

A Pilot Study on Awareness of Oral Cancer among Health Workers in Rural Areas of Telugu Speaking State.

Rajalavenkatasubbaiah¹ RanjithkumarPittala²

Consultant Oral and Maxillofacial surgeon, kadapa, Andhra pradesh
Oral and Maxillofacial Surgeon, practitioner Hyderabad, Telangana

Submitted: 05-06-2023

Accepted: 16-06-2023

ABSTRACT:

Background:

The present study aimed to investigate oral cancer awareness and its related knowledge among health practitioner in rural areas

Methods:

A questionnaire survey was conducted among health professionals (Medical and Dental practitioners) concerning their knowledge of oral cancer.

Results:

A total of 16 questionnaires were framed . Both the practitioners in rural areas. All the respondents knew that smoking ,chewing betel nuts, and dental trauma were risk factors for oral cancer. Both the groups respondents were aware that certain red and white lesion like erythroplakia and leukoplakia are the premalignant. Lesions were risk factor for oral cancer.

Conclusions:

This survey demonstrated their is adequate awareness and knowledge about oral cancer. Among medical and dental practitioners in rural areas. Specific measures should be taken to improve public awareness of oral cancer and its prevention and treatment. Early detection of oral lesions risk factors for oral cancer prompt referral of patient in early stages will helpful in survival of the patients.

KEY WORDS: Oral cancer, dental, medical screening

combination with alcohol [4]. The location of oral cancer affects the anterior tongue, cheek, floor of the mouth, gingiva. Buccal mucosa, retro-molar region, hard and soft palate.

Oral cavity which is easily accessible for self or clinical examination to detect oral premalignant lesions but a lack of knowledge among the general public to differentiate the oral lesions particularly in the rural areas as well the medical or dental practitioners in the rural areas there is still lack of knowledge to diagnose the oral carcinomas. Screening of oral cancer by visual and palpation assessment is still controversial. Early detection of potential malignant lesions is extremely important as a result it will reduce the morbidity and mortality. [5,6]

The typical signs and symptoms of oral cancer includes unhealed oral ulcer, swelling of the mouth, jaw pain, difficult or pain in swallowing, speech difficulty, bleeding from unknown origin [5]. Dentist are liable for determine whether patients are in danger of developing carcinoma, therefore assessing dentist knowledge, opinion, and practice towards carcinoma examination is vital. Awareness of early signs and symptoms and risk factors aid in preventing the disease and minimize the consequences of the problem.

The study aimed to determine the knowledge among dental and medical practitioners in rural areas and experiences regarding oral cancer detection relating to etiology, risk factors and signs of oral cancer.

I. INTRODUCTION:

Oral cancer ranks among the top three among the other cancer in Indian subcontinent country [1,2]. An estimate according to the National Cancer Control Program shows that the total cancer burden in India for all sites will increase from 7,00,000 new cases per year to 14,00,00 cases by 2026 [3]. The prevalence is more among the low socio-income groups because these group of population are subjected to wide exposure to risk factors such as betel nut chewing, tobacco chewing, smoking, poor dental hygiene and diet as well as

II. MATERIAL AND METHODS:

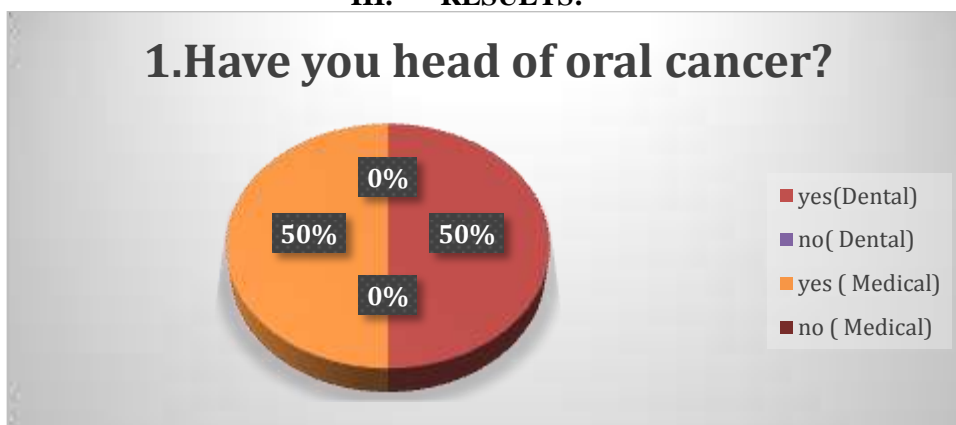
Questionnaire based study conducted through google form which consist of 16 questions regarding the risk factors, etiology, signs of oral malignant lesions. The questions were shared through social media platform the study was conducted for six months from may 2022 to October 2022. The questions were tabulated below (Table.1). The data were retrieved, formulated on to Microsoft excel and the data were evaluated.

