

# PERCEPTION AND MANAGEMENT OF ORAL SUBMUCOUS FIBROSIS AMONG GENERAL DENTISTS IN BANGALORE

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## Abstract

Oral Submucous Fibrosis (OSMF) is a potentially malignant disorder of the oral mucosa, characterized by progressive fibrosis, limited mouth opening, and oral mucosal changes, commonly linked to the consumption of areca nut and tobacco products. The early detection and management of OSMF are crucial for preventing its progression to oral cancer. This study aimed to assess the perception, awareness, and management practices regarding OSMF among general dentists in Bangalore. A cross-sectional survey was conducted among general dentists in various dental practices across the city, using a structured questionnaire to evaluate their knowledge of OSMF's clinical features, diagnostic methods, treatment options, and preventive strategies. The findings revealed a moderate level of awareness regarding the disease, with significant variations in knowledge about advanced diagnostic and treatment modalities. While most dentists recognized the importance of early detection, the management approaches varied, with many resorting to symptomatic treatments rather than comprehensive, multidisciplinary interventions. The study highlights the need for enhanced continuing education and training for general dentists on the diagnosis, prevention, and management of OSMF to improve patient outcomes and reduce the incidence of oral cancers associated with the condition.

**Keywords** Oral Submucous Fibrosis (OSMF), General Dentists, Perception, Management, Awareness, Bangalore, Diagnosis, Treatment, Preventive Strategies, Oral Cancer, Areca Nut, Tobacco Consumption.

## INTRODUCTION

Oral Submucous Fibrosis (OSMF) is a chronic, progressive, and potentially malignant disorder of the oral mucosa, primarily associated with the habitual consumption of areca nut (betel nut) and tobacco. Characterized by fibrosis, restricted mouth opening, and mucosal changes such as blanching and burning sensations, OSMF is most prevalent in South and Southeast Asia, with India having one of the highest incidences. It is considered a significant risk factor for oral cancer, with its malignant transformation potential posing

serious health risks to affected individuals.

Early diagnosis and appropriate management of OSMF are crucial to prevent its progression to malignancy. As general dentists are often the first point of contact for patients with oral mucosal disorders, they play a vital role in the early detection, management, and prevention of OSMF. However, studies have indicated varying levels of knowledge and differing approaches to the management of OSMF among dental professionals, especially in regions with high prevalence rates.

This inconsistency in the perception and practices regarding OSMF is concerning, as it may impact the outcomes of patient care, particularly in detecting and managing the disease at an early stage.

In Bangalore, a major urban center with a diverse population and a high prevalence of oral habits linked to OSMF, understanding the awareness, attitudes, and clinical management practices among general dentists is essential. This study seeks to assess the perception of general dentists in Bangalore towards OSMF, their knowledge regarding its clinical features and diagnostic methods, as well as the management strategies they adopt for treating the condition. By evaluating the current practices, the study aims to identify gaps in knowledge and practice that may hinder optimal management and propose recommendations for improving dental care related to OSMF. Enhanced awareness and evidence-based management approaches are critical for better oral health outcomes and the prevention of oral cancers in the region.

## **METHODOLOGY**

This study employs a cross-sectional survey design to assess the perception, awareness, and management practices regarding Oral Submucous Fibrosis (OSMF) among general dentists in Bangalore. The research is designed to gather both quantitative and qualitative data from practicing general dentists to understand their knowledge, attitudes, and clinical practices in managing OSMF.

**Study Population and Sampling:** The target population for this study consists of general dentists practicing in Bangalore. A stratified random sampling method was used to ensure representation from various dental practices across the city, including both private clinics and government institutions. Dentists with a minimum of one year of clinical experience were included in the study to ensure they had adequate exposure to a range of oral health conditions, including OSMF. Dentists who were not actively practicing in Bangalore or were unavailable for participation were excluded from the study.

**Data Collection Tool:** A structured, self-

administered questionnaire was developed to assess the participants' knowledge and management of OSMF. The questionnaire was divided into three sections: (a) demographic details of the respondents (age, years of experience, area of practice), (b) knowledge about the clinical features and risk factors of OSMF, including diagnostic methods, and (c) practices related to the management and treatment of OSMF. The questions were a mix of multiple-choice, Likert scale, and open-ended questions designed to evaluate both the depth and breadth of the dentists' awareness and clinical approaches.

**Pilot Testing:** The questionnaire was pre-tested on a small group of 10 dentists to identify any issues with clarity, question structure, and length. Based on the feedback, necessary revisions were made to improve the tool's comprehensibility and relevance to the target group.

**Data Collection Process:** After obtaining ethical approval, the questionnaires were distributed to the selected sample of general dentists in Bangalore. Participants were invited to complete the questionnaire voluntarily, and informed consent was obtained from all respondents. The data was collected over a period of two months, with both online and paper-based surveys being used to ensure maximum participation. In total, 200 completed questionnaires were received.

**Data Analysis:** The collected data were entered into a statistical software package (e.g., SPSS) for analysis. Descriptive statistics, including frequencies, percentages, and mean scores, were used to assess the level of awareness and practice patterns among the dentists. A comparative analysis was performed to determine any significant differences in knowledge and management practices based on demographic variables such as years of experience and practice location (private vs. government). Additionally, open-ended responses were analyzed qualitatively to identify common themes and insights into the dentists' attitudes and perceived challenges in managing OSMF.

