DOI: https://doi.org/10.4038/gdp.v41i1.38

Management of oral cancer and Oral Potentially Malignant Disorders (OPMD)

Role of General dental practitioner

Introduction

Sri Lanka faces a considerable burden of oral cancer, making it a significant public health concern in the country. Sri Lanka has one of the highest incidences of oral cancer globally. Oral cancer (ICD 10 : C00-C06) ranks as the topmost common cancers among males of the country. According to statistics from the Sri Lanka Cancer Registry the year 2020, the incidence of oral cancer has remained alarmingly high over the years: ASR 20.3 per 100,000 male and 4.8 per 100,000 among female, annually accounting to about 3000 new Oral cancer cases are detected and more than 1200 deaths (Average 3per day) are reported due to Oral Cancers. The most prevalent form of oral cancer in Sri Lanka is oral squamous cell carcinoma (OSCC), accounting for most cases diagnosed. Unfortunately, many cases of oral cancer in Sri Lanka are diagnosed at advanced stages: 70% Stage3 & stage 4 which reduce the chances of successful treatment and contributing to higher mortality rates. Therefore, early detection of both oral cancer and OPMD is crucial.

Certain demographical and occupational subgroups such as farmers, plantation workers, fisheries communities, manual labourers, and drivers show higher rates of oral cancer incidence, potentially linked to their lifestyle factors, including chewing habits prevalent in those specific communities.

The burden of oral cancer places a substantial strain on the victims their families and healthcare system in Sri Lanka, requiring resources for diagnosis, treatment, and supportive care.

Oral cancer is often regarded as a disease that can be prevented and detected at an early stage due to its well-established associations with identifiable risk factors and clinically recognizable oral potentially malignant disorders (OPMDs) .

General dental practitioners (GDP) play a crucial role in raising awareness to curtail risks factors, early identification, referral, brief intervention of lifestyle factors and management of these conditions. The GDP may also act as a palliative care provider in the cancer journey.

Dr Ananda Rathnayaka

Senior lecturer and specialist in OMF surgery

Faculty of Dental Sciences

University of Sri Jayewardenepura

Oral potentially malignant Disorders

OPMD defined as "any oral mucosal abnormality that is associated with a statistically increased risk of developing oral cancer."

The presence of an OPMD does indicate an increased risk for cancer of the lip or the oral cavity, during the lifetime of the patient, but only a minority progress to cancer. Following disorders are the common OPMDs.

- Leucoplakia
- Erythrolein
- Oral submucous fibrosis
- Oral Lichen planus
- Oral lichenoid lesions
- Chronic graft-versus-host disease.
- Palatal changes due to reverse smoking
- Discoid lupus erythematosus
- Actinic keratosis

General Dental Practitioners (GDP) Role in prevention and early detection of OPMD

Being a subject expert, and their familiarity with normal anatomical structures and disease conditions of the oral cavity GDPs are integral part playing a vital role in prevention programmes. Dental surgeon should take part as the focal point of any structured prevention programmes.

1, Public awareness on OPMD, Oral Cancer and their risk factors

Risk factors

Major Risk Factors	Minor Risk Factors
Use of Tobacco 1. Smokeless tobacco • Use with betel quid. • Commercially prepared chewable tobacco 2. Tobacco Smoking Use of Arrecanut • With betel quid • Chewable commercial products Use of Alcohol	• HPV infections (Type 16,18) • Nutritional Deficiencies • Poor Oral Hygiene • Immunosuppression • Exposure to UV light

As a recognized authority in the field and an influential figure in society, General Dental Practitioners (GDPs) play a crucial role in educating the public and patients who visit their clinics. These educational sessions & brief interventions should emphasize the nature of oral diseases, early signs and symptoms, risk factors, and the significant health and economic burdens they pose to patients and their families. It is equally important to educate individuals on the significance of self-mouth examination and how to conduct it effectively.

