

**NEW YORK CITY COLLEGE OF
TECHNOLOGY
DEPARTMENT OF DENTAL
HYGIENE**

Case Presentation

Miriam Hahn

PATIENT PROFILE

Ms. G is a 55-year-old African American female who presented to the dental hygiene clinic for routine preventive care. She reports a medical history of hypertension, for which she takes Losartan 100mg daily. She also takes an over-the-counter Vitamin B12 supplement. The patient denies any known allergies and reports no use of tobacco or alcohol products.

Her last dental hygiene visit was on 10/8/2024, and her last dental exam was on 3/19/2025, at which time two periapical digital radiographs were taken. During that visit, the implant post at tooth #13 was removed. The patient had originally received the implant in 2019, but it was improperly placed, leading to its removal in 2025. She currently has an implant with a crown on tooth #30 and anticipates receiving a new implant in May 2025. The patient reports brushing twice a day, flossing with floss picks, and using a mouth rinse three times per week. She does not use a tongue scraper. Ms. G also reports occasional teeth grinding and is motivated to maintain her oral health.

CHIEF COMPLAINT

Ms. G presented to the clinic for a dental cleaning and to maintain her oral health. She expressed a strong commitment to stay consistent with hygiene visits and improve her home care routine. She also stated she wanted to ensure her mouth was healthy before receiving an upcoming implant. While she did not report any current pain or discomfort, she mentioned occasional grinding and sensitivity in areas with previous dental work.

Health History Overview

Blood Pressure: 139/86

Pulse: 76

ASA Classification: III (due to uncontrolled hypertension)

Medical Conditions

Hypertension

No known drug allergies

Current Medications

Losartan 100mg – for hypertension

Vitamin B12 – over-the-counter supplement

COMPREHENSIVE ASSESSMENTS

Extraoral Findings

- No abnormalities noted; extraoral exam was within normal limits.

Intraoral Findings

- Bilateral linea alba
- White coated tongue
- Geographic tongue
- Keratinized right buccal mucosa (likely due to cheek biting)

Occlusion

- Class I molar and canine relationship
- Overjet: 3 mm
- Overbite: 20%
- Localized anterior diastemas
- Localized attrition noted on anterior teeth

Calculus

- Moderate to heavy subgingival calculus on mandibular anteriors and posterior teeth
- Localized supragingival calculus by mandibular anterior teeth

