Journal of Family Medicine

Open Access

Austin Publishing Group

Research Article

Outcome of Oral Cancer Screening in High Risk Group at Outpatient Department of ENT and Family Medicine Department in Rajavithi Hospital

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Received: July 14, 2020; **Accepted:** November 13, 2020; **Published:** November 20, 2020

Abstract

Introduction: Oral cancer screening is one of the strategy to improve survival of oral cancer patients. The opportunistic screening for high-risk population in hospital other than dentistry department is feasible.

Objective: To study the outcome of oral cancer screening in family medicine and otolaryngology clinic.

Material and Method: The study performed at otolaryngology and family doctor clinic during 1 Oct 2018- 30 Jan 2020 after permission from Ethic committee of Rajavithi Hospital. Inclusion criterias were 40 years of age or older with history of tobacco usage, alcohol consumption and betel quid chewing as personal habit by continuous use at least 6 month regularly. Visual screening was performed by ENT or general practitioner all the mucosa of oral cavity.

Result: The study population were 482 cases with history of habitual smoking, alcohol drinking or betel nut chewing. There were male in 91.3% and mean age of 54.7±12.9 yrs. The opportunity in hospital for oral cancer screening were appointment for follow up 49%, walk-in with symptom 43%, companion with patient 5.2%. Abnormal lesion found 7.9%, which was leukoplakia that defined as premalignant lesion in 25 cases.

Conclusion: Visual oral cancer screening for high-risk group by opportunistic screening in general practice is feasible and benefit for management of precancerous lesion, which is a strategy to improve survival oral cancer for early management and detection.

Keywords: Visual oral cancer screening; High-risk screening; Opportunistic screening; Early detection

Introduction

Oral cancer is one the most common cancer in Thailand, which Cancer Registry reported the age-standardized incidence rate in 2015 of 5.5 and 4.3 per 100,000 in male and female respectively [1]. This is the cause of death for Thai population reported in 2014 of 1.4 percent. The important risk factors are tobacco and alcohol which rates of consumption has not change in past 10 years. The oral cancer presented at OPD ENT mostly advanced stage. The survival of oral cancer has not been change despite advanced in surgical and radiation technique. Early detection and screening by Sankaranarayanan [2,3] for oral cancer has shown to be effective in reduced mortality and morbidity. The visual screening is the method that was reported to be the tool in India and others reported later to support the evidence [4-8].

Speight et al., [6] demonstrated using a simulated model that an oral examination of high-risk individuals may be a cost-effective screening strategy. Most of Oral cancer screening reported in literature performed by dentist [7-9] but few by otolaryngologist or family doctor who has opportunity in oral exam too. Therefore, the aim of this study was to evaluate the feasibility of oral cancer screening in ENT clinic and general practice clinic and the result of detection.

Materials and Methods

After permission from Ethic committee of Rajavithi Hospital. The study performed at otolaryngology and family doctor clinic during 1 Oct 2018-30 Jan 2020. Inclusion criteria's were 40 years of age or older with history of tobacco usage, alcohol consumption and betel quid chewing as personal habit by continuous use at least 6 month regularly. Visual screening was performed by ENT or general practitioner all the mucosa at lip, floor of mouth, buccal, tongue, hard palate, retro molar trigone and alveolar ridge. The abnormal as leukoplakia, erythroplakia (red lesion) or ulcer, tumor were recorded as positive finding. The patients who had the history of head and neck cancer were excluded. Statistic analysis This study used descriptive statistics for general data presentation.

Results

The study population were high-risk group for oral cancer which were male in 91.3% and mean age of 54.7±12.9 yrs. Cigarette smoking of 83.6%. The quantity of smoking was 8.82 pack-year. Number of pack year was of smoking was 8.82 pack-year with mean duration

Citation: Boonyapisomparn R and Chindavijak S. Outcome of Oral Cancer Screening in High Risk Group at Outpatient Department of ENT and Family Medicine Department in Rajavithi Hospital. J Fam Med. 2020; 7(8): 1225.

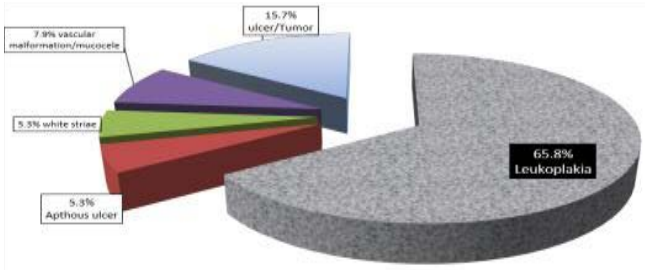

Figure 1: Characteristic of abnormal lesion.

of exposure 16,1 yrs. More than half of population (58.3%) quit smoking with duration of 14.9±12 yrs. The population of habitual alcohol consumption was 82.9% with mean duration of 17.1±12 yrs and still have routine alcohol drinking in 59.7%. The more exposure of both cigarette smoking with habitual alcohol consumption 67.8%. Only 1.5% of population that chew betel nut. The opportunity in hospital for oral cancer screening were appointment for follow up of chronic disease such as hypertension, diabetes mellitus, dyslipidemia etc. 49%, walk-in with symptom 43%, companion with patient 5.2% (Table 1). Abnormal lesion found 7.9%, which was leukoplakia, which defined as premalignant lesion in 25 cases (Figure 1). The biopsy was performed with consent in one case with pathological report of pseudoepitheliomatous hyperplasia. Tumor or ulcer in oral cavity found in six cases, which were sialolith one case, pyogenic granuloma one case, ulcer from irritation : ulcer heal post dental/denture extraction 2 case, ulcer heal after medication one case, odontogenic tumor 1 case. No malignancy found in this study. No statistically significant difference between the group that found abnormal lesion to normal finding except the duration of smoking (Table 2).

