



UNIVERSITY OF THE  
**PACIFIC**  
Arthur A. Dugoni  
School of Dentistry

**ORAL REHABILITATION  
WITH IMMEDIATE DENTURE  
FOR A PATIENT  
PRESENTING WITH DRUG  
INDUCED GINGIVAL  
HYPERPLASIA**

**KRINA SHAH (D23872)  
IDS CLASS OF 2023**

- 69 Years old female
- Medical history: Hypertension, Hyperlipidemia, Diabetes Mellitus
- Meds: Amlodipine (10 mg QD), Hydrochlorothiazide (12.5 mg QD), Provastatin (20 mg QD), Metformin (500 mg BID)  
Presently, Amlodipine is replaced by Losartan Potassium (50 mg)
- Allergy: No known drug allergy
- Social history: Works as a cashier
- Dental history: Patient has long plan bridge fabricated almost 30 years ago. She does not go to dentist regularly due to insurance not being covered and her inability to drive which makes commute to dental school difficult.

# LABS

- May 2022

Fasting blood glucose: 143

HbA1c: 6.6

Cholesterol: 200 (High)

- November 2021

Fasting blood glucose: 197


HbA1c: 7.3

Cholesterol: 283 (High)

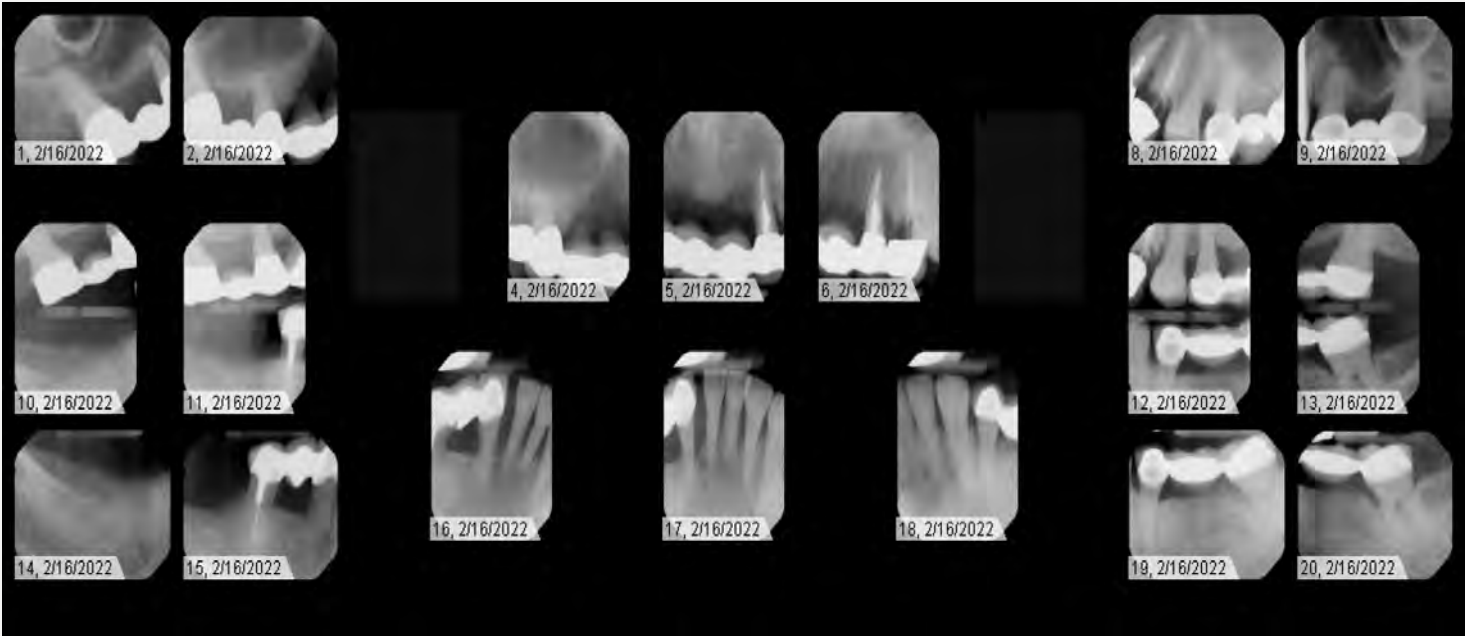


## **CHIEF COMPLAIN AND DENTAL HISTORY**

Patient complains of swollen gums which bleeds often. Additionally, she mentions that her maxillary long span bridge is mobile which makes it difficult for her to masticate food. She would like to address her bleeding gums and have a full mouth rehabilitation.



# RADIOGRAPHS





# INTRA-ORAL PICTURES



# **GENERALIZED GINGIVAL HYPERPLASIA**



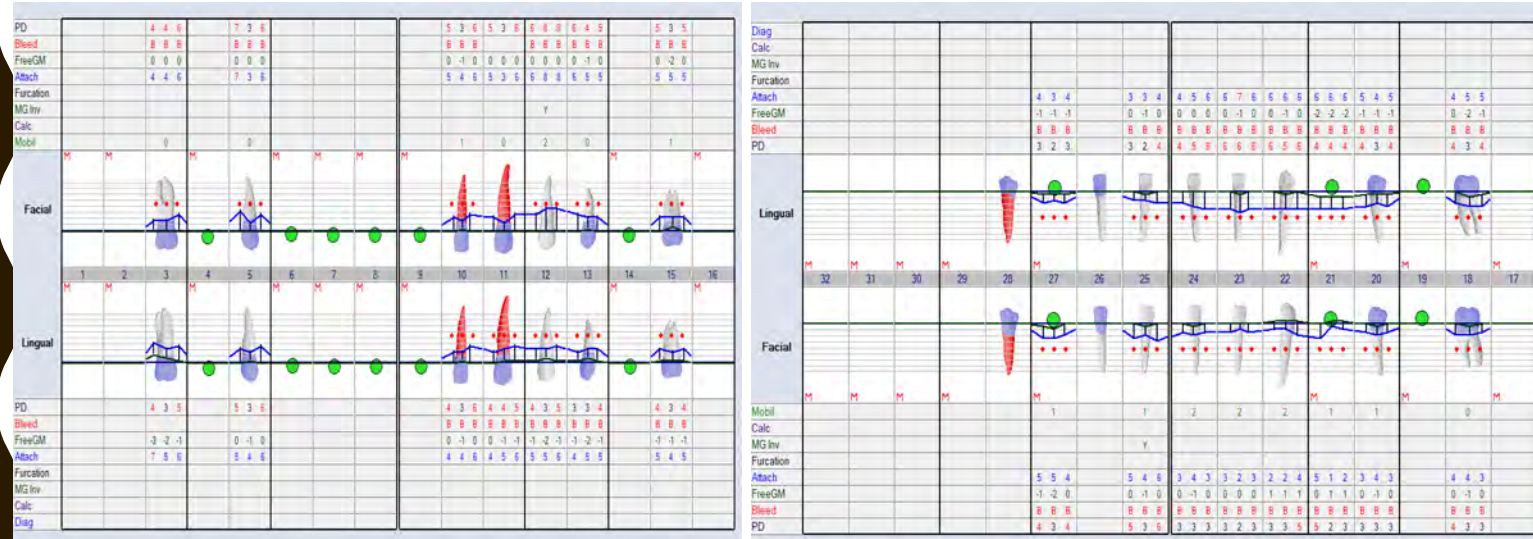
## CAUSE OF GINGIVAL HYPERPLASIA (AMPLODIPINE INDUCED)

- Vasodilation effect of the calcium channel blocker
- Gingival fibroblasts are induced via the proliferative signaling pathways in association with formation of bacterial plaques.