Stain

- Light generalized stain noted

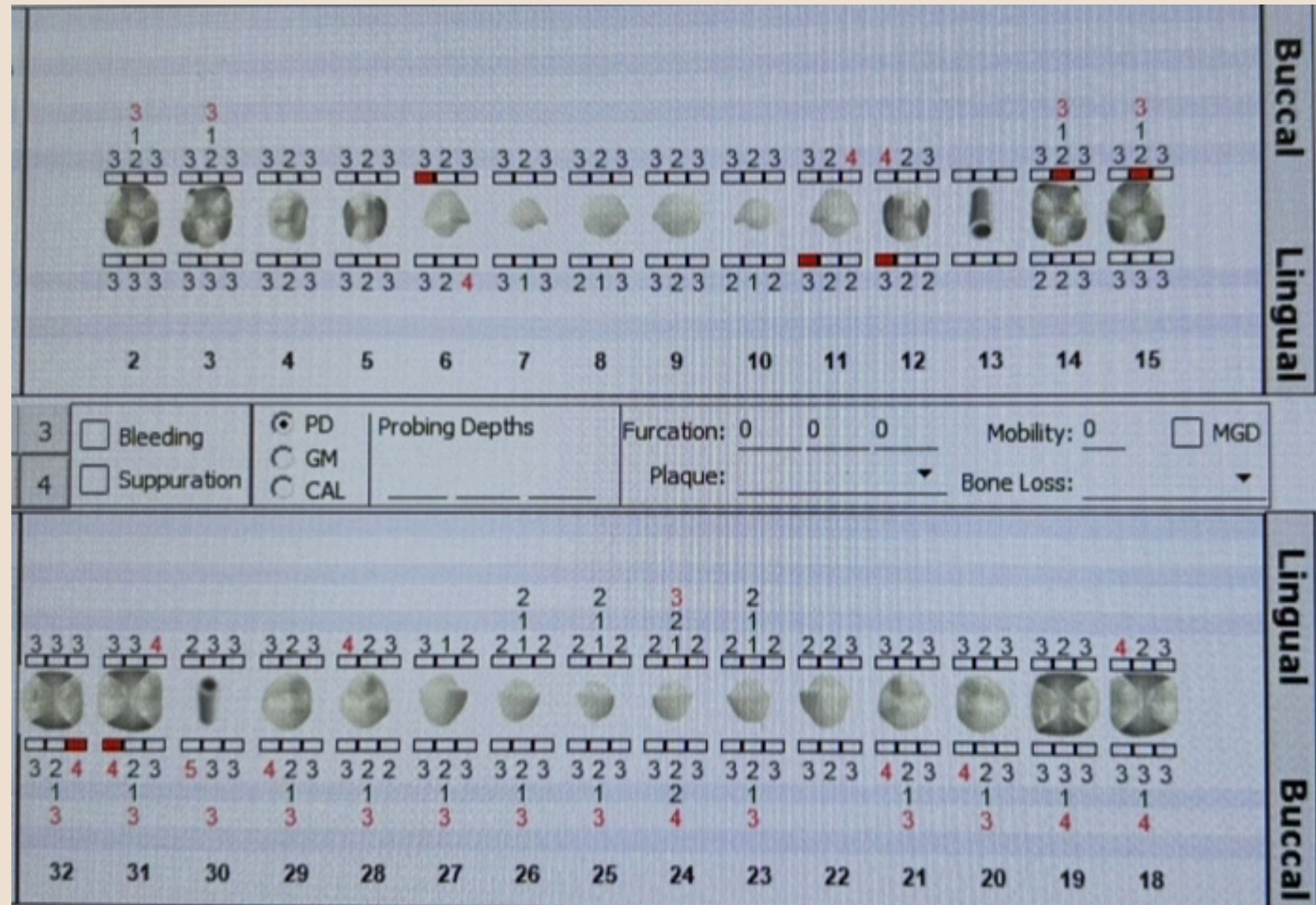
Gingival Description

Gingiva is generally pigmented with a reddish hue and shows mild to moderate generalized inflammation. Margins are rolled, and the papillae appear bulbous. The texture is smooth and shiny, and the consistency is mostly firm and resilient. Localized recession is noted in the mandibular region and maxillary molars, with gingival margins appearing apical to the CEJ. Bleeding was observed on probing in several areas.

Periodontal Status

Periodontitis Stage II, Grade B with radiographic evidence.

Periodontal Charting



- Probing depths ranged from 1–3 mm generalized, with localized areas of 4–5 mm on posterior teeth.
- Moderate bleeding on probing (BOP) was present throughout the mouth.
- Localized gingival recession observed on the mandible and the maxillary molars.
- No furcations and no mobility noted.

RADIOGRAPH OVERVIEW

Upon review of previously taken radiographs,
the following findings were noted:

- Localized 15–33% horizontal bone loss by posterior teeth observed.
- Interproximal caries suspected on: #3M, #4D that have not been filled.
- Evidence of multiple interproximal restorations consistent with clinical charting.
- Implant with abutment present at site of #30.
- All findings were reviewed and discussed with the patient.

Dental Hygiene Diagnosis

Periodontal Diagnosis

Periodontitis Stage II, Grade B based on the following clinical and radiographic findings:

- Generalized moderate inflammation of the gingiva.
- Moderate bleeding on probing and exploring.
- Probing depths ranging from 1–5 mm, with localized areas of 4–5 mm in posterior teeth.
- Radiographic evidence of 15–33% horizontal bone loss.
- Localized moderate subgingival and supragingival calculus.
- Localized gingival recession.

Dental Hygiene Diagnosis

Caries Risk Assessment (CAMBRA)

Caries Risk Level: High

Risk factors include:

- Presence of interproximal restorations
- Suspected carious lesions on #3-M and #4-D
- Generalized plaque accumulation and moderate bleeding on probing.
- Exposed roots

● Dental Hygiene Care Plan ●

Visit #1

- Take and record vital signs.
- Review and confirm patient's medical history, including hypertension and medications.
- Conduct full assessments: EO/IO exam, periodontal charting, and CAMBRA evaluation.
- Review previously taken radiographs and discuss findings with the patient.
- Educate patient on the Modified Bass brushing technique and importance of consistent home care habits.
- Begin scaling and root planing of Quadrant 2 using ultrasonic and hand instruments.
- Provide comfort measures throughout treatment (e.g., breaks, water, slow chair adjustments).
- Provide referrals for suspected carious lesions on #3-M and #4-D, medical evaluation, and for upcoming implant treatment.