s.no	Questionnaire regarding oral cancer.	Response
1	Have you heard of oral cancer?	Yes/ No
2	Have you heard of red lesions in the oral cavity?	Yes/ No
3	Have you heard of white lesions in the oral cavity?	Yes/ No
4	Can oral cancer occur as a mixture of red and white lesions?	Yes/ No
5	Can oral cancer occur without any symptoms?	Yes/ No
6	Do you know the various methods of detecting oral cancer?	Yes/ No
7	Cigarette smoking increases risk of oral cancer?	Yes/ No
8	Consumption of heavy alcohol leads to cancer?	Yes/ No
9	Do you think sharp cusps of the teeth casing irritation to the oral cavity can cause oral cancer?	Yes/ No
10	Does oral cancer spread to other parts of the body?	Yes/ No
11	Do you consider an ulcer not healing by more than 2 weeks is a sign of initial symptoms of oral cancer?	Yes/ No
12	Do you routinely examine the patient’s oral cavity who had deleterious habits for signs of oral cavity?	Yes/ No
13	Have you ever advised patents to avoid the risk factors of oral cavity?	Yes/ No
14	Do you think you are competent to detect oral cancer?	Yes/ No
15	Would you go for screening for oral cancer for yourself?	Yes/ No
16	Do you think oral cancer awareness campaign are effective and they should be carried out?	Yes/ No

Table 1. Questionnaire regarding oral cancer.

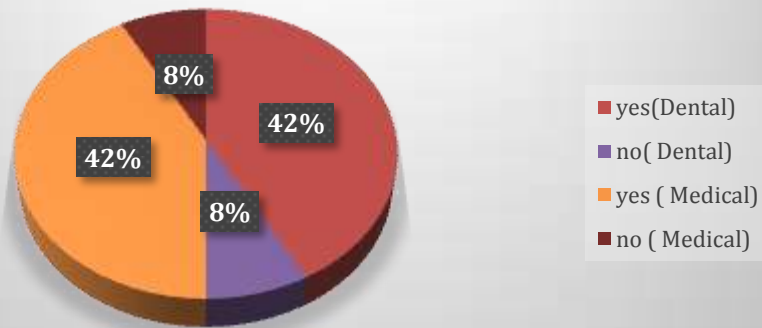
III. RESULTS:

1. Have you heard of oral cancer?



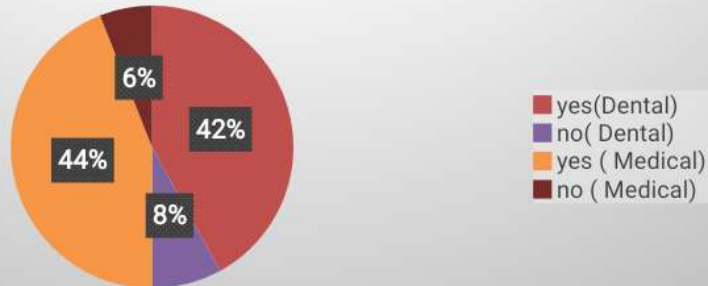
Pie diagram representing the both the health practitioners have a sound knowledge of oral cancer

2. Have you heard of red lesions in the oral cavity?



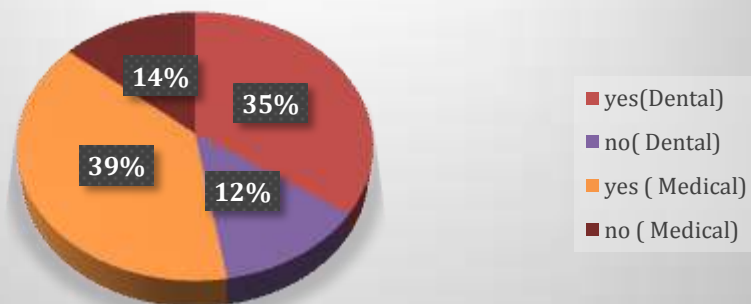
Pie diagram represents the 84% in both the groups had heard of the red lesions of oral cavity, Medical practitioners have informed that erythroplakia is the one which is more responsible for oral carcinoma.

3. Have you heard of white lesions in the oral cavity?



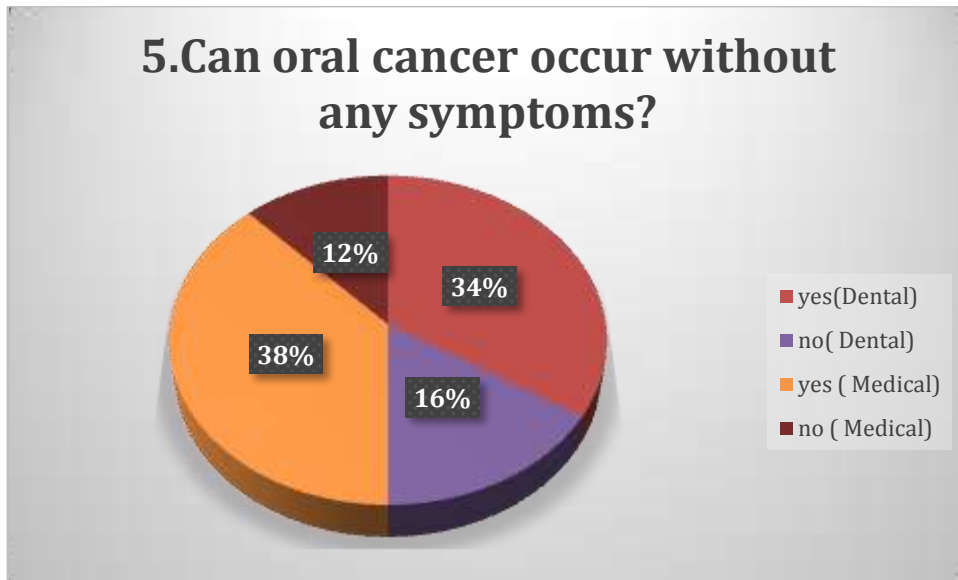
In the above pie diagram 86% of the practitioners in the rural areas know about the oral white lesion. The most common they encounter in their regular practice was candidiasis.

