Mouth self-examination as a screening tool for oral potentially malignant disorders among a high-risk Indigenous population

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Abstract
Objectives: To evaluate the efficacy of mouth self-examination (MSE) as a self-screening tool for detection of oral mucosal lesions among an Indigenous population in Malaysia at high risk for oral premalignant and malignant disorders.

Methods: Two villages were selected as the sampling frame based on prevalence of tobacco and betel quid chewing habit. Respondents were asked to check their mouth for presence of lesion or abnormalities. Education on oral cancer, including MSE, was provided. Subsequently, respondents were asked to perform MSE. Finally, a clinical oral examination (COE) was done by a specialist and the presence of oral mucosal lesions was recorded.

Results: Almost 64.5 percent of respondents exhibited high levels of difficulty and low mucosal visualization and retracting ability, whereas 3.0 percent demonstrated high attention level when performing MSE. Prevalence of oral mucosal lesions was 59.0 percent, whereas the prevalence of oral potentially malignant disorders (OPMDs) was 9.0 percent. Detection of oral lesions by respondents using MSE was lower than detection by the gold standard. Sensitivity and specificity of MSE for detection of all types of lesions were 8.6 and 95.0 percent respectively. When analyzing each lesion type separately, MSE was found to be most sensitive in detection of swellings (10.0 percent), and most specific in identifying white lesions (97.8 percent). For detection of OPMDs, although specificity was high (98.9 percent), sensitivity (0 percent), and +LR (0) was poor.

Conclusion: MSE is not an effective self-screening tool for early detection of potentially malignant lesions for this population.

Introduction
The burden of oral cancer and its impact on patients, their families, and the community is high with severe morbidity and mortality (1). Oral cancer is avoidable with the elimination of established habits such as tobacco consumption, excessive alcohol intake, and betel quid chewing (2). Oral cancer can appear as either white, red, ulcerated, or proliferative lesions or swellings. Apart from arising independently,