

## CLINICAL MANAGEMENT OF FIBROUS GINGIVAL HYPERPLASIA: A CASE REPORT

**Yusupova Sitora Sanjarovna**

Department of the Orthopedic Dentistry

**Rafikov A**

Student of the faculty dentistry

Department of Orthopedic Dentistry

Samarkand State Medical University

**Relevance and Clinical Background** The therapeutic management of the fibrous variant of hyperplastic gingivitis continues to be a formidable challenge in clinical periodontology. The pathogenesis of this condition is primarily driven by suboptimal oral hygiene, characterized by the persistent accumulation of microbial biofilms and mineralized dental deposits. These factors induce chronic irritation of the marginal gingiva, leading to reactive tissue proliferation. In cases where the inflammatory process becomes protracted, the gingival architecture undergoes irreversible fibrous degeneration and remodeling. Consequently, the mere elimination of local etiological factors (plaque and calculus) is frequently insufficient to restore the physiological contour of the periodontium, necessitating advanced surgical intervention to achieve functional and esthetic rehabilitation.

**Research Objective** This study aimed to evaluate and document a comprehensive treatment protocol for moderate fibrous hyperplastic gingivitis in a systemically healthy patient. The objective was to determine the efficacy of a combined conservative-surgical approach in a subject with no history of medication-induced gingival overgrowth or underlying systemic pathologies.

**Clinical Presentation and Pre-treatment Assessment** Upon initial examination, the patient presented with significant gingival hypertrophy and tissue thickening. Marked hyperemia was observed in the interdental papillae, particularly within the anterior segments of both the maxillary and mandibular arches. The hyperplastic tissue occupied approximately 50% of the clinical crown height, obstructing the coronal surfaces. Clinical assessment revealed that the overgrown gingiva was sensitive to palpation and exhibited a high tendency for provoked bleeding. Furthermore, substantial quantities of both supragingival and subgingival dental deposits were identified, serving as the primary inflammatory triggers.

**Comprehensive Treatment Protocol** The management strategy was executed in a structured, multi-phase sequence:

1. **Phase I: Conservative Therapy and Hygiene Optimization** The initial stage focused on patient motivation and the establishment of rigorous individual hygiene protocols. Professional mechanical debridement was performed under local anesthesia in two distinct intervals:

- *Initial Step:* Comprehensive removal of supragingival and subgingival deposits combined with intensive antimicrobial and anti-inflammatory chemotherapy to reduce the acute bacterial load.
- *Follow-up Step (14 days post-initial debridement):* Precise removal of residual subgingival calculus once the inflammatory edema had partially subsided, allowing for better access to the root surfaces.

2. **Phase II: Surgical Correction (Gingivectomy)** Despite a significant reduction in inflammation following the conservative phase, the residual fibrous tissue continued to hinder effective plaque control, resulting in localized "pinpoint" inflammatory foci. To address these functional and esthetic deficits, a surgical gingivectomy was performed. The procedure was carried out separately for the maxilla and mandible, utilizing a hybrid technique involving traditional surgical scalpels and laser coagulation for precise hemostasis. Post-operative care included

the application of a protective periodontal dressing and the administration of keratoplastic agents to accelerate epithelialization and tissue maturation.

### **Research Findings and Longitudinal Analysis**

• **Immediate Clinical Results:** Following the completion of the healing phase, a successful restoration of the gingival zenith was achieved. The gingival margin on both jaws returned to its natural physiological position, with complete resolution of bleeding and pain.

• **Long-term Monitoring (12-month Follow-up):**

- In the **maxillary arch**, the corrected gingival contour remained stable and healthy throughout the observation period.
- In the **mandibular arch**, a localized recurrence was identified, characterized by slight gingival swelling and papillae enlargement (less than 1/3 of the crown height). Clinical analysis attributed this relapse to the patient's persistent difficulty in maintaining adequate hygiene in the mandibular anterior region.

**Conclusion and Clinical Implications** The integration of systematic professional hygiene with surgical gingivectomy is an effective strategy for the correction of fibrous hyperplastic gingivitis. However, this case demonstrates that surgical success is heavily dependent on post-operative maintenance. Inadequate personal plaque control significantly diminishes the long-term stability of the treatment, leading to localized recurrence. This case emphasizes that patient adherence to strict oral hygiene regimens is the most critical factor in preventing the relapse of fibrous tissue overgrowth and ensuring the permanence of surgical outcomes.

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