4. Can oral cancer occur as a mixture of red and white lesions?

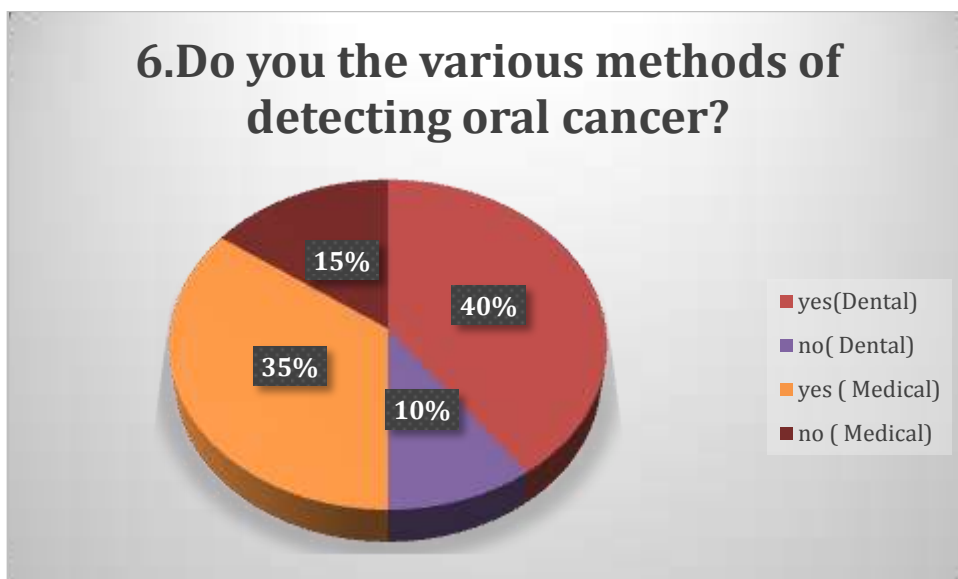


Pie diagram shows that 74% of the practitioners agreed with that both red and white lesions are the predicting source of oral squamous

cell carcinoma. Interestingly 13 percentage of dental practitioners do not agree that both the red and white lesions are a source for oral carcinoma.

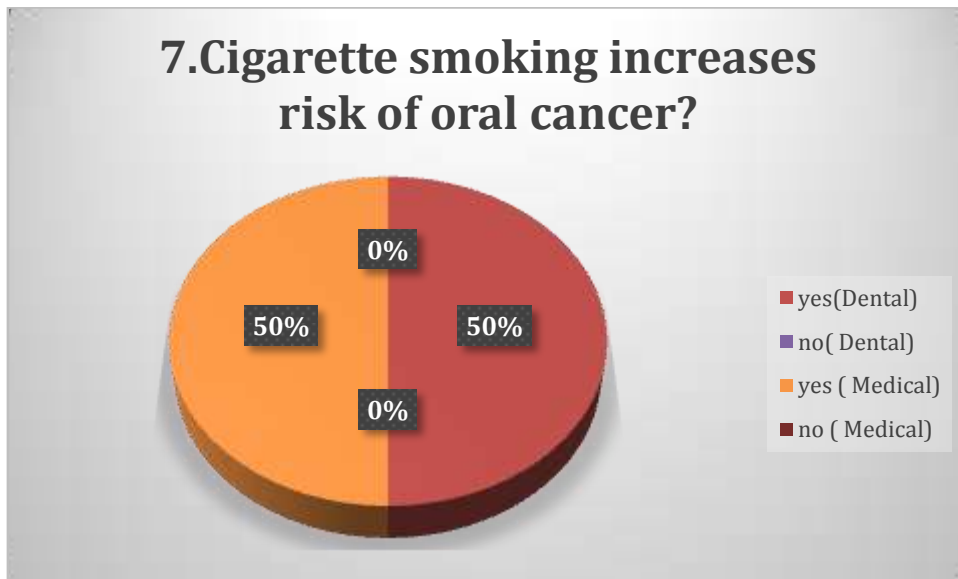


Both (Medical and Dental) practitioners nearly 72% stated that cancer can occur without any symptoms and 28% Stated that oral cancer cannot occur without any symptoms



75% of the practitioners know the recent trends in detection of oral cancer of this 75% every practitioners confirmed that biopsy is the gold standard in diagnosis followed by CT, MRI and PET scan

25% of the practitioners are unaware of the various methods in detection of oral cancer, of this 25% 15% agreed that biopsy is must for any lesion to confirm the diagnosis and the remaining 10% do not know that even biopsy is should be done to rule out about lesions in the oral cavity.



