

FOR NON-ORAL HEALTH PROFESSIONALS

# Oral Potentially Malignant Disorders and Oral Cancer (OPMD)

## Background

Oral potentially malignant disorders (OPMD) represent a range of oral lesions and conditions which have the potential to transform into lip and oral cavity cancers. Conditions such as leukoplakia (white lesions), erythroplakia (red lesions), erythroleukoplakia (mixed), oral lichen planus, oral submucous fibrosis, actinic cheilitis, graft-versus-host disease, and some inherited disorders are among those classified as OPMD. Early diagnosis of these conditions will reduce morbidity and mortality.<sup>1</sup>

Oral cancer is a group of malignant neoplasms (primarily squamous cell carcinomas) that affect the lips, gingiva, the area behind the molars, the hard palate, the floor of the mouth, and the anterior two-thirds of the tongue. In 2020, there were 377,713 new cases and 177,757 deaths worldwide attributed to oral cancer, according to the International Agency for Research on Cancer (GLOBOCAN).<sup>2</sup> The populations of South Central Asia and the Melanesian islands of Fiji, Vanuatu, Solomon Islands, and Papua New Guinea have the highest age-adjusted incidence and mortality rates for both men and women. India accounts for approximately 36% of all new cases of oral cancer and 42% of all deaths associated with oral cancer.<sup>2</sup>



## Aetiology and risk factors

The incidence of oral cancer increases with age, suggesting that cumulative damage from exposure to carcinogenic substances and reduced immunological surveillance play a role in oral cancer aetiology.

Nearly 95% of oral cancers occur in adults aged 40 years and over, with diagnosis typically at around 60 years of age. Tobacco use, alcohol consumption, UV exposure, areca nut and betel quid chewing (with or without added tobacco) are significant risk factors for lip and oral cavity cancers.<sup>3</sup>

## Signs and symptoms

Patient discomfort is the most common initial symptom. Unfortunately, at this point the oral cancer may be already at an advanced stage. Other symptoms of oral cancer include difficulty or pain when swallowing, ear pain, unilateral paresthesia or dysesthesia, and teeth mobility. Signs can include oral bleeding or the presence of red, white, or mixed ulcerations that fail to heal within three weeks. The ulceration's surface can be irregular, indurated, flat or elevated. Other signs include impaired tongue or jaw movement, enlarged and hard-textured neck lymph nodes that become fixed to the surrounding tissue in later stages, and weight loss.<sup>4</sup>

## Diagnosis

An oral cancer diagnosis is primarily histopathological. The expert panel convened by the American Dental Association Council on Scientific Affairs and the Center for Evidence-Based Dentistry stated in its latest clinical practice guideline for the evaluation of OPMD, that adult patients presenting with a clinically evident and potentially malignant oral mucosal lesion or other related symptoms, should have a biopsy of the lesion or immediate referral to a specialist.<sup>5</sup> This statement emphasizes the importance of a rapid diagnosis and the avoidance of adjunct or screening tools. Any lesion that has not healed within three weeks should be biopsied.

## Treatment

The primary goal of oral cancer treatment is to maximize the chances of survival and to avoid recurrence while minimizing the impact of undesirable associated morbidity and reduction in quality of life. Several factors affect the choice of treatment, including the location and size of the primary lesion, whether metastases are present, and the disposition of the patient. The first line of therapy usually includes a combination of surgery and radiation therapy, which could be augmented with chemotherapy and immunotherapy.<sup>4</sup>

## Prevention

Oral cancer prevention includes a combination of interventions to target the most common risk factors. Primary prevention focuses on strategies to promote tobacco cessation and eliminate the use of other carcinogenic substances, such as betel quid products and alcohol. The implementation of oral cancer screening strategies varies around the world. Oral examination of asymptomatic adults by other healthcare professionals is potentially beneficial in countries with a high incidence of oral cancer. In India, for example, oral examination of high-risk people could result in more benefit (e.g. a reduction in mortality and incidence of advanced oral cancer) than harm (e.g. overdiagnosis and overtreatment) and be more cost-effective than in settings with a lower incidence of oral cancer.<sup>6</sup>

# Oral healthcare delivery framework and oral cancer

## Ask

- Obtain a focused medical history and ask for information regarding exposure to carcinogenic substances like tobacco and alcohol, other potential risk factors such as exposure to UV light and explore possible OPMD symptoms.

