# Idiopathic Gingival Enlargement and its Management: A Case Report:

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## Abstract

Idiopathic gingival overgrowth is an unusual condition that leads to a gigantic overgrowth of the gums without any specific etiology. The enlargement leads to multiple issues and makes chewing difficult for the patient along with the unsightly appearance. Here we present a case of idiopathic gingival enlargement without any syndromic association in a 45- year old female patient. It was managed by surgical treatment including gingivectomy followed by gingivoplasty and was monitored regularly due to its high rate of recurrence.

***Keywords:*** *Idiopathic gingival enlargement, gingival overgrowth, Gingivectomy.*

## Introduction

It is a well-known fact that the increase in the volume of the gums is one of the most prominent features of gingival inflammation. The enlargement can be restricted to few teeth or may involve more or else the entire dentition in a generalized form. The most common of them is plaque-induced gingival overgrowth or inflammatory gum enlargement. Other causes include drug-related, enlargements associated with systemic diseases, leukemic gingival overgrowth[1,2], subjects with kidney issues and on immunosuppressants[3] to name a few. In the localized form, it was put forth by Cook that all of the enlargements may be known as "Epulis" and is seen mostly in the upper front teeth region.[4] Gingival enlargement can also be caused by few benign and malignant tumors of the oral cavity.[5]

Idiopathic gingival enlargement or fibromatosis as it is known as is an extremely rare condition seen leading to diffuse enlargement of the gums of alarming proportions. The main reason for this type of overgrowth is unknown and sometimes is associated with some syndromes. The enlargement may involve the maxilla or the mandible or sometimes may involve both. It involves both the labial/buccal and lingual/palatal surface. It involves all three parts of the gingiva, that are attached, marginal and interdental papilla which differentiates it from drug-induced gingival enlargement as the attached gingiva is not involved in the latter. The gingiva appears firm and leathery and has a peculiar "pebbled appearance." It can be of two types: One which is nodular and has multiple swellings at the interdental gingiva and the other one in which proportionate enlargements are seen.[6] It can sometimes cover the entire teeth and pose a challenge in mastication and can also lead to distortion of the maxilla and mandible.

**Case Report:** Here we are going to present a case report of idiopathic gingival enlargement. A 45-year-

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old female, housewife by occupation presented to the Department of Periodontology with a chief complaint of an increase in the size of her gums slowly over a period of 5 years. She also complained of the looseness of teeth and the inability to brush with difficulty in eating. Her medical and dental history was inconclusive. This was the first visit of the patient to a dental setup. She did not give any history of drug intake, fever, weight loss, pregnancy or any other systemic disease. She did not have any deleterious habits. She used to brush with a medium bristle toothbrush and toothpaste with a horizontal scrub technique. She reported that for the past few months, maintaining oral hygiene was difficult due to the gum overgrowth. She had severe halitosis. There was no abnormality was seen in the extraoral examination wherein the profile was convex, no abnormalities detected in the TMJ and lymph nodes and the lips were incompetent. Intraoral examination of the buccal and labial mucosa, palate, tongue revealed no abnormal finding.

Coming to the area of chief complaint, there was diffuse gingival enlargement of both the maxilla and mandible but was severely more pronounced in the lower jaw. The gingiva appeared pale pink, fibrotic with the typical "pebbled appearance" seen in the lower jaw. (Fig. 1) There was generalized mobility of teeth There was a typical erythema seen in the maxillary arch around the marginal gingiva. The enlargement was so much in the mandible that it prevented the contact between the teeth and posterior open bite was seen as a result of it. Since it did not fit any criteria, a provisional diagnosis of "Idiopathic Gingival Enlargement" was made. We advised an OPG and a complete blood hemogram to rule out any other abnormality. OPG revealed generalized alveolar bone loss but the blood investigations revealed all values within normal range, except alkaline phosphatase which was slightly increased. Her diabetic status came out as non- diabetic, it was done to emphasize the fact that diabetic patients are more prone to destructive periodontal disease as compared to non-diabetic subjects.[7,8]

**Treatment Plan:** After the initial examination, a thorough scaling and root planing was done and the patient was asked to rinse with 0.2% chlorhexidine mouthwash and was again recalled after 3-4 weeks. On her second visit, there was a very slight improvement in her condition. Therefore, we planned to do gingivectomy in all four quadrants in a planned manner. The whole procedure was explained to the patient along with the risks associated with the surgical process. A written informed consent was taken from the patient. Under complete asepsis, after administering local anesthesia, an external bevel gingivectomy was performed on one side and the same procedure was repeated on the other side after healing of the first side. (Fig.2) After the surgical procedure, a periodontal dressing was given at the site of surgery. The patient was prescribed necessary antibiotics and analgesics and was asked to meticulously maintain her oral hygiene. The excised tissue was sent for histopathological test and it revealed inflamed gingival tissues. There was an abundance of connective tissue which was mainly avascular and large congregation of fibroblasts along with heavy infiltration of piles of collagen fiber bundles. The superficial epithelium was broad with prominent thickening of all the layers with extended rete pegs. (Fig. 3) This confirmed our provisional diagnosis and a final diagnosis of Idiopathic gingival enlargement was made. The case was followed up for 6 months and it did not show any recurrence. (Fig. 4).

