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RESEARCH ARTICLE

ORAL CANCER AWARENESS IN CANCER CAPITAL OF INDIA: AN INSIGHT

***,[1]Tabishur Rahman and [2]Ghulam Sarwar Hashmi**

[1]M.D.S, Clinical Registrar, Faculty of Medicine, Aligarh Muslim University, Uttar Pradesh, India 202002
[2]M.D.S, Associate Professor, Faculty of Medicine, Aligarh Muslim University, Uttar Pradesh, India 202002

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ABSTRACT

Oral cancer has very high incidence in India. The reasons for this high incidence is lack of awareness and late presentation which is further complicated by lack of adequately trained medical and dental professionals. We studied the level of awareness related to oral cancer among general public in a hospital based survey in a northern Indian state. We hypothesized that people with higher education will be more aware when it came to knowledge about oral cancer than people who could not afford college education. Our study proved otherwise with results which were extremely disappointing highlighting the failure of our education system regarding a disease which has been shown to be growing at an exponential rate in this part of the globe.

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INTRODUCTION

Oral cancer is sixth most common cancer reported globally with an annual incidence of over 3,000,000 cases, of which 62% arise in developing countries (Parkin, 1988). In India, itconstitutes around 12% of all cancers inmen and 8% of all cancers among women (Mamta Agrawal, 2012). By the year 2020, the cases of head & neck cancers in India are estimated to be around 218, 421 (19.0% of All sites cancers) (National Cancer Control Programme, 1996). Most of the oral cancers are preventable if people know which risk factors they must control or eliminate (Luís Silva Monteiro, 2012). At our centerwhich is located in Uttar Pradesh, also known as "cancer capital of India" with highest incidence of oral cancer cases in the country; we noticed that a vast majority of oral cancer patients who reported to us for the treatment of their 'lesion' were not aware that they had oral cancer and they presented at an advanced stage. Out of those who were aware about their condition, many gave a history of multiple consultation from different specialists just because they went into denial as they thought that oral cancer cannot be cured. When questioned, many of them were not aware of the warning signs or did not have the knowledge of whom to consult regarding their condition. Apart from tobacco which accounts for more than 90% of OC cases reports (SreeVidya, 2002), and about which almost all the patients were aware of being a causative agent, only a few patients identified other causes of oral cancer. Also, only a handful of them were aware that if detected early, oral cancer is curable. The lack of awareness especially of the warning signs coupled with the undermining of the importance of early detection and curability which leads the patient to obtain multiple consultations with different specialists over a period of months due to denial; may be the causes for the late presentation. The purpose of this study was to evaluate the awareness and access the knowledge in the outpatient setting regarding oral cancer with the help of a questionnaire and to educate them. It is a common presumption that people from rural areas have higher incidence of oral cancer as they have inadequate access to trained providers with very limited health services and they are not 'educated' and thus have an ignorant attitude. So, we also studied whether the level of education has any effect on awareness regarding oral cancer.

MATERIALS AND METHODS

This was a descriptive study carried out between the months of February 2017 and April 2017. A total of 553 people gave their consent andparticipated in this survey, which included patients who reported to the outpatient department of Oral and

Corresponding author:* **Tabishur Rahman,
[1]M.D.S, Clinical Registrar, Faculty of Medicine, Aligarh Muslim University, Uttar Pradesh, India, 202002.

Maxillofacial Surgery at our center. A questionnaire based survey was carried out which contained 7 questions given below to test basic level of awareness regarding oral cancer.

1. **Do you know that India is one of the countries with highest incidence of oral cancer?**

_____

2. **According to you, what causes oral cancer?**

_____

3. **According to you what are the warning signs of oral cancer?**

_____

4. **Do you think that oral cancer can pass from one person to another?**

_____

5. **If you doubt that someone has oral cancer, then you would refer him to a doctor of what specialization?**

_____

6. **Do you know that if detected early, oral cancer can be fully treated?**

_____

7. **According to you what is the treatment of oral cancer?**

_____

We did not provide any options in any of the questions as it could lead to biased response. Excluded from the study were individuals below the age of 18 years, those with precancerous conditions or lesions, patients suffering from oral cancer and those who were not willing to participate. The data obtained was analyzed.

