

# Management of Oral Submucous Fibrosis: A Case Report

Vasiliki Karlis\*

Department of Oral and Maxillofacial Surgery, NYU College of Dentistry, 345 East 24th Street, Room 201, New York, USA

## Introduction

Oral Submucous Fibrosis (OSF) is a chronic, potentially malignant disorder characterized by the progressive fibrosis of the oral mucosa and underlying tissues. It is primarily associated with the habit of betel nut chewing and is prevalent in regions where this habit is common. OSF presents a significant challenge due to its potential for malignant transformation and the severe functional and aesthetic impairments it can cause. This case report describes the successful management of a patient with oral submucous fibrosis, highlighting the diagnostic process, treatment modalities, and long-term outcomes.

## Patient presentation

A 40-year-old male presented with a chief complaint of restricted mouth opening and difficulty in eating and speaking. Clinical examination revealed a fibrous, non-elastic oral mucosa with reduced mouth opening (2 cm), palpable fibrous bands, and the absence of vesicles or ulcers. The patient reported a history of betel nut chewing for more than 20 years, supporting the diagnosis of oral submucous fibrosis [1].

## Diagnosis and treatment planning

Based on the clinical findings and the patient's history, a diagnosis of oral submucous fibrosis was made. The severity of the condition was assessed using various scales, including the mouth opening measurement and the classification of fibrosis. The treatment plan aimed to arrest the progression of the disease, alleviate symptoms, and improve the patient's quality of life.

## Treatment modalities

**Counseling and behavior modification:** The patient was provided with detailed information regarding the harmful effects of betel nut chewing and was counseled on the importance of quitting the habit. Behavior modification techniques were employed to encourage the patient to discontinue the habit and prevent further progression of the condition.

**Medications:** To manage the fibrosis and reduce symptoms, the patient was prescribed a combination of medications, including oral antioxidants, corticosteroids, and collagenase enzymes. These medications aimed to improve tissue elasticity, reduce inflammation, and promote healing.

**Physiotherapy and exercises:** The patient underwent regular physiotherapy sessions to improve mouth opening and flexibility of the oral tissues. Passive stretching exercises, tongue exercises, and jaw exercises were prescribed to gradually increase mouth opening and improve functional movements.

**Intralesional injections:** In advanced cases with severe fibrotic bands, intralesional injections of hyaluronidase and triamcinolone acetonide were administered to soften the fibrotic tissue and improve elasticity.

**Regular Follow-up:** The patient was scheduled for regular follow-up visits to monitor the progress of the treatment, assess symptom improvement, and modify the treatment plan as needed. Oral hygiene instructions and regular oral examinations were provided to prevent secondary infections and maintain oral health [2].

## Long-term outcomes

Over a period of several months, the patient showed improvement in mouth opening, with a gradual increase to 3.5 cm. The oral mucosa became less fibrotic and regained some elasticity. The patient reported a significant reduction in symptoms, including improved ability to eat and speak comfortably. Regular follow-up visits and continued counseling supported the patient in maintaining betel nut cessation [3].

## Description

The successful management of oral submucous fibrosis requires a multidimensional approach, addressing both the underlying cause and the fibrotic changes in the oral mucosa. Combining behavioral modifications, pharmacotherapy, physiotherapy, and intralesional injections can help arrest the disease progression and alleviate symptoms. Regular follow-up and patient education are essential to maintain long-term results and prevent relapse.

## Understanding the pathogenesis

The pathogenesis of oral submucous fibrosis is multifactorial, involving various genetic, immunologic, and environmental factors. The most common etiological factor is the habitual consumption of betel nut, often mixed with other ingredients such as tobacco and lime. Betel nut contains areca nut alkaloids, which are considered to be the primary causative agents. Prolonged exposure to these substances leads to the deposition of collagen and other fibrotic components in the connective tissues of the oral mucosa, causing a loss of elasticity and fibrosis [4].

## Clinical presentation and impact

Oral submucous fibrosis primarily affects the oral cavity but can also involve the pharynx and upper digestive tract. The condition typically manifests as progressive fibrosis, resulting in reduced mouth opening, mucosal rigidity, and palpable fibrous bands. The affected individuals may experience difficulty in opening the mouth wide enough to eat, speak, or perform routine oral hygiene practices. As the disease progresses, other symptoms such as burning sensation, altered taste sensation, and dryness of the mouth may also arise. These functional impairments significantly impact the quality of life, leading to social, psychological, and nutritional consequences [5].

## Management strategies

The management of oral submucous fibrosis involves a comprehensive approach that aims to control disease progression, alleviate symptoms, and prevent malignant transformation. The primary objective is to eliminate or minimize the causative factors, particularly the cessation of betel nut chewing. This is achieved through patient education, counseling, and behavioral modifications. Various treatment modalities are employed to address the fibrosis and improve oral function, including pharmacotherapy, physiotherapy, and intralesional injections. Regular monitoring and follow-up visits are

\*Address for Correspondence: Vasiliki Karlis, Department of Oral and Maxillofacial Surgery, NYU College of Dentistry, 345 East 24th Street, Room 201, New York, USA, E-mail: Vkarlis@nyu.edu

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essential to assess treatment response, provide ongoing support, and identify any potential malignant transformation.

## Conclusion

Oral submucous fibrosis is a chronic and potentially malignant disorder characterized by the fibrosis of the oral mucosa and underlying tissues. The condition primarily affects individuals with a history of betel nut chewing and poses significant challenges due to its potential for malignant transformation and functional impairments. Early diagnosis, appropriate management, and patient education are key in controlling the disease progression and improving the quality of life for affected individuals. Dental professionals play a crucial role in recognizing the signs and symptoms of oral submucous fibrosis, implementing appropriate treatment strategies, and providing ongoing support to help individuals overcome this debilitating condition. By promoting awareness, facilitating early intervention, and emphasizing the importance of cessation of betel nut chewing, healthcare providers can make a significant impact in the management of oral submucous fibrosis and its associated complications.

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