

Abstract

BACKGROUND

Oral malignancy (OM) and oral potentially malignant lesions (OPMLs) constitutes a major portion of cancers seen in developing countries because of its high prevalence and high mortality rate. Virtually all OMs are preceded by potentially malignant oral disorders such as oral leukoplakia, erythroplakia, oral lichen planus, and oral submucous fibrosis. Shammah is a type of smokeless tobacco product that is widely consumed in the Arabian Peninsula, especially in Yemen. However, there is limited data on the association between shammah use and the development of OM and OPMLs, especially in Sana'a, Yemen.

OBJECTIVE

The aims of this study were to investigate the relationship between shammah use and the risk of developing OMs and/or OPMLs; to assess the incidence of these disorders among Yemeni dental patients who are shammah users.

METHODS

This case-control study was conducted at the Faculty of Dentistry, Sana'a University, between 2017 and 2020. A total of 102 participants were divided into two groups. Fifty-one patients with histopathologically confirmed OMs or OPMLs (Group I) and 51 healthy controls (matched for age and gender — Group II) were recruited. Demographics and information about using shammah and khat were collected using a structured questionnaire. Descriptive analysis was first performed, followed by multiple logistic regression to derive odds ratios (ORs) and 95% confidence intervals (CIs).

RESULTS

Most participants in Group I were males (72.5%), and almost half of the study sample (47.1%) belonged to the age group 51-65 years. Homogenous leukoplakia and oral squamous cell carcinoma were the most prevalent lesions within Group I, showing a prevalence of 49% and 37.3%, respectively. Approximately 74.5% of study participants in Group I were shammah users. Of those, 94.7% reported using white shammah ≥ 4 times/day. Shammah usage was reported in all patients with epithelial dysplasia (100%) and in 83.3% of patients with well-differentiated squamous cell carcinoma. Shammah users showed a significant risk of developing OMs and /or OPMLs with an OR of 142.0 (95% CI).

CONCLUSION

Shammah use is a strong risk factor for the development of OM and/or OPMLs in Yemen. Therefore, there is an imperative need for public health programs to reduce the prevalence of these habits.

KEYWORDS: Shammah, Oral potentially malignant lesions, Squamous cell carcinoma