



Medication-Induced Gingival Overgrowth

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A 59-year-old African-American male with essential hypertension and chronic obstructive pulmonary disease presented to the office for routine visit. The oral exam showed severe gingival overgrowth (Figure a) that caused his right lower canine to shift downward and laterally. No pain, blood, discharge, or halitosis was noticed. However, the patient had moderate plaque disease. He was started on nifedipine 14 months prior and had no observed gingival overgrowth during a previous routine visit seven months prior. A presumptive diagnosis of nifedipine-induced gingival overgrowth was made and nifedipine was stopped. Follow-up six months later showed partial resolution (Figure b).

Discussion

The preferred clinical diagnostic terminology is gingival overgrowth or enlargement. Medication-induced gingival hyperplasia refers to a histologic rather than a clinical presentation.¹ Medications associated with gingival overgrowth fall into three categories: antiepileptics (primarily phenytoin), immunosuppressants (primarily cyclosporine), and calcium channel blockers (primarily nifedipine and verapamil).² The gingiva affected by these medications can have hyperplasia and/or hypertrophy. Gingival overgrowth also can occur with other anticonvulsants or immunosuppressants, antibiotics, and oral contraceptives.³ Causes of gingival overgrowth that are non-medication related include acute myelomonocytic leukemia (M5, myelomonocytic) and Burkitt's lymphoma.

The incidence in the general population is unknown.⁴ The exact mechanism of action is not understood. Medications are thought to produce changes in fibroblast function increasing the

extracellular matrix of the gingival connective tissue. Dental plaque causes inflammation and increases the likelihood of medication-induced gingival overgrowth. This process is not related to the systemic dose of the medication, but to its concentration in the saliva and gingival connective tissue. Clinically, it can lead to significant disfigurement and difficulty in chewing and speech.

Treatment for mild or moderate disease includes medication discontinuation or dose reduction in addition to plaque control and good oral dental hygiene.⁵ Scalpel gingivectomy remains the treatment of choice in severe cases and necessitates referral to a general dentist or periodontist. Metronidazole, azithromycin, and azithromycin toothpaste have shown variable degrees of success in treatment.⁶ A recent study found that oral folic acid decreased the incidence of phenytoin-induced gingival overgrowth in children.⁷

The oral exam is an important part of the general physical exam and commonly overlooked by busy physicians. Promoting oral hygiene, early detection of gingival overgrowth and cessation of the inciting medication are the cornerstones in management of drug-induced gingival overgrowth and preventing its associated morbidity and disfigurement.

References

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