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Case Report

# Gingival Generalized Hyperplasia Associated Only to Local Factors

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## Abstract

Gingival hyperplasia or gingival enlargement is a common type of gingival disease. It consists on a regional or generalized abnormal overgrowth of gingival tissues.

Always, this disease is a response of local irritation associated with many others contributory factors.

A detailed examination is required because pertinent management depends on precisely diagnosing and the determination of the enlargement origin.

A case of generalized gingival hyperplasia related only to local factor in a 29-year-old female patient was reported, this case highlights the common etiologies of this disease and details the therapeutic approach.

**Keywords:** Gingival Hyperplasia; Gingival Enlargement; Local Irritation; Inflammation; Mucoplasty

## Introduction

Gingival hyperplasia is characterized by a benign localized or generalized increase in the size of gum due to cell multiplication, in contrary to gingival hypertrophy in which gingival tissue increases in size in result of the overgrowth of cells. The new tissue is similar to the normal healthy tissue.

This enlargement is an unusual condition causing esthetic, functional and psychological disturbances. Consequently, it is a very common chief complain and it requires a suitable treatment.

Usually it is attributed to local factor and can be influenced by many general causes.

## Case Report

A 29-year-old female patient consulted the department of oral surgery with a chief complaint of progressive mobility of all teeth since 7 years.

Her familial and past medical history were non- contributory.

The extraoral examination showed uprising upper lips (Figure 1).

The intraoral examination revealed a poor oral hygiene, halitosis, a generalized diffused gingival enlargement involving the upper and lower arches. The gum was firm, floating, with the same color as the rest of mucosa (Figure 2A-2C).

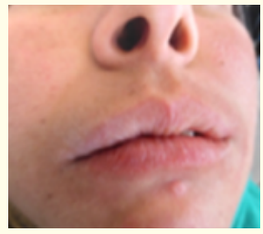

**Figure 1:** Extraoral examination: uprising upper lips.

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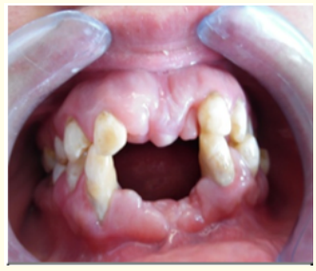

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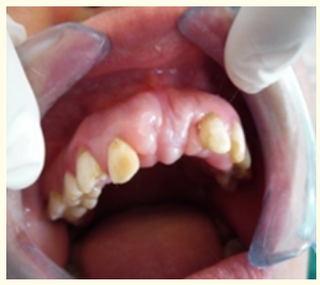

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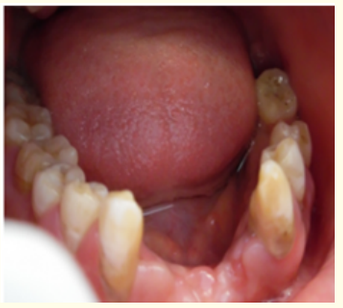


**Figure 2A-2C:** Intratraoral examination: poor oral hygiene, partial edentulous, generalized gingival hyperplasia. A: Dental arches in occlusion, B: Maxilla, C: Mandible.

All residual teeth present grade 3 mobility with generalized pocket and bleeding in probing.

The Orthopantomograph showed a generalized vertical bone loss (Figure 3).

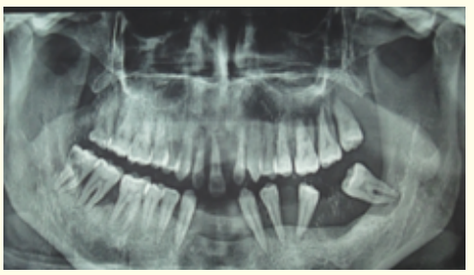
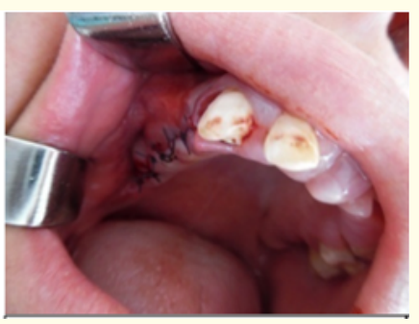


**Figure 3:** Orthopantogram: generalized vertical bone loss.

The results of biological examination (blood count, blood sugar, thyroid function tests, renal function tests) were within normal limits.

