has been receiving medication management since April 2019 with amlodipine 10mg (calcium channel blocker) for this condition.

Dental Hygiene Management

- 20% of individuals who suffer from hypertension are unaware of their medical condition (4). Therefore, it is important that the dental professional provides thorough patient assessments to screen for and educate the patient regarding this condition.
- Thorough understanding of prevention, management, and treatment options for hypertension will "improve overall patient care and treatment outcomes in the dental office" (5).
- The clinician should position the patient chair slowly and sit the patient in a semi-supine position, due to the likelihood that a patient with high blood pressure may suffer from orthostatic hypotension.
- The dental provider should be familiar with substances that may adversely affect blood pressure control, as well as commonly prescribed antihypertensive medications, their side effects, and drug–drug interactions (5).
- A common side effect of antihypertensive medications is xerostomia (dry mouth), for which the clinician may use an alcohol-free preprocedural mouth rinse and recommend additional products (i.e. Biotene) to alleviate.
- "Short stress-free appointments scheduled in the morning reduce the risk for complications. Dental providers may administer nitrous oxide with oxygen and oral premedication with a short-acting benzodiazepine to reduce stress. They should also avoid placing a retraction cord impregnated with epinephrine" (4).
- "Effective pain control during the procedure and post-operative will reduce stress and the risk for complications. Topical vasoconstrictors are not recommended. Local anesthesia should have a limited amount of vasoconstrictor (epinephrine). If a vasoconstrictor is necessary, patients can be safely given 2 cartridges of anesthesia with epinephrine 1:100,000 (0.036 mg). Intravascular injections should be avoided. It is very important to effectively aspirate before depositing any anesthesia" (4).

COMPREHENSIVE ASSESSMENTS

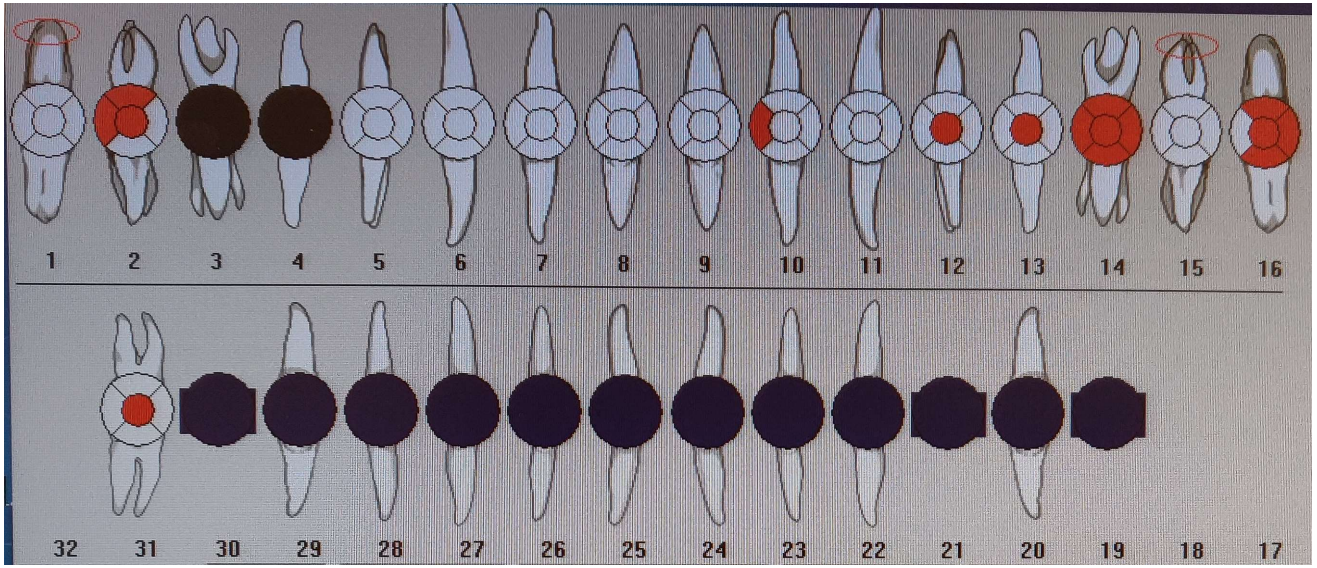
Radiographs



Summary of Clinical Findings

- EO: Crepitation on the left side of her TMJ.
- IO: Raised bump about 0.5cm in diameter, adjacent to the palatal root of tooth #14.
- Class of Occlusion: Class I (on the right and left sides)
- Overbite: 10%. Overjet: 2mm.
- Generalized attrition. Abrasion: #3, 13, and 20. Abfraction: #5 buccal, 12 buccal.
- Mobility: #31 grade 4.
- Furcations: #2 buccal grade 1, #21 buccal grade 2.
- Deposits: Localized heavy supragingival calculus present on mandibular anterior teeth. Moderate yellow staining on maxillary anterior teeth due to prior coffee/tea drinking. Generalized material alba.

