



# Recognition and Treatment of Amlodipine (Norvasc) Induced Gingival Hyperplasia

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## ABSTRACT-

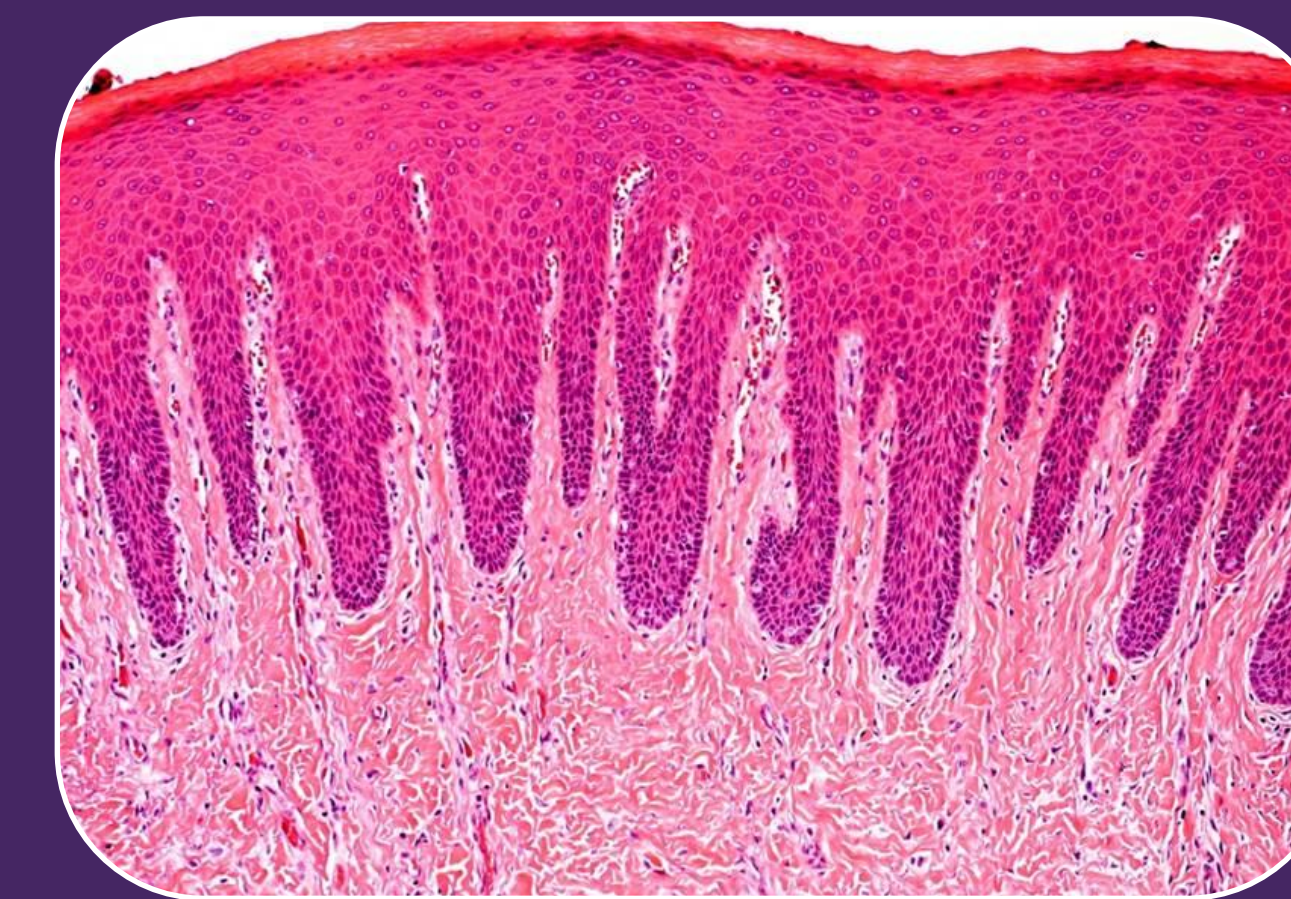
**Objective:** The objective of this clinical case presentation is to help dental hygienist recognize and understand the treatment of gingival hyperplasia. **Assessment:** A 56 year old Caucasian male presented to the dental hygiene clinic with the chief complaint, "I want my teeth cleaned". The patient's last cleaning was in 2011 at Indiana University School of Dentistry (IUSD). The patient's medical history revealed that he smokes one pack a day and has been taking the calcium channel blocker amlodipine for approximately two months for hypertension. Amlodipine is known to cause gingival hyperplasia. [1] The patient's gum tissue presented clinically as pink, stippled, rolled, and bulbous with a hyperplastic appearance. The mandibular attached gingiva in particular, was firm and had an enlarged clinical appearance. **DH Care Plan:** Treatment for this patient at the IUSD hygiene clinic includes scaling and root planing on the maxilla, with full mouth debridement, and a tissue re-evaluation 4-6 weeks after treatment. **Evaluation:** Due to time constraints associated with this presentation, this patient has yet to be re-evaluated after treatment at IUSD. **Conclusion:** Gingival hyperplasia can manifest from mild to severe depending on modifying factors including the patient's ability to remove plaque biofilm and the length of time the patient is on amlodipine. [3] Each case of gingival hyperplasia should be treated based on the individual's needs; this can include non-surgical therapy, surgical procedures, or a combination of both. Drug-induced gingival hyperplasia was reclassified in 1999 by APP as a dental plaque-induced gingival disease. Hygienist must stress the importance of plaque control and spend quality time on oral hygiene instructions. If a patient is on a known medication with this effect it is important to note any gingival changes at each visit. Amlodipine is a commonly prescribed drug with the prevalence of gingival hyperplasia being reported as high as 33.3%. [5]