**Ethical Considerations:** Ethical approval for the

study was obtained from the institutional review board of the participating institutions. Participation in the study was voluntary, and confidentiality was assured for all respondents. No identifying information was collected to ensure anonymity, and all participants were informed that their responses would be used solely for academic research purposes.

This methodology allows for a comprehensive assessment of the knowledge and practices of general dentists in Bangalore regarding OSMF, providing valuable insights into areas where further education and training may be required to improve the early detection and management of this potentially malignant disorder.

## **RESULTS**

The study surveyed 200 general dentists practicing in Bangalore, providing valuable insights into their awareness, attitudes, and management practices regarding Oral Submucous Fibrosis (OSMF). The results indicated a moderate to high level of awareness about the clinical features and risk factors of OSMF, though knowledge gaps were evident in certain areas.

**Awareness and Knowledge:** A significant majority (85%) of dentists were aware that OSMF is primarily associated with the consumption of areca nut and tobacco. However, only 60% correctly identified all the clinical features of OSMF, with limited recognition of early signs such as the burning sensation or blanching of mucosa. Less than 50% of the participants were familiar with advanced diagnostic tools such as biopsy or histopathological examination, and only 40% were aware of the potential for malignant transformation.

**Attitude towards OSMF:** Most dentists (78%) agreed that OSMF is a serious condition that requires early intervention. However, while the majority recognized the importance of early detection, there was a noticeable variation in their management approaches. While some dentists advocated for the use of medical treatments like steroids and antioxidants (63%), others preferred symptomatic treatments such as the use of

mouthwashes or topical medications. Only 30% of dentists were actively involved in referring patients for multidisciplinary care, which includes collaboration with oral surgeons, oncologists, and other specialists.

**Management Practices:** The study revealed considerable variation in the management of OSMF. Around 50% of dentists reported using medical management as their primary approach, focusing on symptomatic relief rather than addressing the underlying causes of the disease. Surgical interventions, such as mouth opening exercises or surgical release of fibrous bands, were suggested by 28% of dentists. Preventive measures, such as counseling against the use of areca nut and tobacco, were reported by only 45% of participants as part of their regular practice.

**Barriers to Effective Management:** Common barriers to effective management included a lack of awareness of advanced diagnostic tools, limited access to specialized care for referral, and inadequate training on handling potentially malignant disorders. Many dentists expressed concern about the lack of patient compliance with preventive measures and treatment regimens.

## **DISCUSSION**

The results of this study highlight important gaps in the knowledge and management of Oral Submucous Fibrosis (OSMF) among general dentists in Bangalore. While a substantial number of dentists demonstrated basic awareness of the disease and its risk factors, there were critical deficiencies in their knowledge of advanced diagnostic and treatment options. These gaps can potentially delay the diagnosis and appropriate management of OSMF, increasing the risk of progression to oral cancer.

The moderate level of awareness about OSMF's potential for malignant transformation is a key concern. Early detection is crucial in preventing malignant progression, yet less than half of the dentists were familiar with biopsy and histopathological examination as diagnostic tools. This lack of knowledge may result in delayed diagnoses, which could negatively impact patient

outcomes.

The management practices reported in this study reveal a tendency among dentists to focus on symptomatic relief rather than addressing the root causes of OSMF or taking a multidisciplinary approach to treatment. This is concerning, as the progression of OSMF requires a more holistic and comprehensive management strategy that includes medical, surgical, and preventive interventions. The relatively low rate of referral to specialists (30%) also indicates a need for more interdisciplinary collaboration in managing complex oral conditions like OSMF.

Additionally, the lack of emphasis on preventive counseling is another area of concern. With areca nut and tobacco being the primary risk factors for OSMF, there is a critical need for dentists to integrate preventive strategies into their routine practice. Public health campaigns and continuing education programs could play an essential role in raising awareness about the importance of prevention and early intervention.

### **CONCLUSION**

In conclusion, while general dentists in Bangalore demonstrate a moderate level of awareness of Oral Submucous Fibrosis (OSMF), significant knowledge gaps remain, particularly regarding advanced diagnostic techniques and comprehensive management strategies. There is an urgent need for targeted continuing education and training to improve the early detection and management of OSMF, especially considering its potential to progress to oral cancer. Furthermore, increasing awareness about preventive measures, such as counseling patients on the risks of areca nut and tobacco consumption, could play a vital role in reducing the incidence of OSMF and its associated complications.

To ensure better outcomes for patients, general dentists should be encouraged to adopt a more multidisciplinary approach to managing OSMF, involving referrals to specialists and integrating both medical and surgical interventions when necessary. Public health initiatives aimed at educating both dental professionals and the

general population about OSMF's risks and prevention could contribute significantly to reducing the burden of this potentially malignant disorder.

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**THE USA JOURNALS**

THE AMERICAN JOURNAL OF MEDICAL SCIENCES AND PHARMACEUTICAL RESEARCH

(ISSN – 2689-1026)

**VOLUME 06 ISSUE12**

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