Dental Charting



- Missing teeth #17, 32, and 19, 21, 30 (abutted by pontics).
- Retained root tips on #1, 15.
- PFM on #3, 4, 20, 22, 23, 24, 25, 26, 27, 28, 29.
- Bridge connecting #19-30.
- Decay on #2-ODB, 14-OMDBL, 16-ODBL, 31-O with radiographic evidence. Suspicious lesions on teeth #10-M, 12-O, 13-O.

Caries Risk Assessment

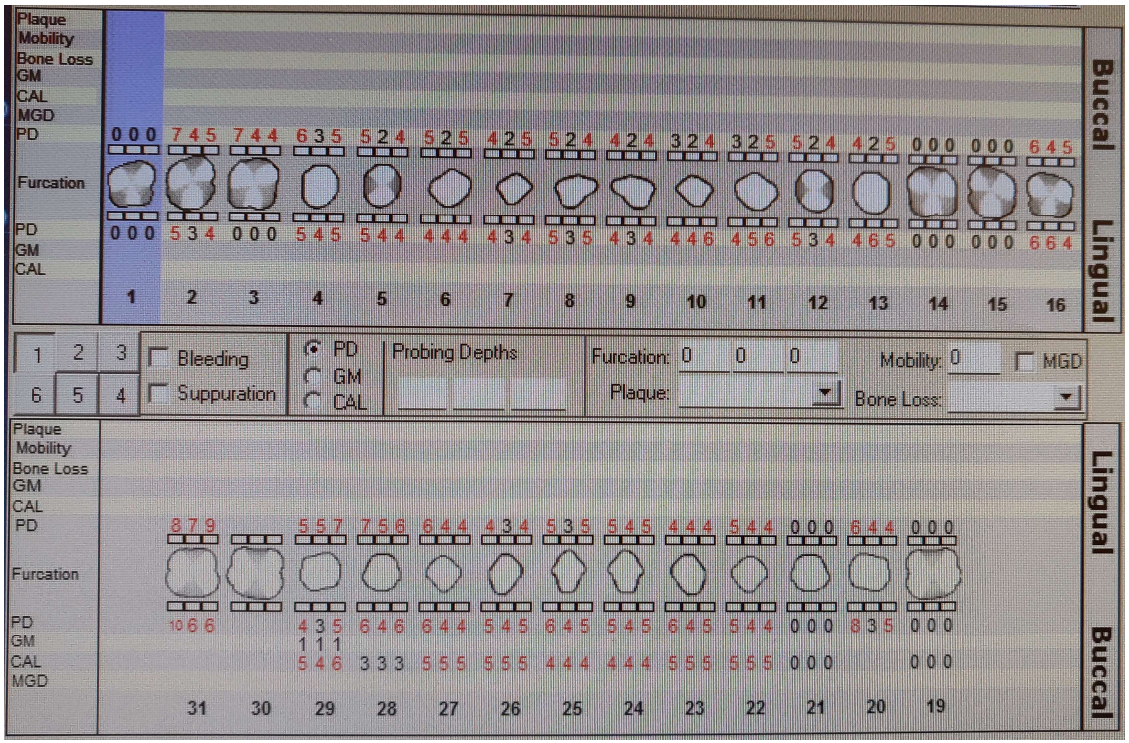
- CAMBRA was not completed for Ms. A. as she was clearly at high risk for caries due to clinical presentation and radiographic evidence of severe decay.
- She had suspicious carious lesions on teeth #10-M, 12-O, 13-O.
- Radiographic evidence of decay noted on #2-ODB, 14-OMDBL, 16-ODBL, 31-O.

Gingival Description & Periodontal Status

Based on clinical findings (probe depths and bleeding on probing) and radiographs revealing severe bone loss, Ms. A. was determined to have periodontitis type III, localized type IV.