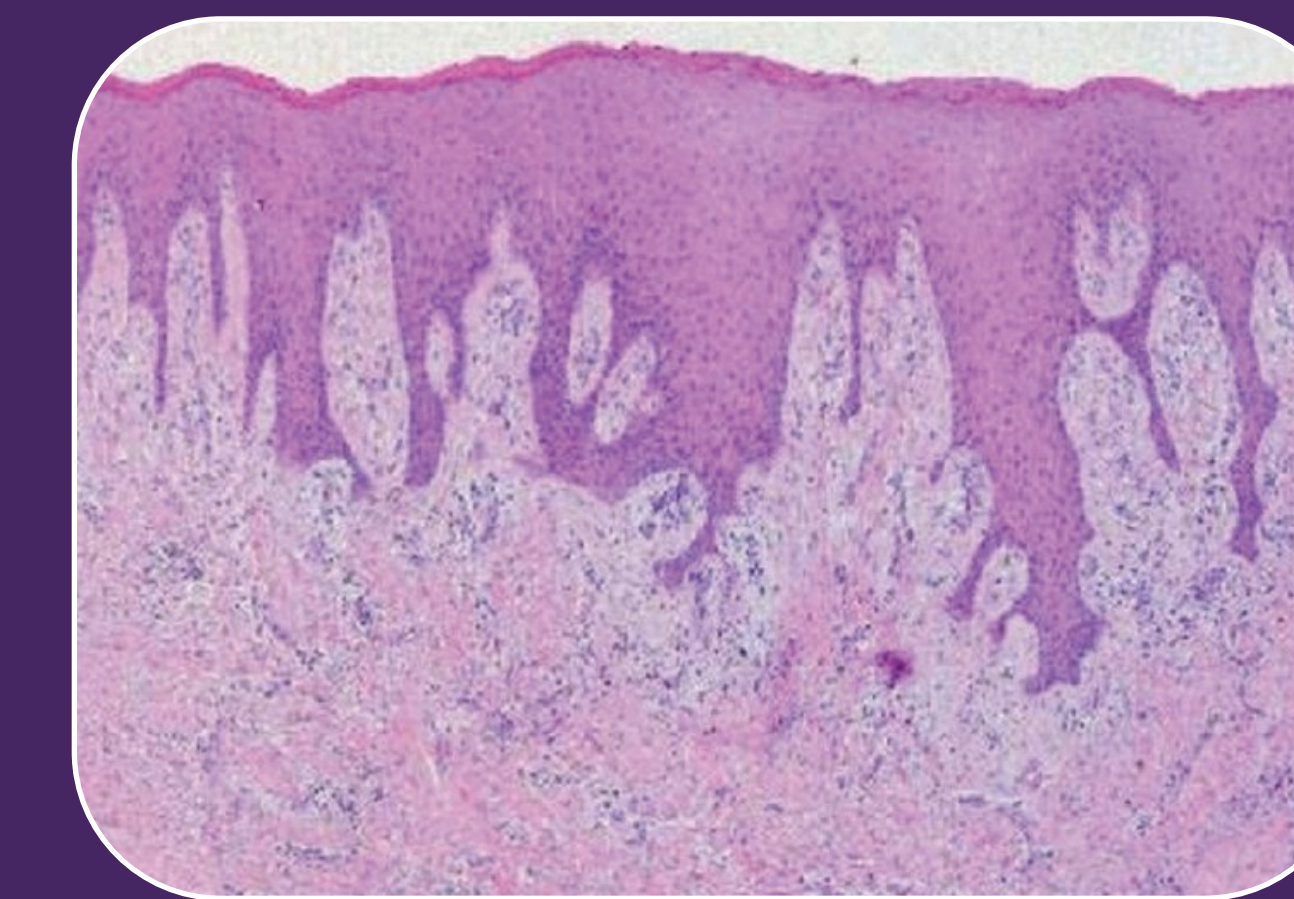
Initial visit to IUSD hygiene clinic, two months after starting CCB amlodipine