The therapeutic approach consisted on the removal of all residual teeth and mucoplasty (Figure 4A-4C) then a removal complete denture was performed (Figure 5A-5C), after this prosthetic rehabilitation, a regression of gingival hyperplasia and a normal alveolar ridges were noted (Figure 6A-6C).

(A)



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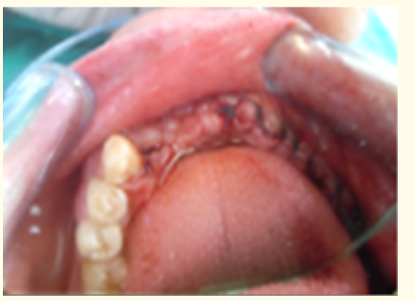

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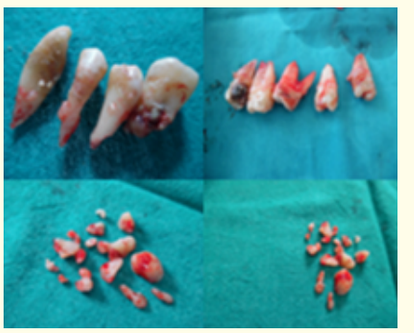
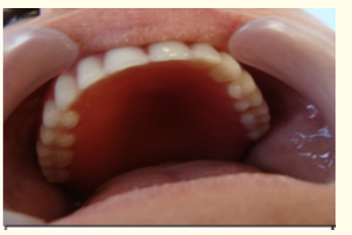


**Figure 4A-4C:** Surgical time: removal of all residual teeth and mucoplasty. A: Removal of maxillary teeth and mucoplasty, B: Removal of mandibular teeth and mucoplasty, C: Specimen.

(A)



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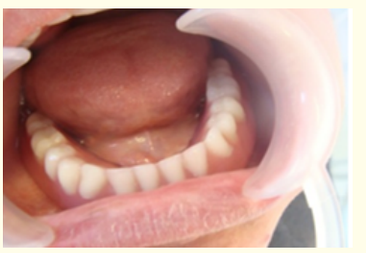

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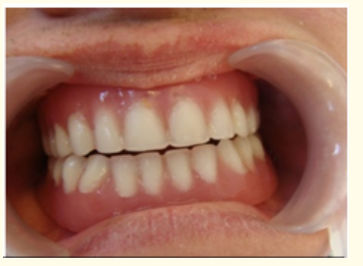
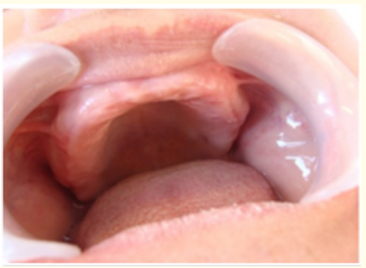


**Figure 5A-5C:** Adaptable removal complete denture. A: Maxillary complete removal denture, B: Mandibular complete removal denture, C: Bimaxillary complete removal denture.

**(A)**



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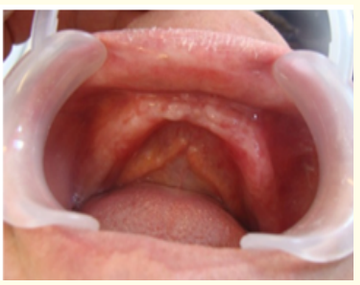

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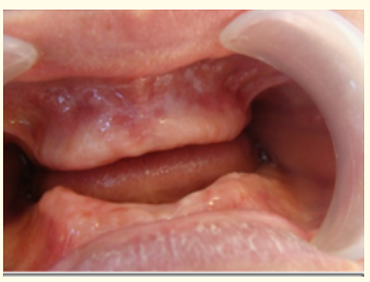

**Figure 6A-6C:** Follow up: regression of gingival hyperplasia and normal alveolar ridges. A: Upper Arch, B: lower arch, C: Dental arches.