Table 1: Data of population.

	Number	%
Gender		
Male	442	91.7
Female	40	8.3
Age		
(mean±S.D.)	54.7±12.9	
(Min-Max)	(20-87)	
Cigarette Smoking	403	83.6
Number pack-year (mean)	10.8±12.7	
Min-Max	0.05-90	
Current smoking	168	
Duration of smoking	16.1 yrs	41.7
Duration of stop smoking (yrs)	(0.6-51)	
(mean±S.D.)	14.9±12.0	
Median (Min-Max)	10 (1-54)	
Habitual Alcohol consumption	400	82.9
Duration (yrs) (mean±S.D.)	17.12±12.14	
Median (Min-Max)	12.50 (1-50)	
Current alcohol drinking	239	59.7
Duration of stop alcohol drinking (mean±S.D.)	10.55±10.09	
Median (Min-Max)	8 (1-50)	
Cigarette Smoking with habitual alcohol consumption	327	67.8
Betel Nut chewing	7	1.5
Opportunity in Hospital		
Appointment	236	49.0
Walk-in with symptom	209	43.4
Companion with patient	25	5.2
Others	12	2.4
Finding		
Abnormal lesion	38	7.9
Normal	444	92.1

Discussion

Until now the modality of treatment of oral cancer are developed by surgical technique that excised the large tumor with free flap reconstruction to the radiation with chemotherapy but the survival of oral cancer is not improved especially for advanced stage. The strategy have to be changed from treatment after the symptom progression to early detection and prevention before being malignancy. Oral cancer screening was reported by Sankaranarayanan [2,3] that visual oral cancer screening reduce mortality in high risk group by early detection. In India, the overall incidence of oral cancer was 9.1 per thousand population compared with 4.1 per thousand population from Globalcan report. The screening by opportunistic was found to be feasible for low incidence of oral cancer. Most of Opportunistic found by dentist but the high-risk population attend every outpatient department. In 2006, Yang KY et al., [5] reported role of otolaryngologist in oral cancer screening in Taiwan and found 3.9% positive lesion from 5,825 cases of screening which biopsy revealed malignancy in 76.2% of positive finding. Because of the research in otolaryngology clinic which oral cancer patient may attend make the incidence of oral cancer so high and did not report of stage that found which the aim of visual screening is the detection of early stage. In this report, the author conducted the oral cancer screening at general outpatient clinic by asking informed consent in the waiting area. The enrollment found other than the patients attend OPD but the companion of patients were enrolled 5.2% who had risk factors of oral cancer. The screener were otolaryngologists and general practitioners. Thirty-nine patients (7.9%) were recorded as abnormal finding. Compare with the finding by dentist [9,10] that reported more specific lesion categories than in this report due to specific finding of premalignant only by examiner. The dentist reported of denture stomatitis, Fordyce granules and leukoedema. Friction keratosis, which was not reported in this study. Consideration of Pre-malignant lesion which is leukoplakia in the patients with risk factors that long term changes to be malignancy found in 25 cases (5.2%) whose the dental etiology of mucosal lesion in 5 cases that all management initiate by physician who screen at that time not by patients who had the lesion. The benefit of prevention of oral cancer by visual screening without sophisticate equipment for examination can perform at OPD by screening of risk factors when attend the clinic and a few minute for oral exam and use only flashlight or headlight and tongue blade which is already available in general clinic. This prediction may have to find the cost effectiveness for the value of the management before changing of the lesion to cancer. Number of patients with precancerous lesion and early stage may be reported more than advanced stage cancers by examination of all patients with risk factors that have opportunity in hospital.

The limitation is that the study was done in the hospital in capital city which may not represent population in the province that may have the different of risk factors such as betel nut chewing. No malignancy found in this study because most of the oral cancer cases were refered to otolaryngologist clinic which was excluded from the study and a few of patient with symptom that attend the tertiary care

Table 2: characteristic between normal and abnormal finding groups.

	Total	Abnormal		Normal		*p*-value
		Number	%	Number	%	
Gender						0.758
Male Female	442 40	36 2	8.1 5	406 38	91.9 95.0	
Age (mean±S.D.)		53.26±12.01		54.86±13.02		0.467
Cigarette smoking						0.725
Current /History of cigarette smoking No History of cigarette smoking Number pack-year Duration of smoking	403 79	31 7 12.81±16.30 7.5 (0-6-7.5) 20.27±13.18	7.7 8.9	372 72 10.63±12.44 6 (0-90) 15.89±11.23	92.3 91.1	 0.363 0.043*
Habitual Alcohol Drinking						0.112
Current/History of alcohol drinking No History of alcohol drinking Duration of Alcohol Drinking	400 82	28 10 19.76±14.77	7.0 12.2	372 72 16.89±11.88	93.0 87.8	 0.257
Cigarette smoking and Alcohol drinking						0.171
Current/History of Cigarette smoking and Habitual alcohol drinking No History of cigarette smoking and alcohol drinking	327 155	22 16	6.7 10.3	305 139	93.3 89.7	
Betel Nut Chewing						0.439
Current/History of Betel Nut chewing No History of Betel Nut Chewing	7 475	1 37	14.3 7.8	6 438	85.7 92.2	
Opportunity in Hospital						0.43
Appointment Walk-in with symptom Companion with patient Others	236 209 25 12	19 19 0 0	8.1 9.1 0 0	217 190 25 12	91.9 90.9 100.0 100.0	

hospital so the screening in the general hospital and large number of cases may find the oral cancer cases.

Conclusion

The visual screening for oral cancer by opportunity attend in hospital is feasible for early detection of precancerous lesion and early stage of cancer in general outpatient clinic and should be considered for new value in quality of care for improved survival of oral cancer patients.

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