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Original Article

Dentistry Section

The Self-Reported Knowledge, Attitude and the Practices Regarding the Early Detection of Oral Cancer and Precancerous Lesions among the Practising Dentists of Dakshina Kannada—A Pilot Study

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ABSTRACT

Introduction: Oral squamous cell carcinoma is one of the leading causes of mortality in India. The screening and the early detection of the premalignant and malignant lesions are the only means for controlling the disease. General dental practitioners can play a great role in this direction. The objective of the present study was to assess the self-reported knowledge, attitude, as well as the practices concerning the early detection of oral cancer among the dentists of Dakshina Kannada, Karnataka, India.

Materials and Methods: About 200 clinicians (BDS/MDS) were randomly selected for an 18 itemed questionnaire survey. The aspects which were enquired into were the usage of exfoliative cytology in their clinical practice, the recent attempts which are made by dentists at updating their knowledge on oral cancer, their practical approaches towards the screening for oral premalignant diseases, etc.

Results: Over 98% of the dentists reported to have not performed exfoliative cytology in their clinics. However, 85% had attended education programs on oral cancer. About 72% felt the need to be trained and they welcomed the suggestion of conducting practical workshops in this direction. 29.5% conducted biopsies when they encountered suspicious looking lesions, but only 13% counseled such patients for the habit cessation. 86% felt the need for Oral Pathology consultants in their clinics.

Conclusion: This pilot survey identified an existing gap in the knowledge and practices among physicians and dentists and this emphasises the need to increase the numbers of oral cancer detection workshops which are held among the professional groups.

Key words: Oral cancer, Exfoliative cytology, Detection, Knowledge, Practice

INTRODUCTION

It has been well recognised that the cancers of the oral cavity and the pharynx are a public health problem and as a result, there are a great number of deaths and people suffering from illnesses or disability in many countries. About 70% of the oral cancer patients present in the advanced stages [1]. Further, in the high incidence areas, a majority of the oral cancers arise from long-standing premalignant lesions [2,3]. It has been reported that a lack of awareness among the public about oral cancer and the associated risk factors are the primary reasons for the delayed presentation of oral cancer [4].

The assessment of the level of the knowledge, attitudes, and the behaviours of dental health care workers regarding oral cancer is important for several reasons. Because the oral and pharyngeal cancers can be recognised at an earliest stage by visual and tactile examinations, dentists are one of the most likely groups of health care practitioners who have a key role in counseling the patients regarding the early detection of oral cancer. Over the last decade, numerous published epidemiologic investigations which were conducted in several countries have examined the primary care physicians' knowledge and practices [5 – 9] and the oral cancer prevention and detection among dental health care workers [9 – 18]. The responses have differed by country, but those country-specific data are necessary for a public health planning.

Evidence is accumulating on the role of the combined effects of several components in the prevention and the treatment of these forms of cancer. The recognition of the problem has demonstrated that close attention must be paid to address the problem and to strengthen the preventive interventions in the health care globally, as well as at the oral health level. The health care workers, health authorities, and managers must work with the best scientific evidence and recommendations, in order to improve the knowledge and practices of the dental health care workers. It is vital to train such professionals on the oral cancer risk, prevention and control measures, and on simple detection procedures such as exfoliative cytology.

Though it is not a foolproof method, exfoliative cytology (EC) remains one of the simple and non invasive methods for detecting dysplasia in the suspicious and the innocuous looking lesions in the Indian setup. The purpose of this study was to assess the dentists' self-reported knowledge as well as their practices concerning the early detection of oral cancer. This was a pilot study which was conducted on a convenient group of dentists, to ensure the practicability, validity, and the interpretation in the final survey which was to be conducted on a larger scale.

MATERIAL AND METHODS

The present study was a cross-sectional questionnaire survey which was conducted among 200 randomly selected clinicians of Dakshina Kannada, Karnataka, India. The study was conducted between April 2012-June 2012. Self-administered questionnaires were personally handed out to the practising dentists. In addition, a letter assured the dentists anonymity and confidentiality of all the responses. The completed questionnaires were collected back immediately. The informed consents of the participants were obtained.