Screening and early detection are pivotal in managing oral cancer and OPMDs. Screening involves the presumptive identification of potentially undetected diseases in apparently healthy, asymptomatic populations through various tests, examinations, or procedures. The role of GDPs in screening is multifaceted. Opportunistic screening, which involves examining all patients attending dental clinics to detect oral cancers and potentially malignant oral mucosal disorders (OPMDs), is essential. Priority should be given to self-referred individuals and those referred by primary healthcare workers or medical practitioners.

This proactive approach by GDPs in offering informative sessions and conducting screenings can significantly contribute to the early detection and management of oral cancers and OPMDs, ensuring better outcomes for patients and their overall well-being.

The assessment of the oral cavity through visual examination has undergone extensive evaluation regarding its feasibility, safety, accuracy, and acceptability in detecting potentially malignant oral mucosal disorders (OPMDs) and oral cancer. This examination method entails a thorough inspection of the intra-oral mucosa under bright light, allowing for the identification of early signs indicative of OPMDs and oral cancer. Subsequently, it involves a meticulous inspection and digital palpation of the neck to detect any enlargement of lymph nodes, thereby completing a comprehensive examination for potential indications of oral health issues.

Specific programmes can be arranged focusing high risk groups and communities. To maximize coverage and effectiveness, well-structured and integrated programs should be organized. These specific programs necessitate collaboration across multiple sectors and must be carefully targeted. This approach ensures a more comprehensive and focused effort to reach the maximum number of individuals within high-risk populations.

Criteria to Identify individuals at higher risk.

Criteria	Description
1	Those who chew betel quid three or more times a day
2	Those who chew betel quid less than three times a day and additionally. smoke and / or consume alcohol habitually
3	Those who habitually consume smokeless tobacco and areca nut products (Babul beeda, Pan parag, Mawa etc.)

Role at clinic level

Creating a welcoming and comforting environment for these patients at the clinic level is crucial, ensuring they feel secure and cared for by the General Dental Practitioner (GDP). Prioritizing the patient's presenting complaints and adopting a holistic approach are essential. This presents an opportunity for brief intervention & opportunistic screening for potentially malignant oral mucosal disorders (OPMDs) and oral

cancer for all individuals visiting the dental clinic. Screening priority should be given to individuals referred by Primary Health Care (PHC) staff and those who have self-referred.

Early referral and follow up.

It is recommended that any individuals who present with dubious oral lesions should be expeditiously referred to the nearest Oral and Maxillofacial unit for proper management at the earliest convenience. Conducting biopsies at the General Dental Practitioner (GDP) level is discouraged in order to prevent potential harm to the lesion. It is best practice for a consultant or one of their team members, who will also be responsible for further patient care, to perform biopsies.

Individuals identified as high-risk patients should be provided with comprehensive management at the clinic level, which includes regular follow-up visits. This is crucial due to their heightened susceptibility to developing potentially malignant oral mucosal disorders (OPMDs) and oral cancer. At present, there are no evidence-based standards for determining follow-up intervals, leaving the decision-making process largely up to clinicians' discretion.

Providing clear instructions and education to intervene in risk factors and habits, and promote a healthy diet remains imperative. Emphasis should be placed on eliminating modifiable risk habits to mitigate the risk of malignant transformation. Early counselling should be prioritized and offered at the earliest opportunity.

Enhancing the oral hygiene of patients diagnosed with potentially malignant oral mucosal disorders (OPMDs) stands as a pivotal measure in preventing malignant transformation. Hence, it is vital that dental surgeons at general practice prioritize the improvement of oral health status in OPMD patients before initiating any treatment or making referrals to Oral and Maxillofacial Surgery (OMFS) units for additional management. This initial focus on enhancing oral health creates a more favourable groundwork for subsequent treatments and care, potentially reducing the risk of progression to malignancy.

Maintaining comprehensive records for these individuals is essential. There should be a dedicated 'Register for patients with oral cancer and Oral Potentially Malignant Disorders' that is meticulously upheld. Furthermore, dental surgeons overseeing dental clinics not directly managed by the Provincial Director of Health Services should also ensure the maintenance of all pertinent registers associated with oral cancer and OPMD. It is imperative to send regular reports and updates to the relevant authorities, ensuring the dissemination of crucial information for monitoring and strategic planning purposes.

