



TYPES AND CLINICAL FORMS OF HYPERTROPHIC GINGIVITIS

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Abstract

Hypertrophic gingivitis is an inflammatory periodontal condition characterized by excessive enlargement of gingival tissues. The disease may present in several clinical forms depending on etiological factors, morphological changes, and severity of tissue proliferation. Understanding the types of hypertrophic gingivitis is essential for accurate diagnosis and effective treatment planning. The aim of this study was to analyze the classification and clinical manifestations of hypertrophic gingivitis based on modern scientific literature. A literature review was conducted using publications from 2000–2025 obtained from international medical databases. The results indicate that hypertrophic gingivitis can be classified into edematous, fibrous, and mixed forms, each presenting distinct clinical features. The condition may also vary in severity and distribution within the oral cavity. Early identification of the specific type of gingival enlargement allows clinicians to select the most appropriate treatment approach and prevent progression to more severe periodontal diseases.

Keywords: Hypertrophic gingivitis, gingival enlargement, edematous gingivitis, fibrous gingivitis, periodontal diseases, gingival hyperplasia.

Introduction

Hypertrophic gingivitis is a form of gingival inflammation characterized by pathological enlargement of gingival tissues. The condition develops as a result of chronic inflammatory processes that stimulate excessive proliferation of gingival connective tissue and epithelium.



Clinically, hypertrophic gingivitis presents with:

- gingival swelling
- redness and bleeding
- enlargement of interdental papillae
- changes in gingival contour

This condition is frequently observed in adolescents, pregnant women, and individuals with poor oral hygiene.

Unlike simple gingivitis, hypertrophic gingivitis involves significant structural changes in gingival tissues, which may lead to aesthetic and functional problems. Enlarged gingiva may partially cover dental crowns, interfere with mastication, and complicate oral hygiene procedures.

The classification of hypertrophic gingivitis is important for:

- accurate diagnosis
- determination of disease severity
- selection of treatment strategies

The aim of this study was to analyze the clinical forms and types of hypertrophic gingivitis and describe their diagnostic characteristics.

Materials and Methods

Study Design

This study was based on a comprehensive review of scientific literature related to hypertrophic gingivitis.

Data Sources

The following scientific databases were used:

- PubMed
- Google Scholar
- Scopus
- Web of Science

Selection Criteria

Publications included:

- clinical research articles



- periodontal textbooks
- systematic reviews
- epidemiological studies

Published between **2000 and 2025**.

Data Analysis

Approximately **65 scientific publications** were screened. After applying inclusion criteria, **35 studies** were selected for detailed analysis.

The studies were evaluated based on:

- classification systems of gingival enlargement
- clinical manifestations
- histological features
- diagnostic criteria.

Results

The literature analysis revealed several classification systems for hypertrophic gingivitis based on clinical and morphological characteristics.

1. Edematous (Inflammatory) Hypertrophic Gingivitis

This is the most common form of hypertrophic gingivitis and is primarily associated with inflammatory processes.

Clinical Features

- bright red or bluish gingiva
- soft and swollen tissues
- bleeding during brushing or probing
- enlargement of interdental papillae

Patients often complain of:

- gum bleeding
- bad breath
- discomfort while eating.



Pathogenesis

The enlargement occurs mainly due to:

- inflammatory edema
- vascular dilation
- accumulation of inflammatory cells.

This form is usually reversible with proper treatment and improved oral hygiene.

2. Fibrous Hypertrophic Gingivitis

Fibrous gingivitis is characterized by proliferation of dense connective tissue within gingival structures.

Clinical Features

- pale pink gingiva
- firm and dense consistency
- minimal bleeding
- slow progression of tissue enlargement.

Unlike edematous gingivitis, inflammation is less pronounced.

Histological Characteristics

Microscopic examination shows:

- increased collagen fiber formation
- thickened epithelial layers
- reduced inflammatory infiltrate.

Fibrous gingivitis often requires surgical correction because conservative therapy alone may not be sufficient.

3. Mixed Form of Hypertrophic Gingivitis

The mixed form combines features of both edematous and fibrous gingivitis.

Clinical Features

- moderate gingival swelling
- areas of fibrous tissue proliferation
- occasional bleeding



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- irregular gingival contour.

This form develops when inflammatory gingivitis persists for a long period and gradually transforms into fibrous tissue growth.

4. Classification by Severity

Hypertrophic gingivitis may also be classified according to the degree of gingival enlargement.

Mild Degree

- gingival enlargement limited to interdental papillae
- minimal functional impairment.

Moderate Degree

- gingiva partially covers dental crowns
- noticeable aesthetic problems.

Severe Degree

- gingival tissues cover a significant portion of teeth
- difficulty in chewing and oral hygiene maintenance.

5. Localization of Gingival Enlargement

Hypertrophic gingivitis may affect:

Localized areas

- limited to one or several teeth.

Generalized areas

- involving multiple segments of the dental arch.

Generalized enlargement is often associated with systemic factors such as hormonal changes or medication use.

Discussion

Hypertrophic gingivitis represents a complex periodontal condition influenced by multiple etiological factors.

Clinical Importance of Classification

Accurate identification of the type of gingival enlargement allows clinicians to:

- determine the severity of disease



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- select appropriate treatment methods
 - predict treatment outcomes.

For example:

- edematous gingivitis responds well to conservative therapy
- fibrous gingivitis may require surgical intervention.

Diagnostic Challenges

Hypertrophic gingivitis must be differentiated from other conditions that cause gingival enlargement, including:

- gingival tumors
- drug-induced gingival hyperplasia
- hereditary gingival fibromatosis.

Proper diagnosis requires a comprehensive clinical examination and sometimes histological analysis.

Impact on Oral Health

Untreated hypertrophic gingivitis may lead to:

- plaque accumulation
- development of periodontal pockets
- progression to periodontitis.

Therefore, early diagnosis and treatment are essential.

Role of Patient Factors

Patient-related factors such as oral hygiene habits, systemic health, and hormonal status significantly influence disease progression.

Education and preventive care play a crucial role in disease management.

Conclusion

Hypertrophic gingivitis is characterized by excessive gingival enlargement that may present in several clinical forms, including edematous, fibrous, and mixed types.

Each form has distinct clinical and histological features that influence treatment planning.



Early diagnosis and accurate classification are essential for effective management of the disease and prevention of complications.

Improved oral hygiene, professional dental care, and elimination of etiological factors are key components in controlling hypertrophic gingivitis.

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