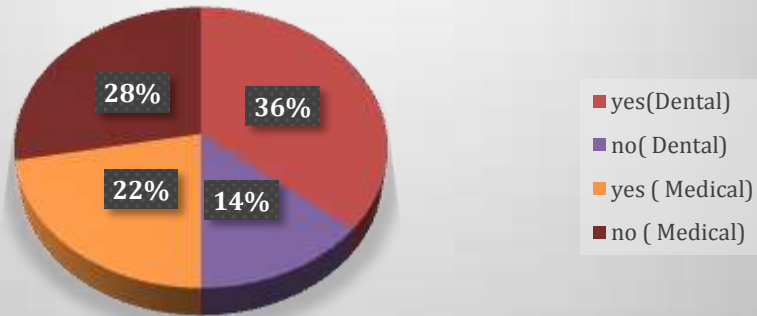
Both the practitioners in the above pie chart agreed that smoking of any form either tobacco or without is harmful and is the main source for prone to cancer.



84% in the above pie diagram stated that consumption of heavy alcohol leads to cancer and 18% of the rural practitioners states that alcohol may be a confounding factor and consumption of

alcohol will damage other organs but not leads to cancer. Smoking with alcohol will increase the risk of developing oral carcinoma.

9. Do you think sharp cusps of the teeth causing irritation to the oral cavity can cause oral cancer?

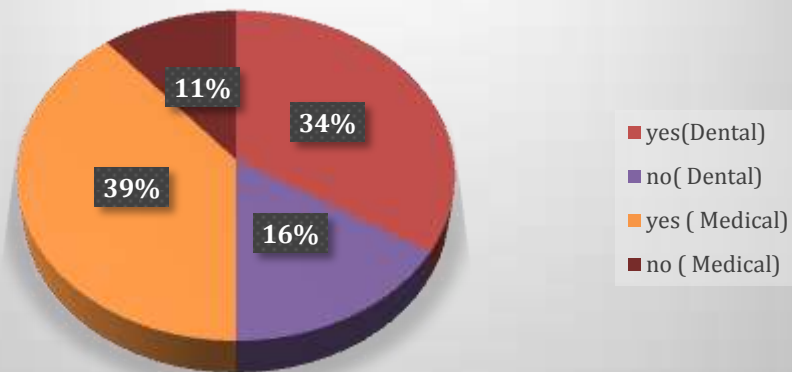


Pie shows that 36 % of dental practitioners knew that any irritating source in the oral cavity such as sharp cusp. Sharp prosthesis which is in continuous contact to oral mucosa and it is irritating to that mucosa will change the normal architecture of the mucosa and change into

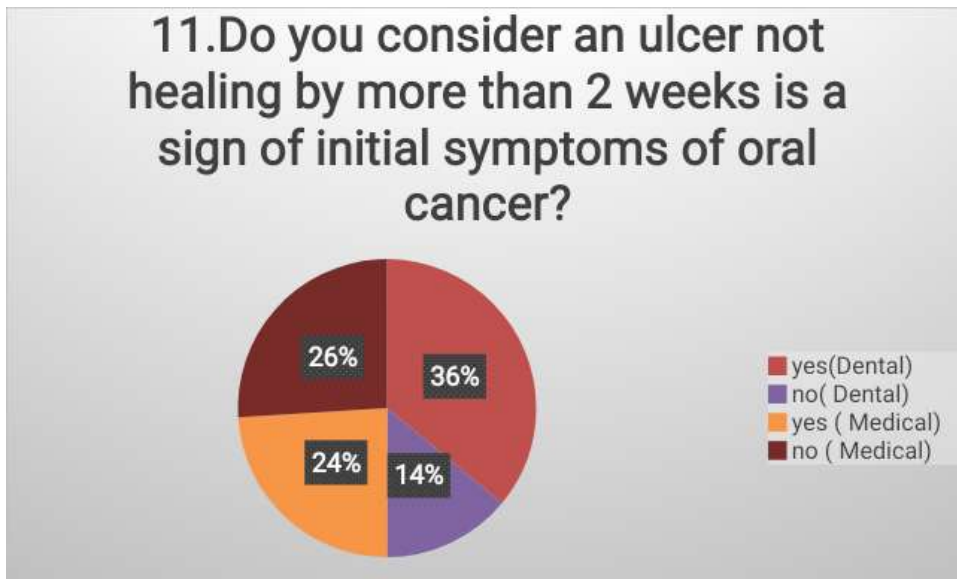
abnormal (displastic) tissue which eventually transforms into oral cancer which is quite agreed with 22% of the medical practitioners.

