

## Idiopathic Gingival Enlargement Causing Social Stigma

### Abstract

Gingival enlargement can be multifactorial; it can be due to nutritional deficiency or can be because of several drugs. Poor oral hygiene may further worsen the gingival hyperplasia, because of which the patient may have difficulty in chewing the food, and the speech may get affected. It may end up in psychosocial stigma for the patient as the patient is even neglected by friends or relatives due to poor oral hygiene and horrifying look of gingival overgrowth. Here, we report a case of gingival enlargement in a 22-year-old married female. The enlargement was massive, such that the teeth were barely visible in the anterior mandible. Based on history and histological findings, the case was diagnosed as idiopathic gingival enlargement. Conventional gingivectomy was planned. The patient was kept on the maintenance phase, and no recurrence was recorded. During the whole treatment phase, there was a notable change in the behavior of the patient. Surgical correction and subsequent maintenance of good oral hygiene may improve the disease condition, which in turn helps the patient in not only improving the aesthetics but also results in better social acceptance.

**Keywords:** *Bad breath, complications, halitosis, idiopathic gingival enlargement, oral hygiene, tooth brushing*

### Background

Psychological conditions, particularly stress have been implicated as a risk indicator of periodontal diseases. Chronic stress and inadequate coping with it can lead to changes in daily habits such as poor oral hygiene, clenching or grinding of teeth, decreased salivary flow, and suppressed oral immunity.<sup>[1]</sup> Gingival fibromatosis is a benign, slowly progressive fibrous overgrowth of the gingiva, with genetic and clinical heterogeneity. The fibromatosis may potentially cover the exposed tooth surfaces, thereby hampering the functioning of the stomatognathic system. It has been studied that depression and loneliness are significant factors associated with aggressive periodontitis.<sup>[2]</sup>

We report a case of idiopathic gingival enlargement (IGE) in a young married female who was socially deprived by the relatives due to her gingival enlargement. These long term adverse events along with neglected lifestyle caused her disease condition to aggravate further.

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### Clinical Presentation

A young female patient accompanied by her father visited the periodontology clinic with a chief complaint of swollen gums in the front region of both the jaws for the last 5 years [Figure 1]. She also had occasional bleeding from the gums along with difficulty in mastication and speech. The patient was of poor rural background and did not undergo any kind of dental treatment in the past. She was trying local remedies and toothpaste, but there was no relief in the disease condition. She was married for 4 years, but due to the gingival disease and poor oral hygiene, she was even neglected by her husband. Out of 4 years of marriage, she did not have any kids. She looked horrified, was silent, and did not utter a single word. She was systemically healthy and did not provide any medical history. Her father gave the entire history, and he even told that she never speaks in front of outsiders and restricts herself from laughing out loud due to fear of exposing her gingival overgrowth. There was no family history of gingival overgrowth.

### Case management

After taking verbal informed consent from her, a complete general examination

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was done to exclude an associated syndrome. The patient was capable of closing her mouth [Figure 2]. Intraoral examination showed painless nodular enlargement with reddish-pink gingiva. There was malpositioning of the mandibular incisors, which were barely visible [Figure 3]. Periodontal examination revealed a thick band of plaque along with deep pockets and moderate gingival inflammation.<sup>[3]</sup>

Orthopantomogram showed the presence of root stumps in relation to the teeth 16, 11, 26, 36, 32, 31, 42, and 41 [Figure 4]. Histopathological findings were suggestive of hyperparakeratinized stratified squamous epithelium showing hyperplasia with thin elongated interconnecting rete pegs [Figure 5]. Based on the case history and histological findings, she was diagnosed to have IGE. Initial phase I therapy comprised scaling and root planing, followed by rinses with 2% chlorhexidine, extraction of root stumps in relation to 16, 11, 26, 36, 32, 31, 42, and 41, which was followed by phase II therapy. Conventional gingivectomy procedure was chosen, and enlarged tissue was removed by external bevel gingivectomy. Finally, after 1 month, the endodontic therapy was executed for 22, 33, 43, 44, and 45. The patient was then kept

on maintenance phase, with thorough oral hygiene instructions.

