

**AMLODIPINE INDUCED GUM HYPERTROPHY IN A PATIENT OF MOTOR NEURON DISEASE**Ashish Sharma<sup>1</sup> and Anupriya Sharma\*<sup>2</sup><sup>1</sup>Department of Neurology, AIIMS Bilaspur, HP India.<sup>2</sup>Department of Dentistry, Dr. RKGMC Hamirpur, HP India.

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**Amlodipine induced Gum hypertrophy in a patient of motor neuron disease**

A 52 year old male patient known case of motor neuron disease was seen in outpatient department of Dentistry for progressive, painless hypertrophy of gums from last 3 months. On enquiring further he was on following drugs: Riluzole 50 mg Twice Daily & Amlodipine 5mg once daily. He was diagnosed hypertensive 6 months back and was started on amlodipine 5 mg once day PO. Three months post therapy he started developing enlargement of gums and occasional bleeding. On examination there was generalized pinkish, enlargement of gums involving both marginal and papillary gingiva around all the teeth, grade III gingival hypertrophy involving anterior maxillary and mandibular region. Oral hygiene was poor. There was no bleeding or discharge. Histopathology revealed gingival hyperplasia. Diagnosis of amlodipine induced gingival hyperplasia was made and patient was prescribed alternative antihypertensive along with oral hygiene. Patient refused for any surgical intervention for same.

Gingival overgrowth due to varied etiologies and presentations pose a challenge to clinicians for correct diagnosis. Management largely depends on the cause and, so are the recurrences. Based on etiopathogenesis, gingival enlargement can be inflammatory, hereditary, drug induced, neoplastic, associated with systemic diseases or false enlargements.<sup>[1]</sup> On basis of location they can be classified as marginal, papillary or diffuse.<sup>[1]</sup> Gingival overgrowth can be classified as localized or generalized, localized can further be classified as discrete, isolated or regional.<sup>[1]</sup> Generalized gingival enlargement commonly occurs secondary to drugs. Other causes include plasma cell gingivitis, hormonal, vitamin D deficiency associated, hereditary gingival fibromatosis and associated with systemic disorders, orofacial granulomatosis, sarcoidosis, strawberry gingiva of granulomatosis with polyangitis.<sup>[1],[2],[3]</sup>

Drugs known to cause gingival enlargement include anticonvulsants, immunosuppressant and calcium Channel blockers. Etiopathogenesis of calcium channel blockers (nifedipine, amlodipine) are poorly understood. Proposed mechanisms include inflammatory and non-inflammatory mechanism.<sup>[2]</sup> The accumulation of the drug in the gingival crevicular fluid in the presence of bacteria can lead to upregulation of proinflammatory cytokines leading to gingival enlargement.<sup>[4]</sup> Even decreased folic acid uptake leads to there is a defective collagenase activity due to decreased folic acid uptake, increased adrenocorticotrophic hormone due to feedback

from adrenal cortex following blockage of aldosterone synthesis and upregulation of keratinocyte growth factor contribute to the non-inflammatory mechanisms.<sup>[5]</sup> The management involves oral prophylaxis, meticulous oral self-care and substitution of the antihypertensive drug which is enough for resolution of the enlargement. For extensive cases, gingivectomy, carbon dioxide LASER may be performed.<sup>[5]</sup> Antihypertensives are a common class of drugs prescribed by physicians. Physician must be aware of this untoward side effect of a common drug in practice so that timely intervention is done.

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1. Agrawal AA. Gingival enlargements: Differential diagnosis and review of literature. World J Clin Cases WJCC, Sep. 16, 2015; 3(9): 779–88.
2. Misra SR, Koduru Lakshmi S, Mohanty N. Amlodipine induced gingival enlargement. BMJ Case Rep., Aug, 2021; 14(8): e245098.
3. Kumar S, Guliani A, Vinay K. Cyclosporine-Induced Gingival Hypertrophy. JAMA Dermatol, Apr. 1, 2019; 155(4): 487.

4. Sucu M, Yuce M, Davutoglu V. Amlodipine-induced massive gingival hypertrophy. *Can Fam Physician*, Apr, 2011; 57(4): 436–7.
5. Madi M, Shetty S, Babu S, Achalli S. Amlodipine-induced Gingival Hyperplasia – A Case Report and Review. *West Indian Med J.*, Jun, 2015; 64(3): 279–82.