



DENTURE STOMATITIS COMPLICATED BY DIABETES AND ORAL CANDIDIASIS: A GERIATRIC CASE REPORT

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ABSTRACT

This clinical case report details the management of denture stomatitis in a 78-year-old female with uncontrolled Type II diabetes and chronic oral candidiasis. Presenting with discomfort and lesions under her decade-long worn partial denture, her condition was indicative of inflammatory papillary hyperplasia and fungal infection. Management involved a combination of systemic and local antifungal treatments, diode laser surgical removal of nodular lesions, fabrication of a new denture, and extensive oral hygiene education. Over a two-year period, a significant decrease in Candida levels was observed, though the persistence of the fungus necessitated ongoing monitoring. This case highlights the complexities of treating denture stomatitis in patients with systemic health issues, emphasizing the need for a multidisciplinary treatment approach and continuous care.

Keywords: Denture Stomatitis, Type II Diabetes, Oral Candidiasis, Prosthetic Hygiene, Multidisciplinary Treatment, Inflammatory Papillary Hyperplasia,

INTRODUCTION:

Denture stomatitis, affecting 20-67% of denture users, predominantly females [1, 2], is a multifactorial oral condition characterized by inflammation beneath the denture, especially in deeper palatal areas [1]. Its complex etiology involves local factors, such as reduced oxygen and saliva flow under dentures, facilitating yeast growth, particularly *Candida albicans* [3]. Newton's 1962 classification categorizes denture stomatitis into three types [2], with Type III being advanced, characterized by granular, nodular lesions [4]. Diabetes mellitus significantly elevates the risk of denture stomatitis and *Candida* infections [5, 6, 7], with associated complications like xerostomia. Continuous denture wearing contributes to inflammatory papillary hyperplasia (IPH) development [8, 9, 10], and lifestyle factors along with systemic diseases amplify the condition's severity [11, 12, 13, 14].

CASE PRESENTATION:

A 78-year-old female, wearing a partial denture for a decade, presented with a non-tender, rough lesion on the oral mucosa, causing discomfort and altered taste for two months. She had uncontrolled Type II diabetes and a persistent oral candidal in-

fection for six years. Continuous denture wear was revealed. Examination showed nodular lesions and white plaques near the soft palate's median line, characteristic of IPH (Fig. 1).

Fig. 1. Nodular lesions in the deep part of the hard palate that passes the border of the hard and soft palate, with small, closely grouped white plaques near the median line of the soft palate.



Diagnosis, Management, and Treatment Approaches:

After assessing the patient's general health and diabetes management, diagnostic tests confirmed *Candida albicans* involvement.

A comprehensive treatment plan included:

1. Systemic Antifungal Therapy: Fluconazole (50-100 mg daily for 14 days)

2. Local Antimycotic Treatment: Dactarin oral gel and nystatin solution 2 times a day after meals for 14 days.

3. Surgical Intervention: Diode laser surgery to remove nodular lesions.

4. New Partial Denture Fabrication: A better-fitting denture was fabricated post-surgery.

5. Prosthetic Hygiene Guidance: Emphasis on denture maintenance with spe-

cial use of effervescent disinfecting tablets during the nighttime.

6. Enhanced Oral Hygiene: Regular oral rinsing and brushing after meal intake and nighttime denture removal are advised.

7. Dietary Modifications: Avoiding spicy foods and hot food and drinks to reduce the risk of additional discomfort.

DISCUSSION:

This case of a geriatric diabetic patient with denture stomatitis and chronic candidiasis illustrates the condition's multifactorial nature. The diabetes-induced susceptibility to infections and the mechanical irritation from dentures emphasize the interaction between systemic and local factors. Proper denture care, including nighttime removal and replacement with well-fitted dentures, is crucial. The multidisciplinary treatment effectively managed the condition, evidenced by the reduced *Candida* levels and decrease of the microbial count from 10^5 to 10^3 over treatment of two years, though ongoing monitoring is essential. Dietary adjustments and oral hygiene played key roles in recovery, particularly significant for diabetic patients.

CONCLUSION AND FUTURE DIRECTIONS:

This case demonstrates the complexity of managing denture stomatitis in patients with systemic health issues. It calls for a personalized, multidisciplinary approach that includes oral care and antifungal therapies tailored to the patient's overall health. Future research should aim at long-term management strategies for denture stomatitis in patients with systemic conditions like diabetes and develop educational programs for denture care to prevent recurrence.

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