RESULTS

Our study population had representation from both rural and urban areas and included 388 male participants and 165 female participants and fell in age range of 18 years to 79 years with mean age 38.6. 65% of them were aware of high incidence of oral cancer in India. 63 (12%) had education upto primary school only while only 72 (13%) attended high school. 81 (15%) participants had senior secondary school education. Graduates and postgraduates represented the major bulk of the participants (61%) (Fig.1).

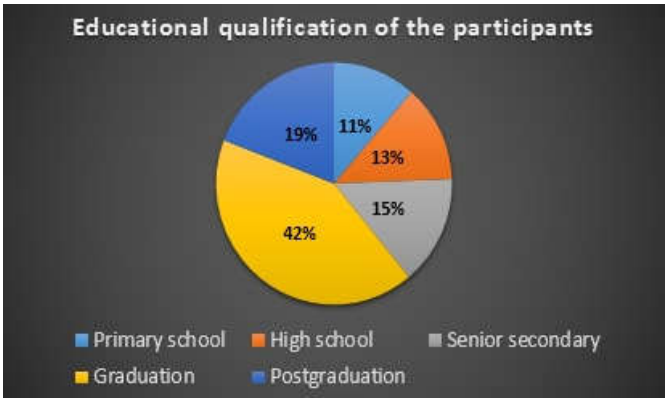


Fig. 1.

While collecting the responses, our study differed from other similar studies in a way that we did not give options to the participants regarding any question as we thought that providing options might lead to biased responses as even if someone did not know the answer, that person could choose one of the options from those provided. Tobacco in different forms (cigarette, bidi, gutkha, pan masala) was identified as the main causative agent followed by the consumption of alcohol (Fig.2). When asked to mention the signs they were aware of related to oral cancers, a vast majority of the participants(61%) said that they were not aware of any. 97 patients did not answer this query. Among the various signs identified were ulcers (9%), lump/swelling (4%), difficult mouth opening (3%), bleeding from gums (3%), red spots (2%), white spots (2%), altered sensation (1%), and difficulty n swallowing (0.5%) (Fig.3). In response to the question that how many thought that oral cancer was contagious, 29% were of the opinion that the disease is contagious whereas 60% said that the disease in non-contagious. A handful of them were not aware whether the disease is contagious or not (53) whereas 12 did not answer the question.

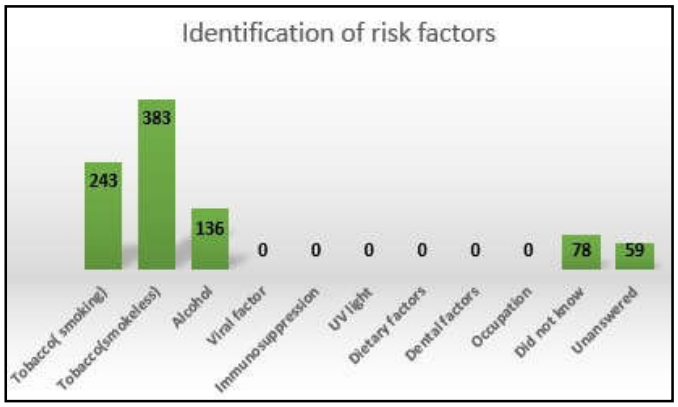
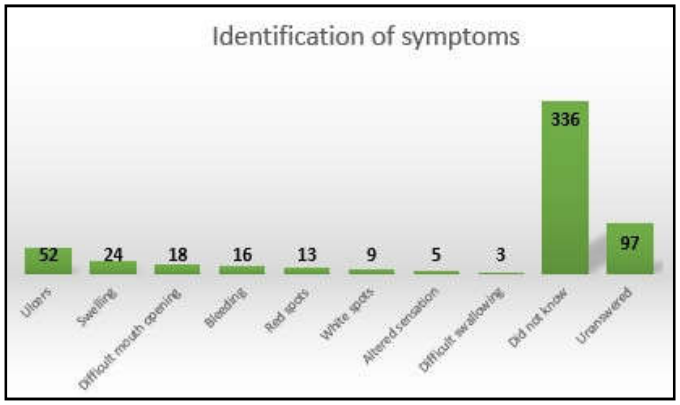


Fig. 2.