Bakshi SS, Choudhary M, Agrawal A, Chakole S. Drug-Induced Gingival Hyperplasia in a Hypertensive Patient: A Case Report. *Cureus*. 2023;15(2):e34558. Published 2023 Feb 2. doi:10.7759/cureus.34558



# PERIO CHART



DIAGNOSIS: Drug induced generalized gingivitis with severe chronic periodontitis (Stage IV, Grade C)

# HARD TISSUE EXAM (MAXILLARY)

- 1 - Missing
- 2 - Missing
- 3 - Abutment Crown
- 4 - Pontic Crown
- 5 - Abutment Crown
- 6-9 - Pontic Crown
- 10 - Endo, Post and Core, Abutment Crown
- 11 - Endo, Abutment crown (Mobile Crown)
- 12 - Crown
- 13 - Abutment crown
- 14 - Pontic (Shaped as Premolar)
- 15 - Abutment crown
- 16 - Missing

# **HARD TISSUE EXAM (MANDIBULAR)**

17 – Missing

18 - Abutment crown

19 - Pontic

20 - Abutment crown

21 - Pontic

22 - Abutment crown

23-25 - Severe localized periodontitis

26 - Abutment crown

27 - Pontic

28 - Endo, Post and core, Abutment crown

29-32 - Missing

# TREATMENT PLAN

URGENT – Medical consult requesting to replace Calcium channel blocker medication (for hypertension) with other class of anti-hypertensive drug.

DISEASE CONTROL – Staged extraction with gingivectomy

Stage I: Bridge sectioning mesial to # 4 and # 27 pontic, followed by extraction of # 3,4, 24, 25, 26, 27, 28 with gingivectomy

Stage II: Bridge sectioning mesial to # 14 pontic, followed by extraction of # 2,13,14,15 with gingivectomy

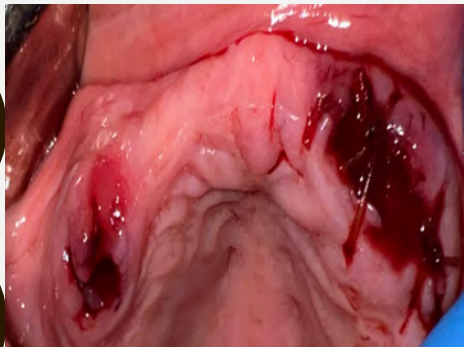
Stage III: Bridge sectioning mesial to # 19 pontic, followed by extraction of # 18,19,20, 21 with gingivectomy

Stage IV: Bridge sectioning mesial to # 10, followed by extraction of # 5, 6-9 (Pontics), 10,11,22, 23 with gingivectomy. Delivery of Immediate denture.

RESTORATIVE: Complete maxillary denture and mandibular immediate dentures.

MAINTENANCE : Chair side reline for 1<sup>st</sup> 6 months, Lab reline after 6 months of extractions, Reline after 1.5 years, Recalls, Oral hygiene maintenance by rinsing oral cavity everyday

# STAGED EXTRACTIONS



## REMOVABLE DENTURES

#22 and # 23 teeth and  
maxillary anterior bridge were  
preserved to record vertical  
dimension of occlusion.





**HAPPY AND HEALTHY PATIENT**

# EVIDENCE BASED DENTISTRY

Should Implant supported overdentures be considered in patients undergoing full mouth extraction for oral rehabilitation?

Calcium channel blocker induced gingival hyperplasia is a rare presentation in edentulous patients and can be triggered by placement of dental implants. Dental implants can trigger gingival overgrowth and can lead to implant failure and loss of stability of implant overdenture. Thus, dentists and surgeons should take into consideration this potential side effect and should inform the patient about possibility of gingival hyperplasia following implant placement. Implant supported denture should be considered as last option for patients on calcium channel blockers or any other drug that causes gingival hyperplasia as a potential side effect.