● Dental Hygiene Care Plan ●

Visit #2

- Take and record vital signs
- Review patient's home care progress and any updates to medical history
- Evaluate tissue response in previously scaled quadrants (Q1 and Q4)
- Complete scaling and root planing of Quadrants 1, 3, and 4 using Guided Biofilm Therapy (GBT)
- Reinforce C-shaped flossing and Super Floss technique, and review brushing effectiveness
- Apply 5% Sodium Fluoride Varnish for caries prevention
- Emphasize daily oral hygiene practices including use of mouth rinse and tongue cleaner
- Discuss and schedule a 3-month recare interval due to moderate bone loss and periodontal status

Implementation

Visit #1 (Initial visit)

- Vital signs were taken: BP 133/84, Pulse 76 bpm
- Medical and dental history reviewed and confirmed; patient reported taking Losartan 100mg for hypertension and Vitamin B12
- ASA III assigned due to history of uncontrolled hypertension
- Extraoral and intraoral exams, periodontal charting, and CAMBRA evaluation were completed
- Previously taken periapical radiographs were reviewed with the patient and discussed
- The Modified Bass brushing technique was taught and demonstrated; patient responded well
- Scaling and root planing was initiated and completed on Quadrant 2 using ultrasonic and hand instruments
- Comfort measures provided: slow chair adjustment, water breaks, and reassurance
- Referred patient to dentist for evaluation of suspected caries on #3-M and #4-D, medical evaluation, and implant planning

Implementation

Visit #2 (Revisit)

- Vital signs were retaken: BP 119/85, Pulse 76 bpm
- No changes in medical history reported; patient continues Losartan and Vitamin B12.
- Re-evaluated tissue response in Quadrant 2; noted improvement in inflammation and bleeding.
- Scaling and root planing were completed on quadrants 1, 3, and 4 using Guided Biofilm Therapy (GBT) with Airflow, Piezon, and the Perioflow for the implant by #30.
- Evaluated and removed residual calculus found on mandibular anterior region.
- Reinforced Modified Bass brushing and introduced C-shaped flossing technique, which patient demonstrated successfully.
- Discussed proper technique using Super Floss for implant care.
- Applied 5% Sodium Fluoride Varnish for caries prevention.
- 3-month recare interval recommended due to periodontal status and bone loss.

Challenges During Treatment

- The patient's uncontrolled hypertension (ASA III) required close monitoring, with stress-reduction protocols like frequent breaks and slow chair movements implemented to ensure safety.
- The implant-supported crown on #30 required careful instrumentation and targeted oral hygiene instruction, especially with a second implant planned.
- Sensitivity and bleeding, particularly interproximally, made scaling more challenging. Only Quadrant 2 was completed at the first visit; Quadrants 1, 3, and 4 were completed at the second visit using Guided Biofilm Therapy for improved comfort.
- The patient was compliant with brushing and flossing but did not use a tongue scraper and rinsed only three times per week. These habits were addressed during education.

Evaluation

- The patient responded positively to treatment. Following full-mouth debridement, there was a noticeable reduction in gingival inflammation and bleeding on probing, particularly in previously treated areas.
- Patient compliance with home care instructions, including the Modified Bass technique and floss picks, contributed to improved plaque control. However, continued reinforcement is needed regarding tongue cleaning and consistent mouth rinse use.
- With continued professional care and patient commitment to home care, the prognosis is fair to good. Maintenance will be essential due to the patient's periodontal status, history of hypertension, and presence of an implant.
- A 3-month recare interval is recommended to monitor tissue response, maintain periodontal health, and support the patient in preparation for her upcoming implant placement.

FINAL REFLECTION

Caring for Ms. G allowed me to apply clinical and critical thinking skills to manage a complex medical and dental history patient. Her uncontrolled hypertension required me to implement safety measures and adapt the pace of treatment while maintaining a focus on comprehensive care.

Working around an implant-supported crown and preparing her for future implant placement reinforced the importance of gentle instrumentation, patient education, and long-term planning. I also learned how essential it is to tailor oral hygiene instruction to each patient's habits and needs—especially when compliance is inconsistent.

This experience strengthened my confidence in treating patients with systemic conditions. It reinforced the dental hygienist's role in supporting oral and overall health through education, prevention, and collaborative care.