Tissue appearance after six years of 5mg/day amlodipine. [5]



Normal Gingival histological appearance. [3]



Gingival hyperplasia histological appearance. [5]

## INTRODUCTION

Gingival Hyperplasia is sometimes called gingival overgrowth when associated with medication-related enlargement. It is an abnormal proliferation of extracellular matrix of periodontal tissues[4]. Drugs that can cause this include, anticonvulsants, immunosuppressants, and calcium channel blockers.[1] The group of calcium channel blockers more commonly associated with gingival hyperplasia are the dihydropyridines, these include nifedipine, felodipine, and amlodipine.[2]

## ASSESSMENT

### -Clinical Appearance-

Granular and pebbly gingiva  
Diffuse thickened gingiva  
Interdental papillae may be abnormally enlarged  
The more severe the more diffuse the enlargement is typically.  
Commonly seen in the anterior labial gingiva, but can be present in posterior.

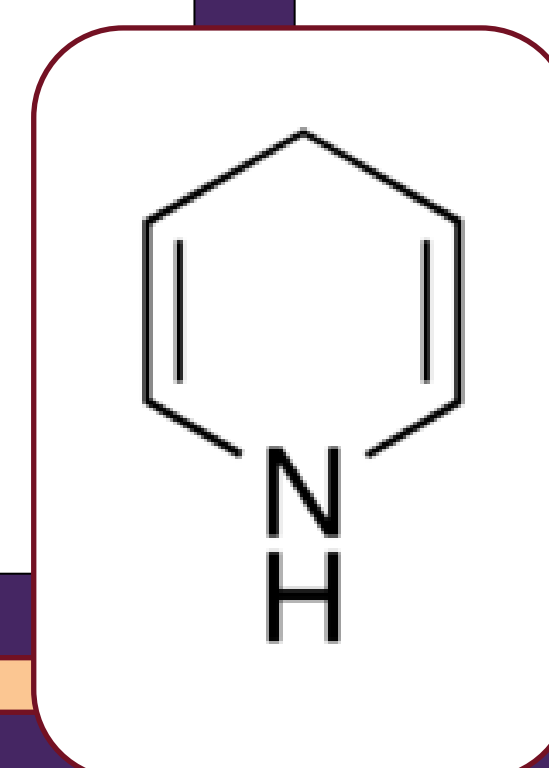
### -Other-

Medical history shows patient is taking drug with known cause of gingival enlargement.

