Evaluation and Management of Oral Potentially Malignant Disorders

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KEYWORDS

• Oral potentially malignant disorders • Leukoplakia • Malignant transformation
• Risk assessment • Screening • Management

KEY POINTS

- Oral potentially malignant disorders (OPMDs) refer to epithelial lesions and conditions with an increased risk for malignant transformation; oral leukoplakia is the most commonly encountered.
- Overall, OPMDs have a low risk for malignant transformation, yet the challenge is the difficulty to reliably identify and predict which patients with OPMDs are at the highest risk for malignant transformation.
- Future research is needed to elucidate the molecular aspects of OPMDs, to improve current diagnostic strategies, leading to personalized management.

INTRODUCTION

Oral potentially malignant disorders (OMPDs) refer to all epithelial lesions and conditions with an increased risk for malignant transformation (MT).[1] OMPDs include different entities; oral leukoplakia (OL) is the most common OPMD[2] whereas oral erythroplakia (OE) is relatively uncommon (**Box 1**).[1,3] OL is defined as a "white plaque of questionable risk having excluded (other) known diseases or disorders that carry no increased risk for cancer."[2] It is a clinical diagnosis based on the history and examination findings and not based on specific histopathologic features. Clinically, OL is typically unifocal and presents as 2 clinical phenotypes: homogenous and nonhomogeneous. The homogeneous type typically appears as a flat, thin, uniform white plaque with or without fissuring[4] (**Fig. 1**). The nonhomogeneous type is nonuniform in appearance and may be subclassified into several different types, including

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Box 1
Oral potentially malignant disorders

OL
- Homogeneous
- Nonhomogeneous

OE

PVL

OSMF

Palatal lesions in reverse smoking

Actinic keratosis

OLP

Discoid lupus erythematous

Dyskeratosis congenita

erythroleukoplakia a mixed red and white lesion but not predominantly white (Fig. 2), a speckled leukoplakia/leukoerythroplakia a mixed red and white lesion but predominantly white (Fig. 3), and nodular or verrucous leukoplakias (Fig. 4). In addition, OL may have a multifocal presentation, known as proliferative verrucous leukoplakia (PVL), which can have homogeneous and nonhomogenous features[1] (Fig. 5). OE is defined as "any lesion of the oral mucosa that presents as bright red velvety plaques which cannot be characterized clinically or pathologically as any other recognizable condition"[1,5] (Fig. 6).

Two other OPMDs that have a distinctly different pathogenesis compared with OL and OE include oral submucous fibrosis (OSMF) and oral lichen planus (OLP). OSMF is a chronic, insidious inflammatory disease stemming from areca nut chewing and characterized by a loss in fibroelasticity of the oral mucosa and submucosa.[6] OLP is a chronic inflammatory disease, characterized by a T lymphocyte–mediated immune response against epithelial basal cells, causing basal cell degeneration, which may result mucosal erosion and ulceration and commensurate oral soreness.[7] OPMDs may be exhibit epithelial dysplasia or, less frequently, oral squamous cell carcinoma

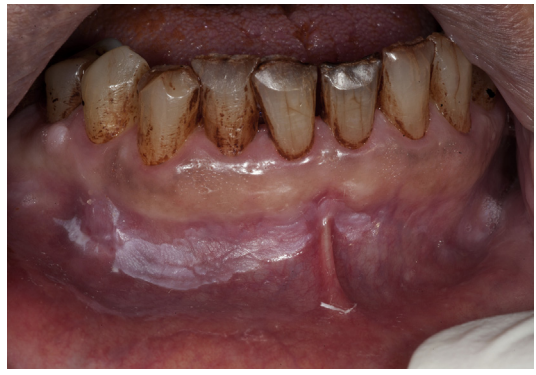

Fig. 1. Leukoplakia (homogeneous). A 51-year-old Asian woman with areca nut habit (paan). Note the extrinsic staining on teeth secondary to the habit. Definitive diagnosis was mild epithelial dysplasia.