

Cilnidipine-induced Gingival Enlargement – A Rare Entity

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Abstract

Gingival enlargement has a wide variety of etiology such as hormone-induced, drug-induced, neoplastic changes, and sometimes without a definite etiology like idiopathic gingival enlargement. Even though drug-induced gingival enlargement is a common entity after intake of calcium channel blockers such as diltiazem, nifedipine, amlodipine, and gingival enlargement after intake of drug like cilnidipine is rare. In our case report, we are going to present a patient with drug-induced gingival enlargement after intake of cilnidipine and how we had managed nonsurgically.

Keywords: Azithromycin, Cilnidipine, Drug-induced gingival enlargement, Non-surgical periodontal therapy.

INTRODUCTION

Drug-induced gingival enlargement (DIGE) is a common manifestation which had been reported with the intake of almost 20 drugs and is commonly associated with immunosuppressants, calcium channel blockers (CCBs), and anticonvulsants.^[1] First- and second-generation dihydropyridines of CCBs are commonly associated with DIGE.^[2] Amlodipine reported with a higher prevalence of DIGE when compared to other CCBs.^[3] DIGE due to Cilnidipine was reported in a few cases only.^[4,5] Here in our case report, we are going to report a case on Cilnidipine-induced drug enlargement and how we managed it by non-surgical periodontal therapy.

CASE REPORT

A 50-year-old female reported to the department of periodontics in our college with a complaint of enlarged gums in relation to the upper and lower anterior region (Figure 1a and b). Bleeding during brushing and even on slight provocation started 1 year before but severe gingival inflammation started 4 months before. She had a history of primary hypertension for the past 5 months and she was under cilnidipine 10 mg as an anti-hypertensive. On intraoral examination, patient had Grade II gingival enlargement in relation to 11, 12, 13, 41, 42, 43, 32, and 33. Oral hygiene index-simplified (OHIS) Index was assessed and was scored 5.9 with poor oral hygiene. Pocket depth of 10 mm was present in relation to 31, 32, 41, and 8 mm was present in relation to 36, 26, 27, and 46. Diagnosis of chronic

periodontitis associated with cilnidipine-induced gingival enlargement was made.

The patient was referred to a physician for an opinion about an alternative drug for cilnidipine. He prescribed an alternative drug for cilnidipine and had given fitness for non-surgical periodontal therapy. Full mouth scaling and root planning were done with Azithromycin 500 mg OD for 5 days as an adjuvant. The patient was instructed to report after 1 month. However, she reported after 3 months with improvement in periodontal condition and reduction in gingival enlargement. OHIS index was assessed and was scored as 1.2 with good oral hygiene. Pocket depth was reduced to 5 mm present in relation to 31, 32, 41, and 4 mm in relation to 36, 46, and 3 mm in relation to 26 and 27. Gingival enlargement was completely resolved (Figure 2a and b). The patient is under follow-up.

DISCUSSION

DIGE is a common side effect associated with anticonvulsants, immunosuppressants, and CCBs of first- and second-generation dihydropyridines. CCBs inhibit the Ca²⁺ uptake and

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Received: Nov. 10, 2023; **Accepted:** Nov. 15, 2023; **Published:** Nov. 30, 2023

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How to cite this article: Kalaichelvan T, Muthuraj MSA. Cilnidipine-induced Gingival Enlargement – A Rare Entity. J Res Adv Dent 2024;15(1):1-2.

Access this article online

Website:
www.jrad.co.in

DOI:
<https://doi.org/10.53064/jrad.2022.14.6.448>

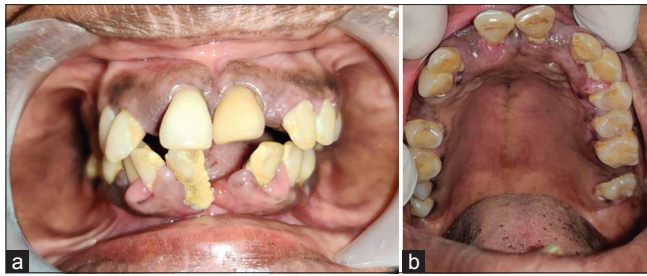


Figure 1: (a and b) Pre-operative

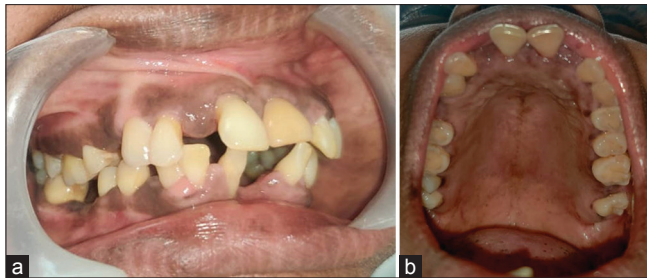


Figure 2: (a and b) Post-operative

increase the activity of gingival fibroblasts.^[6] Mechanism of the pathogenesis of DIGE is still controversial but the enlargement is usually associated with high plaque scores.^[7] CCBs of first- and second-generation-dihydropyridines are commonly associated with DIGE. DIGE associated with cilnidipine is rare and was previously reported in a few case reports.^[4,5]

In our case, the patient reported gingival enlargement in the anterior region of both the upper and lower arch, and the onset of DIGE occurs within 3 months of drug exposure which is according to the findings by Seymour *et al.*^[6] Enlargement of gingiva is usually associated with high plaque scores.^[7] In our case report, also the patient had high plaque scores preoperatively, but enlargement was reduced with thorough scaling and root planning with systemic

azithromycin as an adjuvant. Azithromycin was given because of its immunomodulatory property along with anti-microbial action.^[8] Till now only a few cases had been reported with cilnidipine-induced gingival enlargement.^[4,5] However, in our case report only, we managed nonsurgically with systemic azithromycin as an adjuvant.

CONCLUSION

Drug-induced enlargement is a common complication associated with CCBs of first- and second-generation dihydropyridines. However, DIGE had been reported in few cases taking cilnidipine. Thorough debridement under adjuvant anti-microbial therapy and proper plaque control by patient resulted in decrease in size of gingival enlargement in our case, which is the main motto of our treatment.

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