14% from dental and 28% from medical practitioners have no knowledge about sharp cusps or sharp prosthesis would be an etiology for oral carcinoma.

10. Does oral cancer spread to other parts of the body?

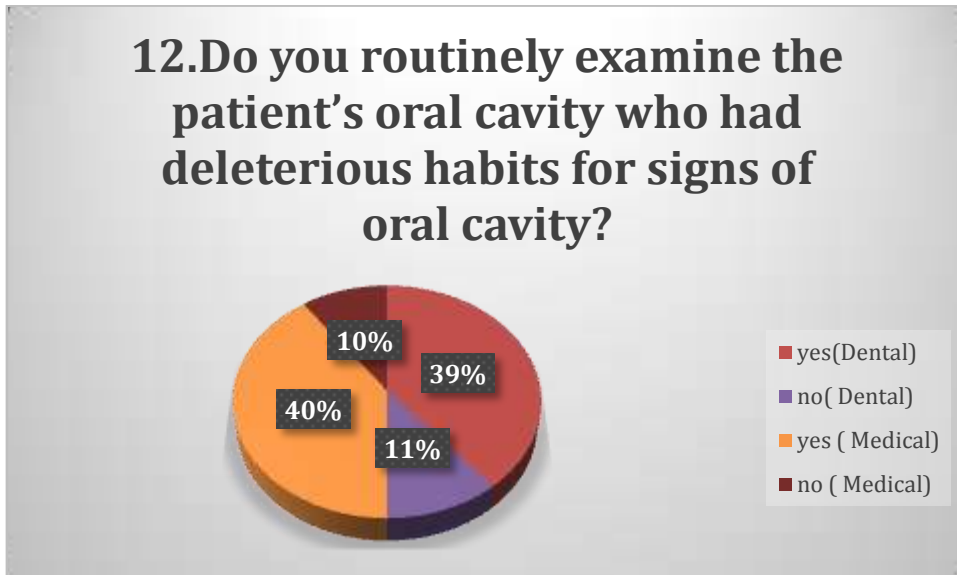


73% in the above pie diagram from both the practitioners stated that oral carcinoma can spread to other parts of the body while 27% stated it does not spread to other parts of the body.



A non healing ulcer which is more than 2 weeks can be suspected as oral carcinoma in the above pie diagram 60% stated that this

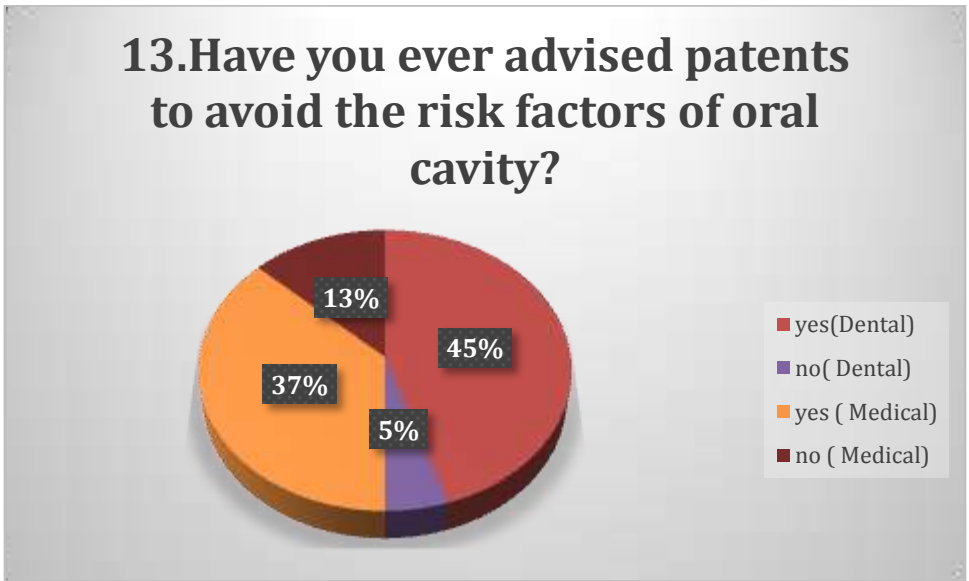
statement is true regarding oral carcinoma and 40% believed that this statement is false and stated that sometimes an ulcer can take more than 2 weeks to heal.



In the above pie diagram about 11% of the dentist. Do not check the oral cavity where patients with deleterious habits. Because they stated that it gives nausea. While examining and talking to them. About 10% of the medical practitioners they stated that they were not interested in checking the oral cavity and further stated that they would like to refer the patient who complaint

with oral cavity problem to deal by local dental practitioners. And about 79%. Of both the groups practitioners. Would like to check the oral cavity as a part of their regular health checkup and. If they noticed any abnormality they would counsel the patient and mention about the proper referral of the patient pertaining to the diagnosis.