Gingival Description: Generalized severe gingival inflammation with erythema (redness and swelling) and moderate bleeding upon applying pressure on the lower anterior gingiva.

Periodontal Charting



- Localized 4-6mm pocketing.
- Localized 7+mm pocketing on tooth #31.
- Selective probing was done during her most recent visit; teeth #1-4, 14-16, and 31 were avoided altogether.

Dental Hygiene Diagnosis

The dental conditions Ms. A. presented with include active periodontitis (type III, localized type IV), active caries, and need for extraction.

She had generalized 4-6mm probe depths, localized 7+ probe depths, moderate BOP, and radiographic evidence of severe generalized bone loss. Furcations were noted on buccals of #2 (grade 1) and #21 (grade 2).

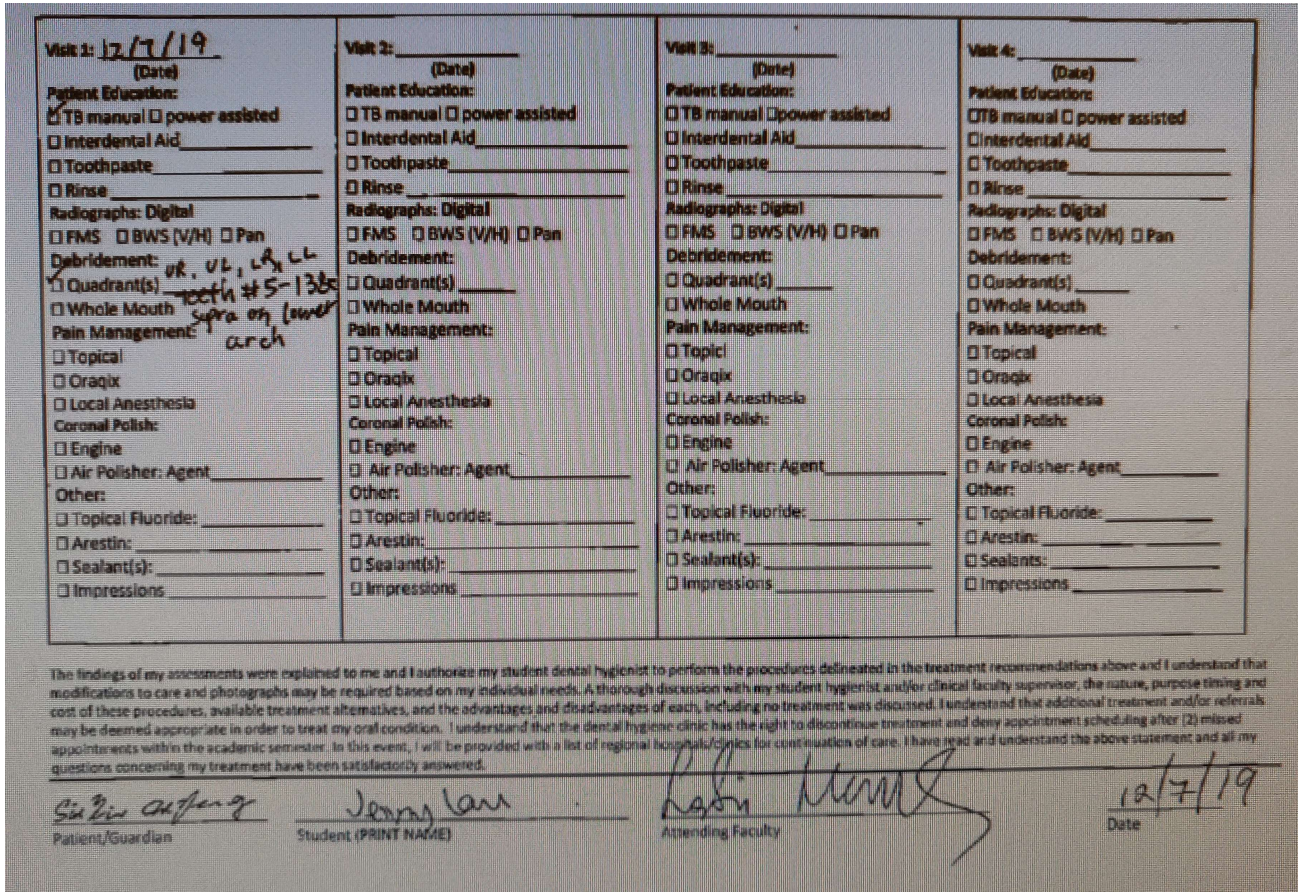
Ms. A. is at a high risk of caries due to clinical and radiographic evidence of 3 or more active lesions. She reported past frequent or prolonged exposure to sugary foods, which she has limited since April 2019. She complained of difficulty cleaning the margins of her crowns during at-home care. She presented with xerostomia, likely worsened by her antihypertensive medication. She does not floss in the lower arch due to the difficulty of accessing beneath her bridge with string floss.

