

Management Of Drug Induced Gingival Enlargement By Different Treatment Modalities – A Case Series

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Abstract

Gingival overgrowth is well documented side effect associated with three major classes of drugs like, anticonvulsants, calcium channel blockers, and immunosuppressants. Despite our greater understanding of pathogenesis of Drug induced Gingival Overgrowth (DIGO), its treatment still remains a challenge for the periodontists and treatment is still largely limited to maintenance of improved level of oral hygiene and surgical removal of overgrown tissue. Dental Surgeons need to discuss this issue with their medical colleagues and to practice care while prescribing the drugs associated with gingival overgrowth. The aim of present article is to report that management of drug induced gingival enlargement by various treatment modalities.

Keywords: Calcium channel blockers, Drug-induced gingival overgrowth, Gingivectomy, lasertherapy, Electrocautery, Non - surgical periodontal therapy.

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I. Introduction

Drug-induced gingival enlargement, or DIGO, previously known as drug-induced gingival hyperplasia, is a common side effect of different drugs where the gingival tissue is not the actual target organ. The main culprit drugs are anticonvulsants, calcium channel blockers, and immune suppressants. GO not only restricts proper dental hygiene maintenance but also brings about cosmetic damage and causes painful chewing and eating. DIGO is a common problem observed in patients having systemic consumption of the above drugs and the condition is associated with the patient's genetic constitution as well as the presence of any pre-existing plaque-induced gingival inflammation. It is more common in children and adolescents, with a predilection for the gingival tissue in the anterior region. The genetic constitution of an individual directly affects the pathogenesis of DIGO, with the extent and degree of condition depending upon the drug being consumed. PHT, nifedipine, and cyclosporine are the main culprit drugs, with PHT showing the highest prevalence of all. About 50% of individuals undergoing PHT therapy suffer from the condition with 30 and 20% contribution by cyclosporine and nifedipine, respectively ¹.

II. Case Presentation -1

A 36-year-old, male patient reported to Department of Periodontics of K.D dental college and hospital Mathura, U.P with the chief complaint of enlargement of gums in upper and lower arch since last one year. On Intraoral examination, both the maxillary and s] was present. The soft tissue overlying maxillary and mandibular arches was nodular and soft in consistency, erythematous and showed spontaneous bleeding on touch and was painful. On taking Medical and drug history of the patient revealed that patient was known hypertensive and was on medication since last five years (Amlodipine 10 mg twice daily).

Routine blood investigation values were in normal range including bleeding time and clotting time. Based on Patients history, clinical evaluation a provisional diagnosis of amlodipine induced drug enlargement superimposed with inflammation was established.

Treatment Done

Patient was referred to physician for his consent and consideration for substitution of drug (amlodipine) with other antihypertensive drug, for which the physician agreed and substituted amlodipine with

combination of β -blockers and ACE inhibitors. On first visit Supragingival scaling was done, Patient was asked to rinse with 10 ml of 0.2% chlorhexidine mouthwash twice daily for one minute and to maintain strict oral hygiene and gum paint Metro hex plus is given to apply topically. He was asked to report back after two week for supragingival and for subgingival scaling. In second visit supragingival and subgingival scaling was done .Patient was asked to report back after 1 month for scaling and curettage .The tissue in the meantime had become fibrous [Fig-3 and Fig – 4] and inflammation had subsided.Patient was kept on supportive periodontal therapy and re-examined after 15 days, 1 month, 3 months, and 12 months. Because of regular maintenance level of plaque and calculus was reduced and subsequent reduction of bleeding on probing seen.



Fig-1 pre operative (labial side)

Fig-2 per operative (lingual side)



Fig -3 post operative (After 12 months)

Fig -4 Post operative (After 12 months)

III. Case Presentation-2

A 16-year-old male patient came to the Department of Periodontics of K.D dental college and hospital Mathura with a chief complaint of bleeding and swollen gums for the past 10–12 months. He felt very uncomfortable with his appearance and the gingival swelling interfered while chewing food and brushing. He gave a history of generalized tonic–clonic seizures with the lesion in the left parietal lobe and was taking medication—PHT, 300 mg every day along with clobazam and folic acid for the last 1 year. When examined intraoral, painless, lobulated, overgrowth of the gingival tissue was seen on the labial, buccal aspects of the upper teeth and lower teeth. Bleeding on probing was present with an increase in probing depth and the presence of plaque and calculus deposits (Fig. 1). Blood investigations presented with normal values and there was no bone loss evident on orthopantomography examination.

Treatment Done

Patient's physician was asked to replace the drug but considering the risk of complications he refused for the same. Initial management aimed at decreasing the plaque and calculus deposits controlling the inflammatory component of the condition by deep subgingival scaling and curettage. The patient was advised to

strictly follow the home oral hygiene maintenance regimen. Deep gingival scaling and curettage were done every 3 months since 6 months and the patient was followed up regularly for 6 months before his drug was tapered to minimum and had no episodes of seizures in 6 months. Gingival enlargement was significantly reduced as shown in fig -2. Gingivoplasty was performed under local anaesthesia with respect to maxillary arch by abrasive method using bur as shown in (Fig -3) and crown lengthening was done using electro cautery as shown in (Fig- 4) , after surgical procedure co-pack is given ,patient is Recalled after 7 days for reevaluation. Patient Recalled after 3months ,6 month and 12 months for follow up .



Fig -1 pre- operative Fig -2 after 6 months



Fig -3 Gingivoplasty by using Bur.



Fig - 4 Crown lengthening by electro cautery



Fig -5 After gingivectomy and Gingivoplasty Fig- 6- After 12 months

IV. Case Presentation -3

A 47 year old hypertensive female patient visited the Department of Periodontics, at K.D dental Dental College and Hospital, Mathura, with the chief complaint of gingival swelling in lower front tooth region for the last 1 year and mobile tooth w.r.t lower arch since 6 months .The patient gave a history of antihypertensive drug

(Amlodipine 10mg/day) for the last 5 years. On intraoral examination, a generalized gingival overgrowth was observed with poor oral hygiene, predominantly involving the mandibular anterior tooth region with grade 3 mobility w.r.t 31,32,41,42. The enlarged gingiva of was oedematous, soft in consistency and painful of touch, reddish in colour and did not bleed easily on probing while the hard tissue examination revealed increased.

Treatment Done

Patient was referred to physician for his consent and consideration for substitution of drug (amlodipine) with other antihypertensive drug, for which the physician agreed and substituted amlodipine with combination of β -blockers and ACE inhibitors. Initial management aimed at decreasing the plaque and calculus deposits controlling the inflammatory component of the condition by deep subgingival scaling, curettage and extraction was done wrt 31,32,41,42. The patient was advised to strictly follow the home oral hygiene maintenance regimen. Patient was asked to rinse with 10 ml of 0.2% chlorhexidine mouthwash twice daily for one minute and to maintain strict oral hygiene. Incision was given by using Biolase Diode laser tissue was excised patient was recalled after 7 days , 21 days ,6 months and 12 months for reevaluation .



Figure 1-Fig – 1 pre operative



Figure 2 After scaling and extraction



Figure 3-After scaling and extraction

Figure 4-after excision



Figure 6-After 21 days



Figure 5-After 12 months

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