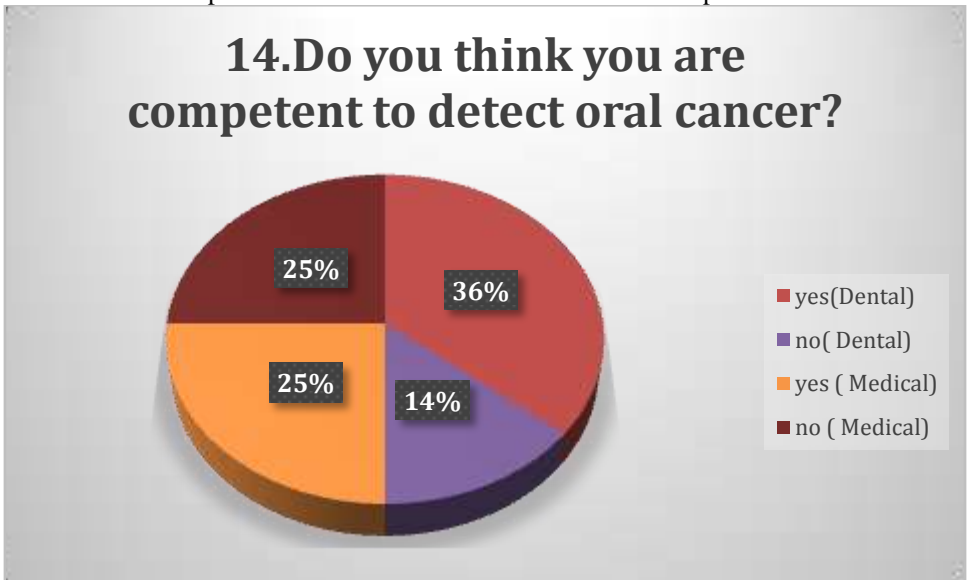
13. Have you ever advised patients to avoid the risk factors of oral cavity?



82% of the responders in the pie diagram stated that they would like to counsel the patient regarding the risk and complications about the

usage of tobacco ,gutka , smoking,alcohol and would like to mention the seriousness of usage of these to the patients.

14. Do you think you are competent to detect oral cancer?



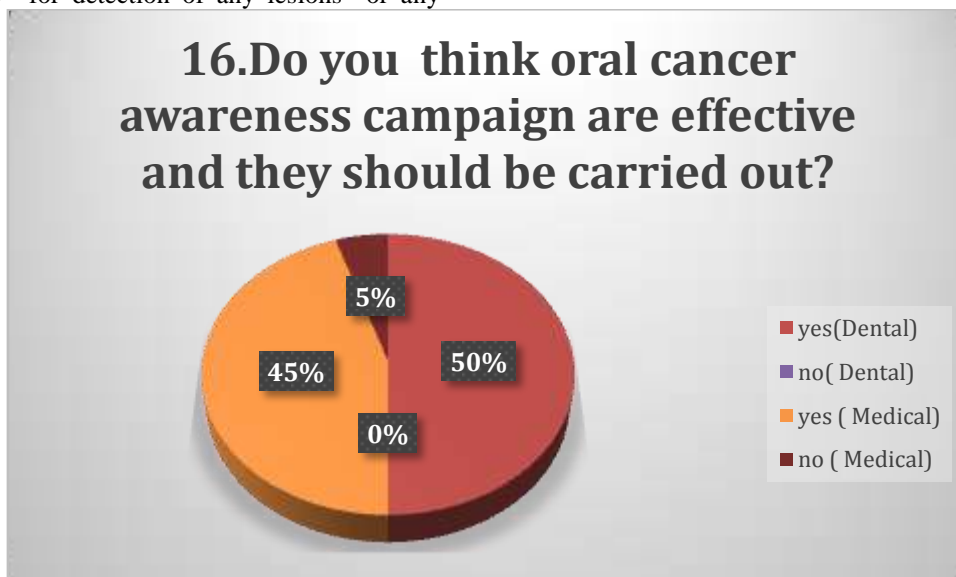
Pie diagram depicting that 36% from dental and 25% from medical practitioners stated they were competent to diagnose oral cancer 14%

from.dental and 25% from medical practitioners stated that they were not competent to detect. Oral cancer



Pie diagram showing that majority of the practitioners would like to undergo screening of the oral cavity for detection of any lesions or any

changes in the oral cavity which might have features of oral carcinoma.



Pie diagrams showing that 95% of the Practitioners believed that oral cancer campaign program should be carried out in rural areas. Which will enlighten the un educated and educated people. And bring the awareness among the people. To quit the habits and also know about the oral cancer and it's etiology for causation.

the patients.[7]. Medical practitioners as part of general examining ,oral examination are being done. To find out any abnormality regarding to the complain issued by patients, but more specifically don't examine the oral cavity to determine Any abnormal changes related to cancerous lesion. Due to the opportunity of routinely examining the oral cavity, the dentist has the chance to diagnose oral cancer even in asymptomatic patients before dissemination occurs to adjacent tissues [8,9]. However, to make it actually effective, dentists

IV. DISCUSSION:

A comprehensive oral examination exit's between when patient visit to dentist and has the chances for one-on-one oral health education for

and medical practitioners must understand oral cancer as a public health problem.