Quach H, Ray-Chaudhuri A. Calcium channel blocker induced gingival enlargement following implant placement in a fibula free flap reconstruction of the mandible: a case report. *Int J Implant Dent.* 2020;6(1):47. Published 2020 Aug 18. doi:10.1186/s40729-020-00242-6



## **CONSIDERATIONS FOR TREATING PATIENTS WITH DRUG INDUCED GINGIVAL HYPERPLASIA**

- Patient must be motivated to get frequent periodontal cleaning (Prophy/SRP/ SPT).
- Watch for signs of gingival inflammation
- Medical consult to replace medication with another class of drug if needed.
- Avoid long span fixed prosthesis
- Periodic complete blood work to detect any abnormal counts
- Motivate patient to maintain oral hygiene



# REFERENCES

- Quach H, Ray-Chaudhuri A. Calcium channel blocker induced gingival enlargement following implant placement in a fibula free flap reconstruction of the mandible: a case report. *Int J Implant Dent*. 2020;6(1):47. Published 2020 Aug 18. doi:10.1186/s40729-020-00242-6
- Bakshi SS, Choudhary M, Agrawal A, Chakole S. Drug-Induced Gingival Hyperplasia in a Hypertensive Patient: A Case Report. *Cureus*. 2023;15(2):e34558. Published 2023 Feb 2. doi:10.7759/cureus.34558
- Srivastava AK, Kundu D, Bandyopadhyay P, Pal AK. Management of amlodipine-induced gingival enlargement: Series of three cases. *J Indian Soc Periodontol*. 2010;14(4):279-281. doi:10.4103/0972-124X.76931

# **ACKNOWLEDGEMENT**

**DR. REX HOOVER  
DR. BRIAN KENYON  
DR. NAVID KNIGHT  
DR. DAVID LAM  
DR. NED NIX**

**THANK YOU**



**OKU Sutro Excellence Day Project Cover Sheet**

(ONE Cover Sheet per project)

Oral Rehabilitation with Immediate Dentures for a patient presenting with drug induced gingival Hyperplasia

Project Title: \_\_\_\_\_

Award Category: DDS & IDS - Clinical\_Removable Prosthodontics

List names of all contributors to this project:

1. Student Name: Krina Shah #989 328589  
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Program: **Please select...** Class Year \_\_\_\_\_
4. Student Name: \_\_\_\_\_ #989 \_\_\_\_\_  
Program: **Please select...** Class Year \_\_\_\_\_
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**Summary**

Drug-induced gingival hyperplasia (DIGH) is a common side effect of certain medications, characterized by an excessive growth of gingival tissues. This condition can cause esthetic, functional, and psychological problems for patients, leading to compromised oral health and quality of life. Immediate dentures are a prosthetic solution for patients with multiple tooth extractions, including those with DIGH. This case presentation aims to investigate the outcomes of oral rehabilitation with immediate dentures in patients presenting with DIGH. Additionally, this case will evaluate the clinical and esthetic outcomes of immediate dentures, as well as patient satisfaction and quality of life following oral rehabilitation.

**Significance:**

The significance of this case report lies in addressing the challenges faced by patient with DIGH and exploring the effectiveness of immediate dentures as a prosthetic solution for oral rehabilitation. By understanding the outcomes of immediate dentures in patients with DIGH, this case report may contribute to the existing knowledge on treatment options for this condition and help clinicians make informed decisions in their treatment planning. The finding of this study also has implications for improving patient care, oral health, and quality of life for individuals with DIGH, ultimately benefiting their overall well-being.

**Acknowledgement:**

I acknowledge the cooperation of the patient during the comprehensive treatment phase as well as the contributions of the main clinic, removable prosthodontics, oral surgery faculties and lab technician involved in the case. Additionally, I express my gratitude to my colleagues for assisting during surgical phase of the treatment. Finally, I would like to express my gratitude to the Dean and University of the Pacific for giving me an opportunity to execute and present this case.

Thank you for filling out the OKU-Sutro Excellence Day Project Cover Sheet! Please merge this Cover Sheet with your Final Project Materials (ie, research poster, clinical case, paper, or other creative production) before uploading to the OKU-Sutro Excellence Day Sharepoint website.