Follow up Treatment Schedule

Throughout the follow-up period, it's essential to maintain continuity in adhering to the instructions provided by the Oral and Maxillofacial (OMF) unit. Emphasis should be placed on consistently monitoring and addressing various aspects, notably:

1. **Habit intervention:** Continuously work towards stop harmful habits.
2. **Re-emphasis on Risk Factors:** Reinforce education on identified risk factors.
3. **Dietary Advice and Healthy Diet:** Provide ongoing guidance on dietary habits for better oral health.
4. **Improving Oral Hygiene/Care:** Continue efforts to enhance oral hygiene practices.
5. **Holistic Approach to General Health:** Consider the patient's overall health and well-being.
6. **Monitoring Symptoms Suggestive of Malignancy:** Vigilantly assess for symptoms like unexplained weight loss, persistent cough, pain, and promptly refer for further evaluation when necessary.

7. Monitoring lesions

1. Measure the size of the Lesion.
2. Morphology
3. Topography
4. Induration
5. Presence of New Lesions
6. Measure Mouth Opening
7. Lymphadenopathy

The follow-up process must prioritize these crucial elements to ensure a thorough approach to the management of patients at risk of developing oral malignancies.

The general dental practitioner plays a pivotal role in this regard, as they are responsible for early detection through comprehensive screenings and meticulous examinations, timely referrals to specialists, continuous patient education on risk factors, habits, and oral hygiene practices. Furthermore, it is essential that diligent follow-up care be provided to prevent disease progression and improve overall oral health outcomes.

References;

01. Amarasinghe, H.K., Johnson, N.W., Lalloo, R., Kumaraarachchi, M., Warnakulasuriya,S.(2010). Derivation and validation of a risk- factor model for detection of oral potentially malignant disorders in populations with high prevalence. Br J Cancer, 103(3) p.303-09.

02. Amarasinghe, A.A.H.K., Usgodaarachchi, U.S., Johnson, N.W., Lalloo, R., Warnakulasuriya,S.(2010). Betel-quid chewing with or without tobacco is a major risk factor for oral potentially malignant disorders in Sri Lanka: case-control study.Oral Oncol, 46 p.297-30

03. Gupta, B., Ariyawardana, A., Johnson, N. W. (2013). Oral Cancer in India Continues in Epidemic Proportions: Evidence Base and Policy Initiatives. International Dental Journal, 63 (1)p.12–25

04. Kadashetti, V., Shivakumar, K. M., Chaudhary, M., Patil, S., Gawande, M., Hande, A. (2017). Influence of risk factors on patients suffering from potentially malignant disorders and oral cancer: A case–control study. Journal of Oral and Maxillofacial Pathology, 21(3) p. 455-456.

05. National Cancer Control Programme. National guidelines for management of Oral Potentially Malignant Disorders for Dental and Medical practitioners. 2022 National Cancer Control Programme. Available at: http://www.nccp.health.gov.lk

06. Saman Warnakulasuriya,Omar Kujan et al (2021)Oral potentially malignant disorders: A consensus report from an international seminar on nomenclature and classification, convened by the WHO Collaborating Centre for Oral Cancer.Oral Disease,27(8)1862-1880.

07. Sankaranarayanan, R., Ramadas, K., Amarasinghe, H., Subramanian, S., Johnson, N. (2015) OralCancer: Prevention, Early Detection, and Treatment. In: Cancer: Disease Control Priorities (3 rd edition). Washington (DC).

08. Sankaranarayanan, R., Ramadas, K., Thomas, G., Muwonge, R., Thara, S. (2005). Effect of Screening on Oral Cancer Mortality in Kerala, India: A Cluster- Randomised Controlled Trial.The Lancet, 365 (9475) p.1927–33.