## Look

- Other healthcare professionals trained in clinical (visual and tactile) examination of the mouth should pay attention to any OPMD on the lips and mucosa of the oral cavity and include a thorough examination of the tongue and the floor of the mouth. Examine neck lymph nodes.
- Collect patient-reported information related to lesions and document a clinical description of any findings.
- Identify any suspicious signs and symptoms: ulceration or induration on the lip or the mucosa of the oral cavity that failed to heal within three weeks; the presence of any lump in the lip, oral mucosa, or neck; persistent pain or difficulty in eating or swallowing for three weeks or more; the presence of white, red, or mixed lesions or other OPMD in the lip and oral cavity (tongue, hard palate, gingiva, floor of the mouth); sudden tooth mobility not attributed to periodontal disease.

## Decide

- Other healthcare professionals should decide whether the patient has any oral cancer risk factors that can be minimized or eliminated.
- Other healthcare professionals with training in oral cancer screening should decide whether an identified lesion is innocuous, an OPMD, or other suspicious lesion.
- Other healthcare professionals without oral cancer screening training decide whether a referral is needed to further examine the lesion they identified.

## Act

- In the presence of risk factors, counsel the patient on behaviour change strategies (e.g. obtaining counselling on smoking and alcohol cessation).
- If an OPMD or a suspicious lesion is identified, refer the patient for a biopsy.
- Inform the patient about the nature of the lesion and the urgent need for establishing a definitive diagnosis via biopsy. Emphasize that early detection and treatment improve prognosis.
- Closely follow up with the patient to avoid delays between detection of symptom and definitive diagnosis.

## Document

- Document any advice given to the patient to reduce risk factors during the consultation.
- Document all the features of suspected OPMD reported by the patient during the medical history taking and clinical examination. Obtain a picture of the lesion to identify possible changes and assess future progression.

## This factsheet is supported by:



## References

1. Warnakulasuriya S. Clinical features and presentation of oral potentially malignant disorders. Oral Surg Oral Med Oral Pathol Oral Radiol 2018;125(6):582-90.
2. Sung H, Ferlay J, Siegel RL, et al. Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. CA Cancer J Clin 2021;71(3):209-49.
3. Global oral health status report: towards universal health coverage for oral health by 2030. Geneva: World Health Organization; 2022.
4. Watters AL, Hansen HJ, Ashish PA, Epstein J. Head and Neck cancer. In: Glick M, Greenberg MS, Lockhart PB, Challacombe SJ, editors. Burket's Oral Medicine. 13th ed: Wiley-Blackwell; 2021. p. 211-57.
5. Lingen MW, Abt E, Agrawal N, et al. Evidence-based clinical practice guideline for the evaluation of potentially malignant disorders in the oral cavity: A report of the American Dental Association. J Am Dent Assoc 2017;148(10):712-27. e10.
6. Bouvard V, Nethan ST, Singh D, et al. IARC Perspective on Oral Cancer Prevention. New England Journal of Medicine 2022;387(21):1999-2005.

## Other Resources

FDI World Dental Federation. Oral Health and Cancer: Collaborative Care. Available from: <https://www.fdiworlddental.org/oral-health-and-cancer-collaborative-care> [Accessed on 12 March 2024].

FDI World Dental Federation. Educational module for other healthcare professionals. Available from: [Educational Module for Other Healthcare Professionals | FDI \(fdiworlddental.org\)](#) [Accessed on 12 March 2024].

This fact sheet was written by external experts Assoc. Prof. Dr Alonso Carrasco-Labra and Prof. Dr Michael Glick, University of Pennsylvania, School of Dental Medicine, who developed the content under the guidance and review of FDI's Public Health Committee.

### Disclaimer:

The provided fact sheet offers general information and may require adaptation to suit the unique scope of work and regulations governing non-dental healthcare professionals in each country.

The Educational Module for Other Healthcare Professionals Project is supported by **HALEON**