

Idiopathic gingival hyperplasia in adult: Case report

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World Journal of Advanced Research and Reviews, 2024, 24(02), 975–979

Publication history: Received on 30 September 2024; revised on 07 November 2024; accepted on 09 November 2024

Article DOI: <https://doi.org/10.30574/wjarr.2024.24.2.3423>

Abstract

Background: Gingival enlargement is a condition in which the gingival increases from normal conditions. This situation is a characteristic of clinical gingival disease frequently encountered. There are many types of gingival enlargement, which vary based on factors etiology, and pathological processes that cause it. Gingival inflammation can be either a chronic or acute cause of gingival enlargement, in addition to local irritants besides plaque bacteria are bad oral hygiene, tooth relations, or abnormal antagonists. One of the forms of gingival hyperplasia by non-inflammatory gingival enlargement is due to hormonal factors and induction drugs (anti-convulsive, immunosuppressive, anti-hypertensive)

Case: Female, Age: 47 yrs present with lower front teeth swollen gums (labial and lingual) since 3 months ago. Feels a bit of pain when it is made to chew food. In 1997, FKG Unair with the same complaint, and it was taken care of. The patient has no history of systemic diseases and allergic

Management: An initial visit was performed by DHE + SRP and instructions betadine use mouthwash for 7 days. The first control, is a complete blood test instructions. Examination of HPA, and the next control after all the tests clear, gingivectomy performed.

Conclusion: Gingival enlargement can occur by a variety of factors, the names and clinical examination should be done carefully, even better when accompanied by other supporting examinations. Treatment-appropriate measures will prevent recurrence.

Keywords: Gingival enlargement; Gingival hyperplasia; Idiopathic; Gingivectomy

1. Introduction

Gingival enlargement is a condition in which the gingival increases from normal conditions. Gingival hyperplasia is a rare condition but it is important for cosmetic and mechanic reasons or the possibility of a part of a systemic disease. In some pathological conditions, gingivitis caused by plaque accumulation can be more severe. In puberty and pregnancy, hyperplasia of the gingival tissues may be due to poor oral hygiene, inadequate nutrition, or systemic hormonal stimulation. A progressive fibrous enlargement of the gingiva is a feature of idiopathic fibrous hyperplasia of the gingiva. Characteristically, this massive enlargement appears to cover the tooth surfaces. While the cause of the disease is unknown, there appears to be a genetic predisposition. Gingival fibromatosis may exist as an isolated abnormality or as part of a syndrome. ^{1,2}

Gingival enlargement (GE) is defined as an abnormal overgrowth of gingival tissues. As the GE is not merely due to an increase in the number or size of cells but due to inflammatory components as well, the term “gingival overgrowth” or “gingival enlargement” is preferred over hyperplasia and hypertrophy. ³ One of the forms of gingival hyperplasia by

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non-inflammatory gingival enlargement is due to hormonal factors and induction drugs (anti-convulsive, immunosuppressive, anti-hypertensive). It may be easy for a dentist to arrive at a clinical diagnosis of GE if the cause is evident, but at times it becomes necessary to seek medical advice to explore the cause and identify the underlying diseases, drug interactions or natural body changes and to develop an effective treatment plan. When the exact cause cannot be elucidated, it becomes challenging for the dentist to establish an accurate diagnosis.^{3,4}

In idiopathic gingival enlargement, no causative agent can be identified and a family history is always lacking. A definitive diagnosis of idiopathic gingival enlargement can be arrived upon by a thorough medical, dental, and family history along with a histopathological examination of gingival tissue. The diagnosis of this disease is by exclusion when no other known causative factor can be identified.⁴ The cause is unknown, and thus the condition is designated as idiopathic. Some cases have a hereditary basis, but the genetic mechanisms involved are not well understood. A study of several families found the mode of inheritance to be autosomal recessive in some cases and autosomal dominant in others. In some families the gingival enlargement may be linked to retardation of physical development Only a few cases that were similar have been treated by an interdisciplinary approach to date as reported in the literature.^{5,6,7}

2. Case

A 47-year-old female patient visited the outpatient department of Periodontics RSGM Airlangga complaining of swelling of gums in their lower arches 3 months ago. Feels a bit of pain when chewing. Her physical appearance was normal and no hormonal disturbances were detected. Intraoral examination revealed diffused and irregular gingival enlargement at the labial and lingual mandibular arch. The enlarged gingiva covers up to the middle third of the crown portion of all the lower anterior teeth present. Gingival was red in color, edematous, firm, and resilient in consistency. There was no history of fever, prolonged medications, anorexia, weight loss, seizures, or hearing loss. On Extraoral examination, the patient had incompetent everted lips and a convex profile. In 1997 had come to the Faculty of Dental Medicine with the same complaint and was treated. The patient has no history of systemic disease, not currently taking medication, and has no hormonal abnormalities. Hematological and panoramic radiograph examination did not reveal any abnormality.