Ms. A. complained of on and off pain in the lower right quadrant, determined to be due to grade 4 mobility of tooth #31 upon further assessment.

Dental Hygiene Care Plan

- Ms. A. was seen for one recare visit in December 2019.
- Morning appointments on Saturdays were always made to accommodate the patient's schedule.
- Medical history was updated. Patient was interviewed regarding changes in her medical and dental health and complaints and concerns were noted.
- EO/IO examination conducted.
- Dental and periodontal charts were updated.
- Treatment plan was developed, and consent obtained.
- OHI: review brushing technique, reintroduce proxy brush for lower anterior teeth (what should have been done).
- Lightly scale whole mouth with ultrasonic and hand scaling, avoiding teeth with severe active carious lesions and grade 4 mobility.
- Engine polish with fine paste.
- Apply 5% sodium fluoride varnish.

Consent for Treatment/treatment plan



Visit 1: 12/7/19 (Date)	Visit 2: _____ (Date)	Visit 3: _____ (Date)	Visit 4: _____ (Date)
Patient Education:	**Patient Education:**	**Patient Education:**	**Patient Education:**
☑ TB manual ☐ power assisted	☐ TB manual ☐ power assisted	☐ TB manual ☐ power assisted	☐ TB manual ☐ power assisted
☐ Interdental Aid_____	☐ Interdental Aid_____	☐ Interdental Aid_____	☐ Interdental Aid_____
☐ Toothpaste_____	☐ Toothpaste_____	☐ Toothpaste_____	☐ Toothpaste_____
☐ Rinse _____	☐ Rinse _____	☐ Rinse _____	☐ Rinse _____
Radiographs: Digital	**Radiographs: Digital**	**Radiographs: Digital**	**Radiographs: Digital**
☐ FMS ☐ BWS (V/H) ☐ Pan	☐ FMS ☐ BWS (V/H) ☐ Pan	☐ FMS ☐ BWS (V/H) ☐ Pan	☐ FMS ☐ BWS (V/H) ☐ Pan
Debridement: UR, UL, LR, LL	**Debridement:**	**Debridement:**	**Debridement:**
☐ Quadrant(s) teeth #5-13 supra on lower arch	☐ Quadrant(s) _____	☐ Quadrant(s) _____	☐ Quadrant(s) _____
☐ Whole Mouth	☐ Whole Mouth	☐ Whole Mouth	☐ Whole Mouth
Pain Management:	**Pain Management:**	**Pain Management:**	**Pain Management:**
☐ Topical	☐ Topical	☐ Topicl	☐ Topical
☐ Oraqix	☐ Oraqix	☐ Oraqix	☐ Oraqix
☐ Local Anesthesia	☐ Local Anesthesia	☐ Local Anesthesia	☐ Local Anesthesia
Coronal Polish:	**Coronal Polish:**	**Coronal Polish:**	**Coronal Polish:**
☐ Engine	☐ Engine	☐ Engine	☐ Engine
☐ Air Polisher: Agent_____	☐ Air Polisher: Agent_____	☐ Air Polisher: Agent_____	☐ Air Polisher: Agent_____
Other:	**Other:**	**Other:**	**Other:**
☐ Topical Fluoride: _____	☐ Topical Fluoride: _____	☐ Topical Fluoride: _____	☐ Topical Fluoride: _____
☐ Arestin: _____	☐ Arestin: _____	☐ Arestin: _____	☐ Arestin: _____
☐ Sealant(s): _____	☐ Sealant(s): _____	☐ Sealant(s): _____	☐ Sealants: _____
☐ Impressions _____	☐ Impressions _____	☐ Impressions _____	☐ 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 understood 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.

Patient/Guardian	Student (PRINT NAME)	Attending Faculty	Date
[signature]	Jenny Lau	[signature]	12/7/19

Implementation –Treatment

Ultrasonic instrumentation was used on the whole mouth, especially in the lower arch. Margins of her crowns/PFMs were lightly hand scaled.