As oral cancer is relatively rare in many countries, it is perhaps not surprising that symptom recognition and awareness of risk factors is limited [10]. Studies conducted in the UK, Western Europe, the USA and Australia all highlight a relatively low level of public awareness of oral cancer, its signs and symptoms and risk factors [11,12]. This is particularly the case for population groups most likely to be affected [13].

The current study revealed that the level of oral cancer knowledge among most of the surveyed participants is regarded as good. This result is comparable to the results of previous studies conducted in Saudi Arabia and India, that revealed good to excellent knowledge of oral cancer and its associated risk factors among dental and medical practitioners in rural areas.

Almost half of the dentists and medical were familiar with erythroplakia and leukoplakia as important signs of a premalignant lesion, but among them only 44 dentists correctly identified erythroplakia as a more serious premalignant condition. In the present study 44% in each group knows about red and white lesions which are prone for increased risk factor for oral cancer. Similarly, in Iran, 50% of dentists correctly identified these signs. On the other hand, a higher percentage of dentists in Turkey and Kuwait correctly identified erythroplakia and leukoplakia as premalignant signs. These are important signs of premalignancy that dentists need to know.

In the present study regarding recent trends in findings of oral cancer, 75% of the practitioners know the recent trends in detection of oral cancer of this 75% every practitioners confirmed that biopsy is the gold standard in diagnosis followed by CT, MRI and PET scan

25% of the practitioners are unaware of the various methods in detection of oral cancer, of this 25% 15% agreed that biopsy is must for any lesion to confirm the diagnosis and the remaining 10% do not know that even biopsy is should be done to rule out about lesions in the oral cavity.

Oral squamous cell carcinoma (SCC) presents in several clinical forms: either as a white lesion (leukoplakia), a red lesion (erythroplakia), a red and white lesion (erythroleukoplakia), an indurated mass, or as a mucosal ulcer. The floor of the mouth and lateral tongue are the most common intraoral sites for this malignancy [14].

A high percentage of both dentists and medical practitioners correctly identified tobacco,

alcohol, as risks for oral carcinoma, which is consistent with other studies. This was reflected in their practice of talking to patients about their medical history, as a majority of dentists properly assessed patient's present tobacco use, history of cancer, and, to a lower extent, patient's present alcohol use. More emphasis is needed to increase their knowledge about the risk of different types of tobacco use, including smokeless tobacco use, which is widespread in Asian cultures. A high proportion of dentists and medical practitioners believe that they should be trained to provide tobacco cessation education. Their knowledge that squamous cell carcinoma is directly linked to tobacco, betel nut chewing and smoking. Dentists had some problems distinguishing between risk factors and non-risk factors for oral cancer. Therefore, more emphasis on the risk factors and non-risk factors for Oral cancer is needed. Increasing dentists' knowledge of these factors would help to raise population awareness and play an important role in oral cancer prevention along with medical practitioners practicing in rural areas. Warnakulasuriya et al. In his study stated that 84% of the dental practitioners examine oral mucosa for diagnosing Oral cancer [15]. whereas in this study, 35% dental and 39% of medical practitioners diagnose Labial or buccal mucosa for examining oral cancer. Among both the groups in the present study concluded that 36% from dental group and 24% from medical group that an ulcer which is not healing by more than 2 weeks can be suspected as carcinoma which was in accordance with the other study mentioned that any non healing ulcer of more than 2 or 3 weeks with signs of burning sensation would probably change the normal architecture of the oral mucosa and transforms into dysplastic changes [16,17]. 14% from dental and 26% from medical group are unaware of this non healing ulcer most of them were aware that an ulcer heals of one week time Proper multivitamin and modifications in their life style and food habits will eventually decrease the progression of the ulcer.

In a retrospective study conducted in Australia stated that oral cancer is twice in non smokers than the smokers this is due to chronic dental trauma which might be ill fitting denture broken tooth sharp cusp, poor hygiene, the most common site according to their study was the lateral border of the tongue. In the present study 36% of the dental practitioners and 22% from the medical practitioners in the rural area stated that dental trauma to the oral tissues which is non

healing might turn up into oral carcinoma [18, 19,].

A review of the use of mass media campaigns to change health behaviour was published in the Lancet in 2010 [20].It concluded that it was possible for mass media campaigns to effect positive changes in health-related behaviours across large populations. The likelihood of success was assessed to be substantially increased by the application of multiple interventions and when the target behaviour was one-off or episodic (eg, cancer screening) rather than on-going. The concurrent availability of and access to key services were recognised as crucial to enable individuals motivated by such campaigns to act on them.

Oral cancer screening programs found to be a cost-effective measure in raising the awareness and reducing mortality [6,20].Thus, the dental students should be prepared to play a part in public health awareness regarding the explanation of the potential burden of sexually transmitted viruses as HPV, in its act in oral cancer.