3. Case Management

The patient was taken up for phase I periodontal therapy which included scaling and root planning and instructions for the use of betadine mouthwash for 1 week (Figure 1). After a week patient was recalled for the surgical approach (Figure 2). External bevel gingivectomy procedure was planned quadrant-wise in lower anterior arches, with a week gap between the procedures. The excised tissue was sent for HPA examination (Figure 4). The examination revealed hyperparakeratinised stratified squamous epithelium with underlying fibrous connective tissue. There is no sign of malignancy Patients were followed up for control of 1 month, then every 3 months is recommended for routine treatment of SRP (Figure 5).



Figure 1 Pre-treatment



Figure 2 1 week after SRP



Figure 3 Excised tissue



Figure 4 1 month post op



Figure 3 Months post op

4. Discussion

Gingival hyperplasia is a bizarre condition causing esthetic, functional, psychological, and masticatory disturbance of the oral cavity. Causes of gingival enlargement can be due to plaque accumulation, due to poor oral hygiene, inadequate nutrition, or systemic hormonal stimulation.^{2,8} Various causes of Gingival Enlargement (GE) can be grouped as follows: Inflammatory, Medication-induced, Idiopathic gingival fibromatosis (hereditary/syndrome associated), Systemic causes of GE, False GE (underlying osseous lesions, dental tissues) and Others (mouth breathers).⁹ GE can be

inflammatory or fibrotic. Inflammatory GE is the most common and is completely reversible in otherwise healthy individuals if the local causative agent, microbial plaque; is regularly and effectively removed by mechanical teeth-cleaning procedures.^{4,10} Hereditary, drug-related, and syndrome-associated GE are usually fibrotic. Oral prophylaxis alone will not be sufficient to control the fibrotic gingival overgrowth, but even surgical excision of hyperplastic tissues is essential.^{3,5}

Idiopathic gingival enlargement (IGF) is a slowly progressive disease involving excessive collagen deposition. Idiopathic gingival fibromatosis is a gradually progressive benign enlargement that affects the marginal, interdental, and attached gingiva. The fibromatosis may potentially cover the exposed tooth surfaces, thereby hampering the functioning of the stomatognathic system.^{7,11} The enlarged gingiva is usually of normal pink color. The enlargement may be localized to specific areas of the mouth, typically the labial gingiva around the lower molars and the maxillary tuberosity region, or may be generalized. Severity may vary from mild involvement of few teeth to severe involvement of all the teeth. Very few case reports exist on the orthodontic treatment of patients with idiopathic gingival enlargement.⁴ As the family, medical, prenatal, and drug histories were noncontributory to this case, it was termed Idiopathic Gingival Fibromatosis. IGF manifest due to congenital or hereditary causes which is not understood accurately. Some authors have proposed the mode of transmission as mainly autosomal dominant, suggesting abnormal chromosomes on phenotype 2p21.

Various other factors are responsible for IGF including inflammation, leukemic infiltration, and drugs like phenytoin, verapamil, cyclosporine, and nifedipine. ^{5,8} External bevel gingivectomy procedure was performed quadrant-wise in upper and lower arches, with a gap of one week between the surgical procedures. A period of 3 months was allowed to evaluate the healing of the gingival tissue as well as any possible recurrence of the gingival enlargement.²

5. Conclusion

In conclusion, even though generalized GE can result from multiple causes, the clinical manifestation appears similar in many cases. Identification of the cause usually poses no great challenge to the clinicians, provided they have thorough knowledge regarding those causative conditions.³ Rarely, diagnosis becomes difficult when associated with syndromes or has an unusual pattern of presentation. This article puts an effort into highlighting the various causes and pathogenesises of GE and an emphasis on the multidisciplinary approach required for the management of such distressing and aesthetically and functionally compromising gingival pathologies

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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