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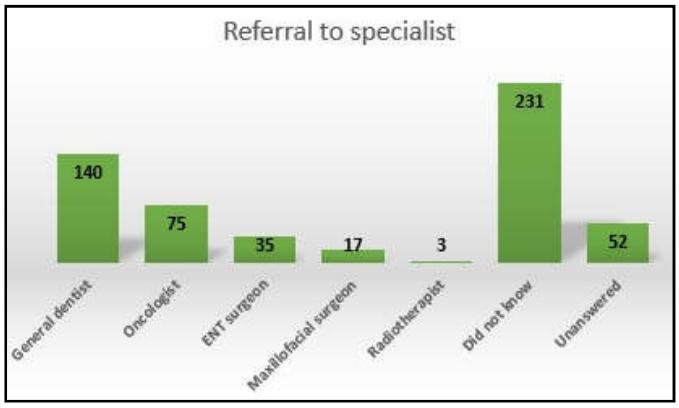

Fig. 4.

42% of the participants did not know that to whom an oral cancer patients should be referred for consultation. 25% were of the opinion of referral to general dentist. Other specialists mentioned included Oncologist (13%), ENT surgeon (6%),

oral and maxillofacial surgeon (3%) and radiotherapist (0.5%) (Fig.4). 52 participants did not answer this question. 397 participants (72%) did not know that if detected early, oral cancer can be treated while only 132 (24%) had this knowledge and 24 left the question unanswered. Again, a vast majority (70%) was not aware of the treatment modalities for the disease. Surgery was the answer of 73 (13%) of them while radiotherapy and chemotherapy were identified as treatment modality by only 26 (5%) and 15 (3%) participants respectively. 53 left the question unanswered (Fig.5).

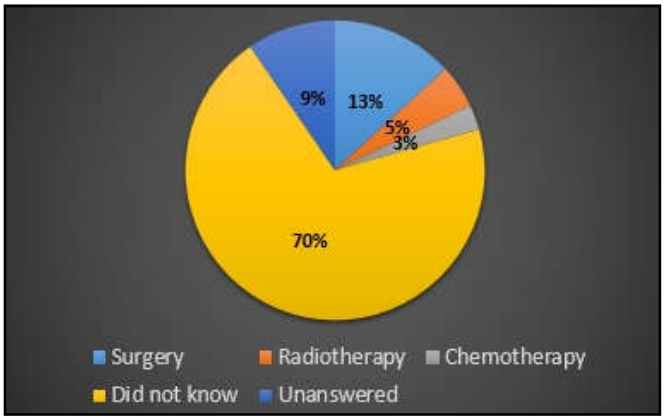

Fig. 5.

DISCUSSION

Oral cancer ranks among top three types of cancer in the Indian subcontinent where it ranks among the top three types of cancer in the country (Elango, 2006). The age-adjusted rates is 20 per 100,000 population in India compared to 10 per 100,000 in the U.S.A, and less than 2 per 100,000 in the Middle East (Sankaranarayanan, 1998). Tobacco use and alcohol are known risk factors for cancers of the oral cavity. (Cancela, 2009; Gupta, 1986 and Khandekar, 2006). A satisfactory number of participants identified tobacco (cigarette, bidi, gutka) and alcohol as main causative agents for oral cancer. However other dry forms of tobacco like zarda, kharra, mawa, and khainni were not identified by any of the participants! And so was betel quid. Chewing of betel quid, zarda and khainniis very common and is accepted socially and culturally in our sample population. The non-identification of betel quid, zarda and khainnias causative agents, could be one major factor which significantly adds up to the higher oral cancer incidence in this part of the country as the consumers consider these products "safe" and the thought of quitting the use of this product does not cross their mind.Other risk factors (HPV, immunosuppression, chronic infections, occupational exposure to causative agents,UV light exposure, dietary and dental factors) were also not mentioned by any participant!!