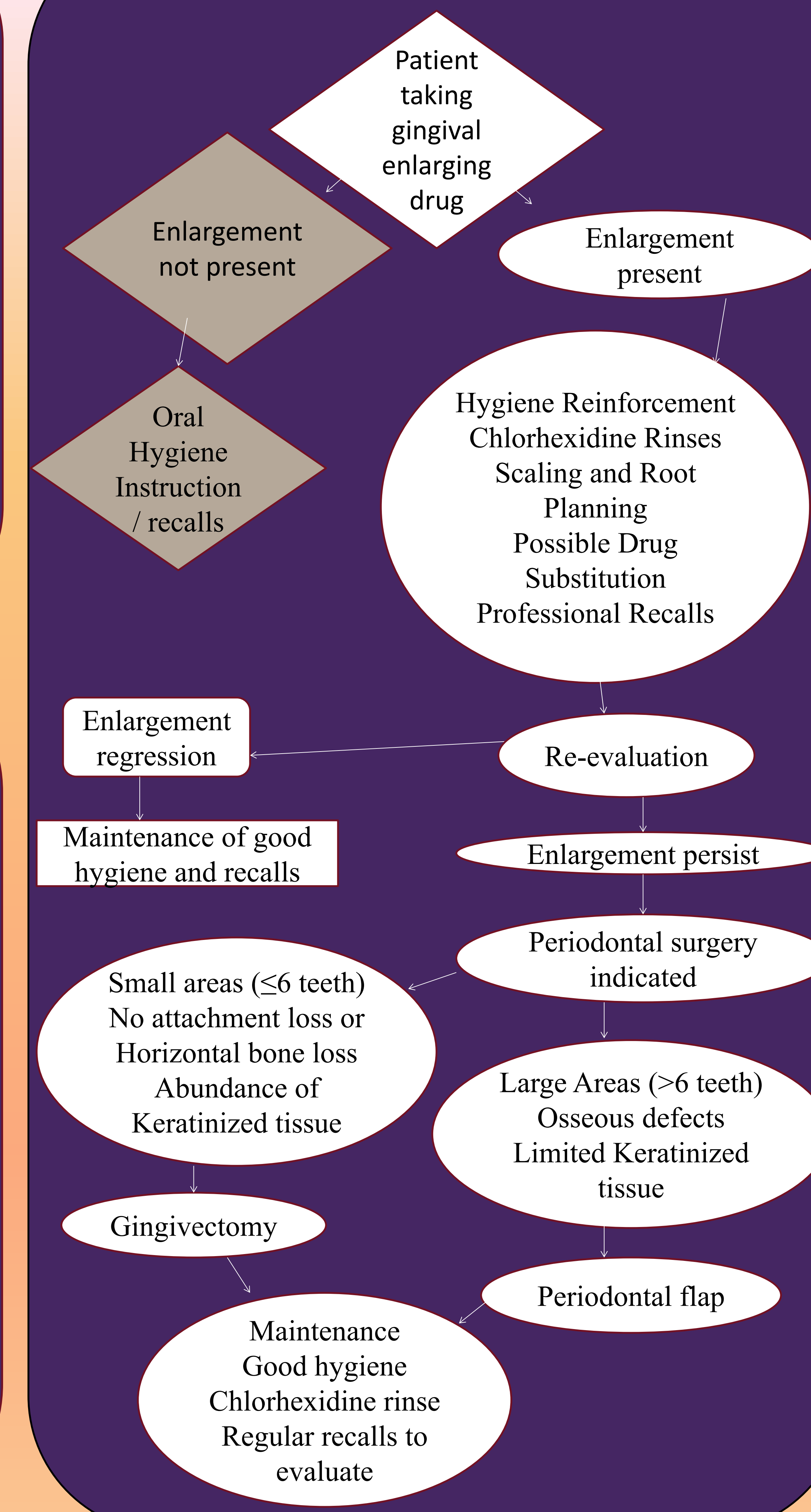
## CONCLUSION

Gingival hyperplasia is not fully understood. Studies show it is multifactorial in nature. [4] Oral Hygiene status of the patient is one factor that may affect the severity of this side effect. The dental hygienist must be able to recognize, treat, and provide maintenance for patients with gingival hyperplasia. Dental hygienist should modify treatment based on each individual's needs. Reducing the amount of plaque biofilm will decrease the chance of an inflammatory response leading to periodontal disease.

Dihydropyridine Molecule



## DH CARE PLAN



## REFERENCES

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