V. CONCLUSION:

As the incidence of oral cancer continues to rise, the role that general medical and dental practitioners may play in prevention and detection of oral cancer assumes ever more importance. Early diagnosis and prompt referral of the patient will helpful in survival of the patients.However, when several factors regarding the knowledge of the risk factors and diagnostic procedures were individually assessed, the results indicated high rates of incorrect answers, demonstrating that there is room for further studies in the area and for oral cancer. oral cancer aspects must be emphasized so that more people, clinicians, and patients become interested in the topic. is goal may be achieved through clarification campaigns and the encouragement of professionals in attending continuing education courses for better qualification.

REFERENCE:

- [1]. Sankaranarayanan R, Ramadas K, Thomas G, Muwonge R, Thara S, Mathew B, Rajan B; Trivandrum Oral Cancer Screening Study Group. Effect of screening on oral cancer mortality in Kerala, India: a cluster-randomised controlled trial. *Lancet*. 2005 Jun 4-10;365(9475):1927-33.
- [2]. J. K. Elango, P. Gangadharan, S. Sumithra, and M. A.Kuriakose, "Trends of head and neck cancers in urban and rural India," *Asian Pacific Journal of Cancer Prevention*, vol. 7
- [3]. Shah SP, Praveen BN. Awareness of oral cancer in rural Bangalore population: A questionnaire based study. *International Journal of Scientific Study*. 2014;1(6):14–6.
- [4]. Murugesan A, Sabarinath, Sivapathasundharam. Awareness of oral cancer among medical students in Chennai [Internet]. Vol. 2, *Journal of Medicine, Radiology, Pathology and Surgery*. 2016. 18–22.
- [5]. Decuseara G, MacCarthy D, Menezes G. Oral cancer: knowledge, practices and opinions of dentists in Ireland. *J Ir Dent Assoc*. 2011 Aug;57(4):209–14.
- [6]. Petti S, Scully C. Oral cancer knowledge and awareness: primary and secondary effects of an information leaflet. *Oral Oncol* 2007; 43:408–415.
- [7]. Formosa J, Jenner R, Nguyen-Thi M-D, Stephens C, Wilson C, Ariyawardana A. Awareness and knowledge of oral cancer and potentially malignant oral disorders among dental patients in far north Queensland, Australia. *Asian Pac J CancerPrev* 2015; 16: 4429–4434.
- [8]. Lachlan M Carter and Graham R Ogden. Oral cancer awareness of undergraduate medical and dental students.*BMC Medical Education* 2007, 7:44.
- [9]. Rehman S, Khan M. Awareness of Oral Cancer in Undergraduate Medical And Dental Students. *J Pak Dent Assoc* 2012; 32(3):385-88.
- [10]. van der Waal I, de Bree R, Brakenhoff R, Coebergh J-W. Early diagnosis in primary oral cancer: is it possible? *Med Oral Patol Cir Bucal* 2011; 16: e300–e305.
- [11]. Hertrampf K, Wenz H-J, Koller M, Wiltfang J. Public awareness about prevention and early detection of oral cancer: a population-based study in Northern Germany. *J CraniomaxillofacSurg* 2012; 40: e82–e86.
- [12]. Luryi A L, Yarbrough W G, Niccolai L M et al. Public awareness of head and neck cancers. A cross-sectional survey. *JAMA Otolaryngol Head Neck Surg* 2014; 140: 639–646.

- [13]. Monteiro L S, Warnakulasuriya S, Cadilhe S et al. Oral cancer awareness and knowledge among residents in the Oporto city, Portugal. *J Investig Clin Dent* 2016; 7: 294–303
- [14]. Amanda Siu, Katina Landon, Daniel M Ramos. Differential diagnosis and management of oral ulcers. *Semin Cutan Med Surg* 2015; 34: 171-177.
- [15]. Warnakulasuriya KA, Johnson NW. Dentists and oral cancer prevention in the UK: opinions, attitudes and practices to screening for mucosal lesions and to counselling patients on tobacco and alcohol use: Baseline data from 1991. *Oral Diseases* 1999; 5: 10-14.
- [16]. Mehta, K. D., Haran, A., Harsha, A., Gulikari, G. K., & Kaul, R. An aggressive, solitary non-healing ulcer: Not always cancerous. *Respiratory Medicine Case Reports*. 2015; 15: 133–134.
- [17]. Swarup N, Nayak MT, Arun N, Chandarani S, Chowdhary Z. Chronic non-healing ulcer of the oral cavity: tuberculosis or carcinoma? *J Exp Ther Oncol*. 2018 May; 12(3): 239-243.
- [18]. Singhvi HR, Malik A, Chaturvedi P. The role of chronic mucosal trauma in oral cancer: A review of literature. *Indian J Med Paediatr Oncol* 2017; 38: 44-50.
- [19]. Perry BJ, Zammit AP, Lewandowski AW, Bashford JJ, Dragovic AS, Perry EJ, et al. Sites of origin of oral cavity cancer in nonsmokers vs. smokers: Possible evidence of dental trauma carcinogenesis and its importance compared with human papillomavirus. *JAMA Otolaryngol Head Neck Surg* 2015; 141: 5-11.
- [20]. Logan H. Public awareness of oral and pharyngeal cancer: what can a dentist do? *Today's FDA* 2014; 26: 38–41.