### Clinical outcomes

At 1-month follow-up, there was significant healing in both the quadrants. An interim prosthesis was planned for missing teeth and also to achieve adequate gingival contour [Figure 6]. During the follow-up for the next 3 years, there was a notable change in the behavior of the patient with build-up of self-confidence. Now, she could be seen smiling and laughing in the clinic. She was accompanied by her husband in the follow-up visits and had two kids over a period of 3 years.

### Discussion

Gingival enlargement is a common feature of the gingival disease. One of its rare types is IGE; however, the condition may be linked to individual susceptibility or local factors such as plaque, caries, and hereditary components. Although the genetic mechanism is not clearly defined, the majority of the reported cases have accredited the mode of transmission as autosomal dominant. Many cases are sporadic without having a familial background or can be related to single-nucleotide polymorphism in chromosome 2p21.<sup>[4]</sup>



Figure 1: Swollen gums in the front region of both the jaws



Figure 2: The patient was capable of closing her mouth

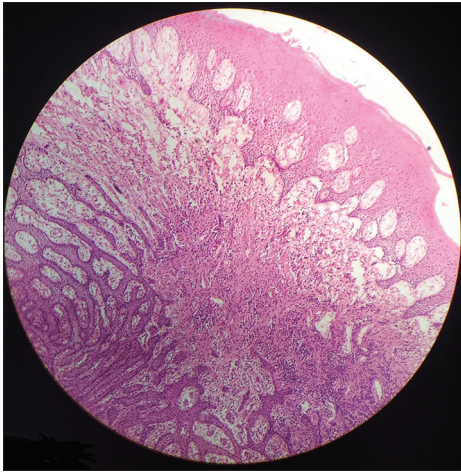


Figure 3: Malpositioning of the mandibular incisors



Figure 4: Orthopantomogram showed the presence of root stumps in relation to the teeth 16, 11, 26, 36, 32, 31, 42, and 41





**Figure 5:** High-power view ( $\times 10$ ) of squamous epithelium showing hyperplasia with thin elongated interconnecting rete pegs

Besides genetic factors, long-term use of several drugs can also lead to gingival overgrowth. A detailed history of drugs such as phenytoin, phenobarbitone, nifedipine, or cyclosporine has to be taken before making a diagnosis of IGE. The incidence of gingival enlargement caused by phenytoin, an anticonvulsant used in the treatment of epilepsy, is up to 50%.<sup>[5]</sup> Whereas, cyclosporine, an immunosuppressant used in organ transplant surgeries and to treat several autoimmune diseases, causes gingival overgrowth with a prevalence rate ranging from 8% to 70%.<sup>[6,7]</sup>

Deficiency of Vitamin C is amenable for localized gingival enlargement. It may lead to irregular gingival hyperplasia and hemorrhagic fields, but it is not encountered frequently in today's modern era.<sup>[8]</sup>

Gingival hyperplasia may be even associated with retardation in physical growth and hypertrichosis.<sup>[9]</sup> The gingival tissue can be of normal texture at birth. However, the overgrowth may become evident with the eruption of primary or permanent teeth, which is mainly because of the tissue reaction due to external forces during teeth eruption. The gingival overgrowth is not painful until the tissue enlargement covers the occlusal surface of the tooth and gets injured during mastication. Due to the massive gingival enlargement, there can be difficulty in speech, mastication, and even swallowing. Tissue overgrowth may also affect oral hygiene, and poor oral hygiene leads to the accumulation of plaque, which further aggravates the gingival overgrowth resulting in disruption of speech and mastication. Maintenance of good oral hygiene may prevent gingival hyperactivity. It is not known if plaque control measures are useful in this condition, but studies have shown that good oral hygiene and chlorhexidine mouth wash prevents gingival enlargement.<sup>[10]</sup>

## Conclusion

The gingival overgrowth due to poor oral hygiene can produce psychological stress in a patient to the extent that it can even



**Figure 6:** After the treatment, the patient achieved adequate gingival contour

affect the married life. Although the recurrence cannot be predicted, the surgical correction and subsequent maintenance of good oral hygiene may improve the disease condition.

## Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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## Conflicts of interest

There are no conflicts of interest.

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