

How Does the Diagnosis of Potentially Malignant Oral Disorders Affect Smoking Behaviors and Alcohol Use? Protocol of a Retrospective Cohort Study

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Introduction

Oral potentially malignant disorders (OPMD) have a 4.5% prevalence around the world. Those disorders have 17 to 35% potential of malignant transformation into invasive oral cancer and an annual rate of 0.7 to 2.9% of malignant transformation. Smoking and/or alcohol consumption is a major risk factor. Sex, type of lesion, status of tobacco products and alcohol consumption, presence of epithelial dysplasia are risk factors for malignant transformation of an OPMD.

Our goals are:

- 1- Describe the changes in smoking and alcohol consumption in patients diagnosed with OPMD and at 4 years follow-up (f/u).
- 2- Explore the association between patient's demographics, initial diagnosis (e.g. severity of dysplasia, size, location) and its treatment (excision or abstinence with surveillance) and patient's changes in oral habits, as compliance with medium-term smoking and alcohol cessation.
- 3- identify if there's an association between post-treatment tobacco and alcohol use and the rate of the OPMD malignant transformation, recurrence, and mortality.

Methodology

Study design: Retrospective cross-sectional study on patients treated for an OPMD at the Department of Oral and Maxillofacial Surgery (OMFS), at the Montreal General Hospital, Montreal, Canada

Data collection: demographics, lifestyle habits at the time of diagnosis and during f/u, which includes tobacco smoking and alcohol consumption, clinical and histopathological data on the initial lesion and its evolution.

Exclusion criteria: patients with missing data on smoking/alcohol habits at diagnosis and at 4 years f/u

Statistical analysis includes:

- Descriptive statistics: participants' sociodemographic and clinical diagnosis characteristics.
- Calculation of: Proportions of smokers and alcohol drinkers, at diagnosis and at 4 years f/u, the changes in smoking and alcohol consumption status between diagnosis and 4 years post-treatment, in all participants, and by type of OPMD, recurrence/malignant transformation rate by smoking and alcohol consumption habits at diagnosis and at 4 years f/u.
- Univariate and multiple logistic regression analysis will be conducted to
 - 1) Identify the factors associated with compliance with long-term smoking and alcohol consumption cessation.
 - 2) Analyze the association between non-compliance with smoking and alcohol consumption cessation and OPMD recurrence and malignant transformation.

The project just obtained the approval of the Research Ethics Office of the MUHC Research Institute, so we present only the research protocol and preliminary data are collected

References

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Results

82 patients were identified to be potentially eligible for the study, 3 were excluded due to unavailable data on smoking/alcohol consumption status at the moment of diagnosis or f/u. Results and analysis will be presented in graphs and tables in order to demonstrate:

- The tobacco and alcohol consumption habits at dx and up to 4 years of f/u
- Changes in habits by OPMD type/location/dysplasia
- Changes in habits and recurrence rates or malignant transformation rates
- Compare the tendency of alcohol vs tobacco cessation

Since the study was approved only few weeks ago, only the research protocol and preliminary data are presented.

Example of table 1:

Total # of pts (n)	79	Tobacco consumption status				Alcohol consumption status			
		At Dx		At f/u		At dx		At f/u	
Age (mean SD)	-	Never-smoker	-	Never-smoker	-	No-consumer	-	No-consumer	-
Gender	-	Former smoker	-	Former smoker	-	Occasional consumer	-	Occasional consumer	-
Male	-					Moderate consumer	-	Moderate consumer	-
Female	-	Current smokers	-	Current smokers	-	Heavy consumer	-	Heavy consumer	-

OPMD diagnosis	
Mild dysplasia	-
Moderate dysplasia	-
Severe dysplasia	-

Discussion

The aim of this study is to provide healthcare providers with data on tobacco and alcohol consumption habits of patients with OPMD at diagnosis and after 3-5 years of f/u, and identify factors that contribute to behavioral changes. This can help with identification of targets in treatment, and improve the habits of the patients of this OPMD population. This can also help create preventive strategies to prevent recurrence, dysplasia level progression and malignant transformation.

Although, there are also some limitations to be expected, such as the size of the sample or number of patients that can be reduced after more thorough analysis. Limitations such as inconsistent or missing information in the data or poor compliance to f/u appointments attendance from patients are also to be expected.

Conclusion

The association between tobacco/alcohol consumption with oral malignant and premalignant disorders emphasizes the importance of motivational interviews on cessation of consumption in patients. Quitting tobacco and alcohol products can have benefits reducing progression, recurrence and malignant transformation of OPMD.

Future directions

It would be pertinent to evaluate the possible reasons for alcohol/tobacco habit cessation and/or continuation.

Acknowledgements

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