Oral cancers are typically detected in their advanced stages despite the fact that the oral cavity is accessible for visual examination, and that oral cancers and premalignant lesions have well-defined clinical diagnostic features. In fact, in India, 60–80% of patients present with advanced disease as compared to 40% in developed countries (Ken Russell Coelho, 2012). It is the lack of awareness amongst the people coupled with inadequately trained medical personnel that could be identified as the main reason behind this late presentation. As shown by the results of our study which is also consistent with other studies conducted on different populations of India (Shah, 2014 and Konduru, 2016; GopinathThilak, 2015; Sukant Sahoo, 2013), it becomes apparent that despite a large expenditure on various cancer awareness related programs by the government and individual organizations, a huge majority of the population is still unaware of the initial warning signs of oral cancer. When we look at the responses of the participants, the responses in identifying the signs of oral cancer are very discouraging. Ulcers and swelling were identified by only a handful of them. The precancerous conditions' signs which if identified, may markedly reduce the incidence of oral cancer; were identified by an insignificant number of participants. A review of several studies that assessed oral cancer knowledge, opinions, and practices of health care providers suggests that many physicians and dentists do not detect oral lesions in their early stages because of inappropriate attitudes or lack of knowledge (Schnetler, 1992; Shafer, 1975; Sadowsky, 1988 and Guggenheimer, 1989). Moreover patients often consult their general medical practitioner rather than their general dental practitioner regarding oral lesions (Scully, 1986), who have been documented to have less awareness and skills of identifying of oral cancer (Nandita, 2013; Lachlan, 2007; Pakfetrat, 2010). It has been a frequent observation at our center that the patients who had been diagnosed early; delayed the treatment by going into denial and obtaining multiple consultations from different specialist over a significant period of time leading to progression of the disease to an advanced stage. When it comes to referring the oral cancer patients to specialists, almost half of the participants (231) were not sure to whom should they refer such patients. One fourth of them (140) went in favor of general dentist. But we are of the opinion that some of the responses were biased as the patients were asked to fill the form while they were sitting in the waiting area of a dental OPD. 75 patients preferred oncologist but none mentioned whether surgical or medical oncologist. This could probably be because generally people are not aware of the sub-specialties in oncology. It was surprising for us to know that maxillofacial surgeons, ENT surgeons and radiotherapist who play a pivotal role in management of this disease were listed by only a few participants with their numbers corresponding to 17, 35 and 3 respectively. Another important finding was that every participant chose to refer the patient to only a single specialist. This gives the impression that people are not aware that oral cancer patients often require a team of specialists as far as proper management is concerned. Similarly when it came to the knowledge of treatment options, our study revealed that 70% of the patients did not know the treatment modalities available for oral cancer. Surgery, chemotherapy and radiotherapy were identified by only 13%, 5 %, and 3% participants respectively. This is far more less than reported in other similar studies from India (Nandita, 2013; Muthu Laakshmi, 2016; Nimma, 2016). In our study around 60% of the participants were graduates or post graduates. Considering the responses obtained after the study, it can be concluded that in this part of the country education did not play a significant role in increasing awareness related to oral cancer thus bringing into light the issue that there is an utmost and urgent need for introduction of curriculum intended to create awareness related to oral cancer and other serious conditions right from early school days.

Conclusion

It is the need of the hour that oral cancer screening and awareness initiatives be introduced in high-risk populations.As pointed out by Daftary et al, large population based oral cancer screening programs involving trained health workers can lower

mortality of the disease. Promotion of mouth self-examination could further reduce the cost of the screening and increase awareness in high-risk communities in India.Medical health professionals should also be given basic training to be able to identify oral cancer in early stages and provide proper referral. Community health workers, dental surgeons and allied medical professionals should take the responsibility to organize low-cost educational programs that are designed and launched to infiltrate every strata of the society. Different forms of media like newspapers, televisions and radio should be properly utilized to create awareness related to oral cancer. Nowadays a huge majority of Indian population has access to social media which can be a good platform to spread awareness related to oral cancer. Despite the fact that oral cancer and consequences can be prevented, treated, and controlled, there exists a significant gap in the Indian public's knowledge, attitudes, and behaviors. Early detection would not only improve the overall cure rate, but it would also lower the cost and morbidity associated with treatment of the disease.

Compliance with ethical standards: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. The authors declare that they have no conflict of interest. Informed consent was obtained from all individual participants included in the study.

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