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Amlodipine Induced Massive Gingival Hypertrophy

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Case Report

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Abstract: Drug-induced gingival hypertrophy is a well-documented side effect of some pharmacologic agents, including calcium channel blockers (CCBs), phenytoin, and cyclosporine. Amlodipine, a long-acting CCB, is a commonly used hypertension drug. Here we describe a case of amlodipine-induced massive gingival hyperplasia. The prevalence of amlodipine-induced gingival overgrowth was reported to be 3.3%. The underlying mechanism of gingival enlargement still remains to be fully understood. However, two main inflammatory and non-inflammatory pathways have already been suggested. Untreated gingival hypertrophy might lead to bleeding, infection, abscess, ulceration, cosmetic deficiency, and functional difficulty. Treatment is generally targeted on drug substitution and effective control of local inflammatory factors such as plaque and calculus. When these measures fail to cause resolution of the enlargement, surgical intervention is recommended.
Keywords: Amlodipine, gingival hypertrophy.

INTRODUCTION

Drug-induced gingival hypertrophy is a well-documented side effect of some pharmacologic agents, including calcium channel blockers (CCBs), phenytoin, and cyclosporine. Amlodipine, a long-acting CCB, is a commonly used hypertension drug. Here we describe a case of amlodipine-induced massive gingival hyperplasia.

CASE REPORT

A 63 years old male patient was admitted for gingival swelling. Until 18 months back, patient firstly noted bead like nodular growth over the upper arch gums which progressively enlarged causing masticatory problems due to extensive gingival overgrowth along with pain, bleeding, and foul odor.

Intraoral examination revealed diffuse enlargement of the gingiva of both the upper and the lower jaws (Figure A). On general examination, the patient was moderately built and nourished. Panoramic radiography was normal (Figure C). History revealed that the patient was diagnosed with hypertension and amlodipine was prescribed. After excluding other potential causes, we considered the diagnosis of amlodipine-induced massive gingival hypertrophy. We substituted an angiotensin receptor blocker for the amlodipine, and within 9 months the gingival hypertrophy had regressed. A periodontal therapy was also recommended in order to reduce residual hyperplasia.

DISCUSSION

Gingival hyperplasia, with its potential cosmetic implication and tendency to provide niche for further growth of microorganism, possess a serious concern to patients and clinicians [1]. Calcium channel blockers are considered as potential etiological agent for inducing gingival enlargement. The prevalence of amlodipine-induced gingival overgrowth was reported to be 3.3% [2-3]. The underlying mechanism of gingival enlargement still remains to be fully understood. However, two main inflammatory and non-inflammatory pathways have already been suggested. Untreated gingival hypertrophy might lead to bleeding, infection, abscess, ulceration, cosmetic deficiency, and functional difficulty [4]. Treatment is generally targeted on drug substitution and effective control of local inflammatory factors such as plaque and calculus. When these measures fail to cause resolution of the enlargement, surgical intervention is recommended [5]. The use of carbon dioxide lasers has shown some utility for reducing gingival enlargement, an approach which provides rapid postoperative haemostasis. These treatment modalities, although effective, do not necessarily prevent recurrence of the lesions. The need for, and timing of, any surgical intervention needs to be carefully assessed [6].

Fig-A: Diffuse enlargement of the gingiva of both the upper and the lower jaws

Fig-B: Normal panoramic radiography

CONCLUSION

Every physician should be aware of this usually overlooked but potentially harmful side effect, particularly if adverse oral symptoms arise during drug use. Gingivectomy should be reserved for severe cases that affect oral hygiene or functionality, or can be performed for cosmetic reasons.

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