## Discussion

As discussed above, gingival enlargement can be caused by a plethora of reasons. In the present case, as the drug, family, medical and dental history was non-contributory, we gave a diagnosis of idiopathic gingival enlargement. "Idiopathic gingival enlargement is also known as gingivomatosis, elephantiasis, idiopathic fibromatosis, hereditary gingival hyperplasia, and congenital familial fibromatosis.

It has been pointed out about its hereditary origin but has not been proved till now. It has been seen in multiple studies that the mode of inheritance is autosomal recessive in some and autosomal dominant in some. "It occurs either as an isolated disease or combined with some rare syndromes like Zimmerman-Laband syndrome (defects of bone, nail, ear, nose and splenomegaly), Murray-Puretic-Drescher syndrome (multiple dental hyaline tumors), Rutherford syndrome (corneal dystrophy), Cowden syndrome(multiple hamartomas), and Cross syndrome (hypopigmentation with athetosis)."[9]As seen in this case, there is progressive enlargement of attached, marginal as well as interdental papilla which sometimes extends above the teeth making the day to day activities like toothbrushing, eating and chewing quite difficult. The histopathology of this type of enlargement reveals numerous collagen fiber bundles, fibroblasts with an overwhelming connective tissue.

There is acanthosis of the epithelium with prominent rete pegs as seen in the present case.

The management of idiopathic gingival fibromatosis is only surgical as non- surgical therapy seldom helps. The definitive management includes gingivectomy[10] (external or internal) or flap surgery depending upon the case. Since the etiology of this is unknown, the chances of recurrence are quite high. Therefore, we need to follow these patients for a long time and repeat the procedure if deemed necessary.

**Figure 1: Pebbled appearance seen in the lower jaw**

**Figure 2: Performance of gingivectomy**

**Figure 3: 6 months follow up**

**Figure 4: Histopathological Examination**

## Conclusion

This was a case of idiopathic gingival enlargement not associated with any syndrome. The patient was properly diagnosed based on clinical examination and proper correlation with radiological and histopathological examination. The case was followed up for six months without any recurrence, but long term follow up is warranted because of its unknown etiology and high chances of recurrence.

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## References

1. Kumar M, Nair V, Mishra L, Mistry S, Satpathy A, Das AC. Gingival enlargement - a clue to the diagnosis of leukemia? Archives of Oral Sciences & Research; 2012;2(3):165-168.
2. Kumar M, Misra SR, Panda S, Das R. Gingival Enlargement, a Diagnostic Indicator of Leukaemia? Indian Journal of Public Health Research & Development Nov2019; 10(11):230-233.
3. Nayak L, Kumar M. Decoding the Link between Chronic Kidney Disease and Periodontitis. Indian Journal of Public Health Research & Development Nov2019; 10(11):1080-1083.
4. Reddy V, Saxena S, Saxena S, Reddy M. Reactive hyperplastic lesions of the oral cavity: a ten-year observational study on North Indian population. J ClinExp Dent. 2012 Jul 1;4(3): e136-40.

5. Kumar M, Mishra L. Peripheral Odontogenic Fibroma: A Case Report. Indian Journal of Public Health Research & Development. Nov2019, Vol. 10 Issue 11, 416-418.
6. Bozzo L, Almedia CP, Seully C, Akfred MJ. Hereditary gingival fibromatosis, report of an extensive 4 generation pedigree. Oral Surg Oral Med Oral Pathol1998; 86:304-7.
7. Kumar M, Mishra L, Mohanty R, Nayak R. "Diabetes and gum disease: the diabolic duo". Diabetes MetabSyndr. 2014 Oct-Dec;8(4):255-8.
8. Kumar M, Bandyopadhyay P, Mishra L, Das S, Kundu PK, Mistry S. Effect of periodontal therapy on glycemic control and circulating TNF-α in type 2 diabetic patients. Int J Diabetes Dev Ctries. 2015;35(2):96–102.
9. Gorlin RJ, Pinborg JJ, Cohen MM Jr. Syndromes of the Head andNeck. 2nd ed. New York: McGraw Hill; 1976. p. 329-36.
10. Tavargeri A, Kulkarni SS, Sudha P; Basavprabhu. Idiopathic gingival fibromatosis - a case report. J Indian SocPedodPrev Dent. 2004 Oct-Dec; 22(4):180-2.