The ultrasonic was very effective on calculus deposits in the lower arch. Deposits in this area filled beneath interproximal contacts and were effectively knocked out by accessing the deposits facially and lingually.

Engine polishing removed any remnants of stains.

The patient was instructed to rinse several times as she did not swish with enough force to remove polishing paste from cervical areas.

Implementation–Treatment-Continued

Ms. A. was advised to drink water after meals to help irrigate food stuffs from the oral cavity. Peroxyl rinse was recommended to aid healing of oral tissues.

Fluoride varnish was applied, and the patient was informed that it will help strengthen her enamel as well as prevent caries.

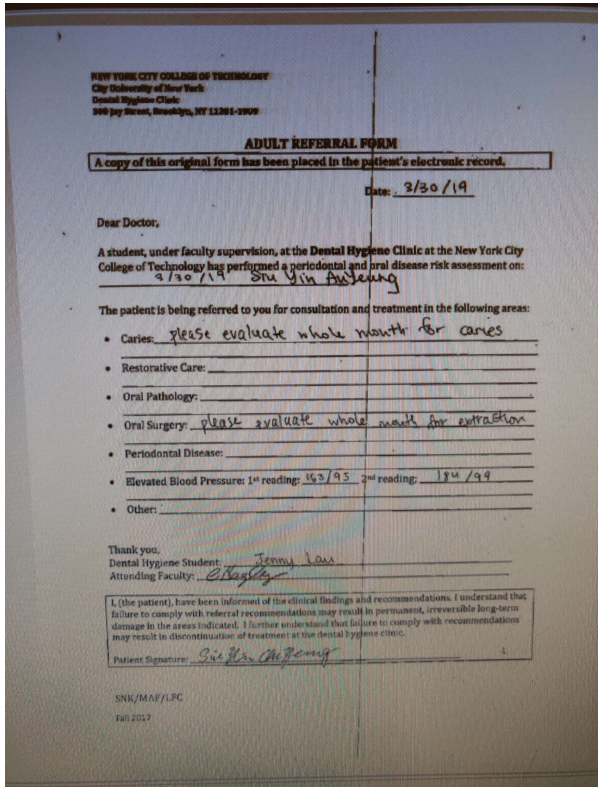
Ms. A. was given a list of hospitals and healthcare facilities that provide a variety of dental services at reduced fees due to her lack of dental insurance.

A copy of her FMS radiographs were given to her along with a referral for consultation and treatment of periodontal status, caries, and need for extractions.

Evaluation of Care – Outcome of Care - Prognosis

- Ms. A. was advised to return for recare following evaluation and treatment for identified dental conditions by a dentist.
- The outcome of care is to achieve a stable periodontal status and prevent the patient from “losing all her teeth” as multiple faculty have expressed may be the result of her continuous active periodontal status.
- Ms. A. stated that she wanted to just have her teeth with crowns extracted as a solution to her difficulty cleaning the margins.
- Hopefully she understands that she has control over her oral health and does not need to suffer from her dental conditions until all her teeth fall out.

Referrals



NEW YORK CITY COLLEGE OF TECHNOLOGY
City University of New York
Dental Hygiene Clinic
300 Jay Street, Brooklyn, NY 11201-1909

ADULT REFERRAL FORM

A copy of this original form has been placed in the patient's electronic record.

Date: 3/30/19

Dear Doctor,

A student, under faculty supervision, at the **Dental Hygiene Clinic** at the New York City College of Technology has performed a periodontal and oral disease risk assessment on: 3/30/19 Shu Yin Au Yeung