The histological examination showed an epithelial hyperplasia of the gingival mucosa, parakeratosis and inflammation of the connective tissue. The inflammatory infiltrate was full of plasmocytes and the granulation tissue was rich in neo vessels and neutrophils (Figure 7-10).

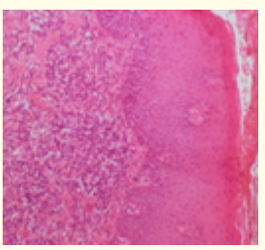

**Figure 7:** Gingival mucosa showing an epithelial hyperplasia associated to parakeratosis and inflammatory connective tissue.

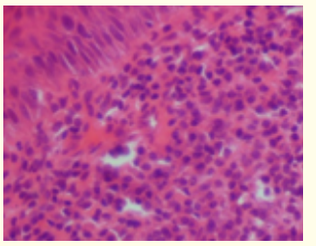

**Figure 8:** Inflammatory infiltrate full of plasmocytes (HE*200).

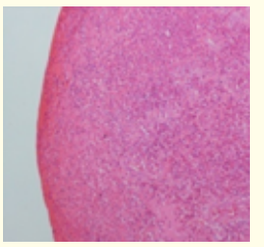

**Figure 9:** Ulceration of gingival mucosa covering a granulation tissue (HE*100).

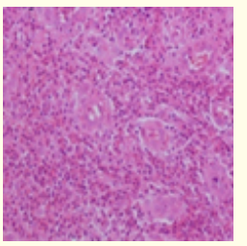

**Figure 10:** Granulation tissue rich in neo vessels surrounded with multiforme inflammatory infiltrate full of PNN (HE*200).

## Discussion

Gingival hyperplasia is defined as an amplification of the volume of gums resulting on cell multiplication, which will damage the esthetic and the function mostly mastication [1-3].

Usually gingival enlargement is associated with local irritation [2,4,5]: poor oral hygiene, plaque and calculus, overhanging restorations, orthodontic brackets and it may be aggravated by many general factors such as genetic disorders, in fact many syndromes include gingival problems like: Anderson-Fabry disease, Cowden syndrome, Sturge-Weber syndrome, Goltz Gorlin syndrome, Cross syndrome, Raman syndrome, hypertrichosis, mental retardation, epilepsy [3,5,6] or hormone disorder like pregnancy, puberty, hor-

monal consumption [5,7]. Also it can be related to endocrine disorder such as hypothyroidism, renal failure [8] or vitamin C deficiency when the serum ascorbic acid level < 2 µg/ml: Scorbut [8]. In addition to drugs consumption like [9-12]:

- Anticonvulsants: Diphenylhydantoin of Soda, Phenytoin, Phenobarbital.
- Immuno-suppressants: Cyclosporine, Tacrolimus.
- Anti-hypertensive agents: Calcium channel blockers: Nife dipine, Felodipine, Amlodipine.

Besides to some systemic diseases like Leukemia [5,8,13]. Or may be an idiopathic gingival hyperplasia [3,5,14].

For this patient, the gingival problem is only associated with the local irritation.

Usually in case of gingival enlargement we must avoid contributory factors and eliminate the etiology then conducted a gingivectomy with usually open flap debridement [1-3,15]. However, for our patient the gingival hyperplasia coexist with chronic periodontitis, consequently the removal of residual teeth was necessary in addition to muccoplasty.

## Conclusion

Gingival hyperplasia is a benign lesion presenting many esthetic and functional disturbances. It requires many detailed examinations in order to detect contributory factors that can be revealed occasionally; therefore a symptomatic and etiological treatment were required.

## Conflict of Interest

There is no conflict of interest.

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