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

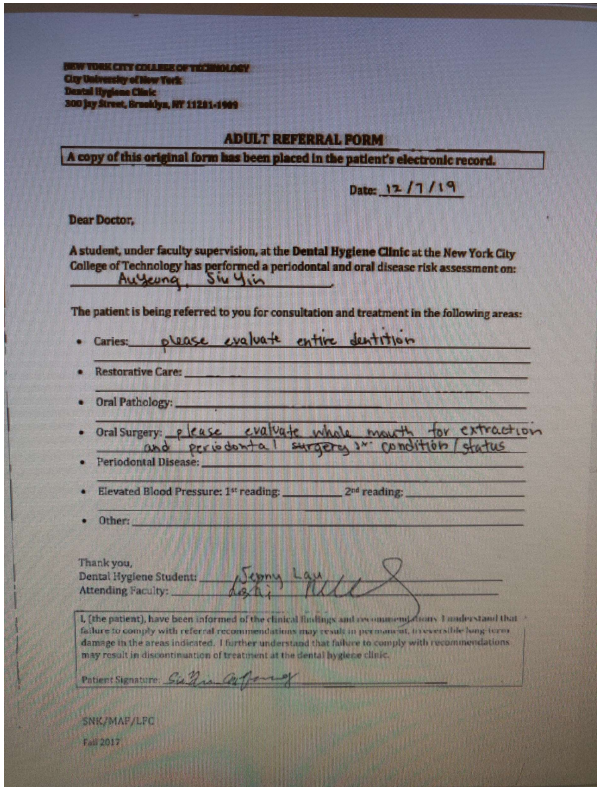
- Caries: please evaluate whole mouth for caries
- Restorative Care:
- Oral Pathology:
- Oral Surgery: please evaluate whole mouth for extraction
- Periodontal Disease:
- Elevated Blood Pressure: 1st reading: 153/95 2nd reading: 134/99
- Other:

Thank you,
Dental Hygiene Student: Jenny Lau
Attending Faculty: [illegible]

I, (the patient), have been informed of the clinical findings and recommendations. I understand that failure to comply with referral recommendations may result in permanent, irreversible long-term damage in the areas indicated. I further understand that failure to comply with recommendations may result in discontinuation of treatment at the dental hygiene clinic.

Patient Signature: Shu Yin Au Yeung

SNK/MAF/LPC
Fall 2017



NEW YORK CITY COLLEGE OF TECHNOLOGY
City University of New York
Dental Hygiene Clinic
300 Jay Street, Brooklyn, NY 11201-1909

ADULT REFERRAL FORM

A copy of this original form has been placed in the patient's electronic record.

Date: 12/7/19

Dear Doctor,

A student, under faculty supervision, at the **Dental Hygiene Clinic** at the New York City College of Technology has performed a periodontal and oral disease risk assessment on: Au Yeung, Shu Yin

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

- Caries: please evaluate entire dentition
- Restorative Care:
- Oral Pathology:
- Oral Surgery: please evaluate whole mouth for extraction and periodontal surgery 2nd condition / status
- Periodontal Disease:
- Elevated Blood Pressure: 1st reading: _____ 2nd reading: _____
- Other:

Thank you,
Dental Hygiene Student: Jenny Lau
Attending Faculty: [illegible]

I, (the patient), have been informed of the clinical findings and recommendations. I understand that failure to comply with referral recommendations may result in permanent, irreversible long-term damage in the areas indicated. I further understand that failure to comply with recommendations may result in discontinuation of treatment at the dental hygiene clinic.

Patient Signature: Shu Yin Au Yeung

SNK/MAF/LPC
Fall 2017

- Ms. A. was given a list of hospitals and healthcare facilities that provide a variety of dental services at reduced fees, due to her lack of dental insurance and need for comprehensive dental treatment.
- She was referred for evaluation due to her active periodontal status and evident active carious lesions.
- Her initial referral included evaluation for high blood pressure, which is currently under control as she went to her doctor for evaluation and treatment.

Continued Care Recommendations

Ms. A. was given a recall on the basis that she sees a dentist for evaluation of her active periodontal status, active carious teeth, and need for extraction. She was informed that her dental condition was out of scope of dental hygiene treatment, and that she needs more extensive care in order to achieve a stable periodontal status which can then be maintained with regular dental hygiene visits on a 3-month recall.

Final Reflection

Ms. A. was very tolerant of treatment. She did not require pain management. During treatment implementation, I stopped frequently to make sure she was okay because I was worried that she would feel pain. However, she assured me that she only felt some sensitivity at most. I thought that she would have been more sensitive to pain due to her generalized severe inflammation, but this seems to be subjective rather than based on level of inflammation or periodontal status. My instructor advised me not to go subgingival with instruments due to the risk of worsening her inflammation or causing infection. I took this too literally because I could probably have gone subgingival in selective areas where her inflammation was not as bad (upper anteriors). Ms. A. definitely needs evaluation and treatment by a dentist, but thinking back on her case, removal of each additional piece of calculus could have promoted another area of tissue healing. I wish that I had recommended xylitol products as an alternative to sugary foods, as Ms. A. mentioned her preference for sweets. Otherwise, I feel that I handled Ms. A.'s case well. Hopefully, she gets treatment to stabilize her periodontal condition with the understanding that her dental health is just as important as any other health condition.

References

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