The questionnaire [Table/Fig-1] consisted of eighteen questions which had to be answered by each respondent, which had the options, 'yes' or 'no'. The questionnaire assessed the management practice regarding oral cancer by asking whether the dentists performed an exfoliative cytology along with a visual examination, and their current knowledge on the recent advances in this field. Finally, the respondents were asked about their training in this direction, and whether they needed additional training/information/oral pathologists as consultants in their clinics.

The data was entered in MS Excel for Windows and it was statistically analysed by using SPSS, version 17.0. Descriptive statistics were carried out in the present study and they were presented as number and percentage.

RESULTS

[Table/Fig-1] shows the responses of the subjects (number and percentage). The response rate was 100%. Exfoliative cytology was performed only by 2% of the practitioners and only 55.5% were trained for the same.

Sl No.		Yes	%	No	%
1	Encounter premalignant lesions	186	93	14	7
2	Rely on visual examination only	37	8.5	163	81.5
3	Exfoliative cytology performed	4	2	196	98
4	Trained to perform EC	111	55.5	89	44.5
5	Educational programs attended	170	85	30	15
6	Felt the need for additional training/ information	144	72	56	28
7	Referral of suspicious lesions to other centres	176	88	24	12
8	Conduct a biopsy	59	29.5	141	70.5
9	Aware of brush biopsy	32	16	168	84
10	Only follow up strategy for innocuous looking lesions	200	100	0	-
11	Aware that innocuous looking lesions can transform to cancer	104	52	96	48
12	Conduct counseling to stop habits	26	13	174	87
13	Exfoliative cytology not suitable for clinical setup	189	94.5	11	5.5
14	Aware of recent advances	87	43.5	113	56.5
15	Recent advances not economic	197	98.5	3	1.5
16	Further simpler methods convenient.	142	61	58	29
17	Felt the need for Oral Pathology consultants in their clinic	172	86	28	14
18	Oral Pathology consultants help in early detection of dysplasia	193	96.5	7	3.5

[Table/Fig-1]: Responses of the study subjects to the questionnaire

Also, 94.5% felt that the procedure was unsuitable for their clinical practice. Although 85% of the general practitioners attended education programs in this direction and 72% welcomed additional training. About 88% of the dentists referred the suspicious lesions to other centres, whereas 29.5 % performed biopsies. All the practitioners preferred a follow up strategy for the innocuous looking lesions, but only 52 % knew that such lesions too could be transformed to cancer. Only 13% counseled the patients who had lesions. Although 43.5% of them were aware of the recent advances in the field of cytology, 98.5% felt that it was not suitable for their clinical usage, due to economic reasons. About 86% felt that there was the need for an oral pathologist as a consultant in their clinics.

DISCUSSION

This investigation reports the overall knowledge, attitudes, and the practice regarding the early detection of oral cancer among the dentists of Dakshina Kannada and the data provides a comprehensive picture of the current status of the knowledge and practice among these dentists.

The results greatly concern us, as many of the dentists themselves showed significant gaps in their knowledge with respect to the diagnostic procedures, with only 2 percent performing an exfoliative cytology in their clinical practice and most of them thinking that it was unsuitable in a clinical set up. Not surprisingly, those who performed an exfoliative cytology in their clinics were all oral pathologists. Another element which needs to be discussed is that only 55.5% of the dentists claimed to be trained in this procedure. Horowitz et al., in his survey, reported that only 10% of all the dentists had ever done an oral cytology smear, that only 42% were taught about how to do a smear and that 96.9% of the dental offices lacked the necessary materials for performing an exfoliative cytology [14]. Despite innumerable studies and articles regarding the usage of brush biopsies, only 16% were aware of such a technique. This clearly points out at the existing gap between the research studies and their actual implementation in the clinical practice. There is strong available evidence to suggest that the visual inspection of the oral mucosa is effective in reducing the mortality from oral cancer, in individuals who are exposed to risk factors. Although biopsy is the gold standard for the diagnosis of oral cancer, adjunctive techniques like the toluidine blue staining, brush biopsies, chemiluminescence and tissue autofluorescence have been suggested, to increase our ability to differentiate between the benign abnormalities and the dysplastic/malignant changes, as well as to identify the areas of dysplasia/early OSCC that are not visible to the naked eye [19]. Among the dentists who practised along the Texas-Mexico border, [17] 90% agreed that oral cancer examinations should be conducted annually for the patients who are 40 years of age and older. A positive acquaintance on the oral cancer knowledge was associated with the performance of an oral cancer examination, as was implied by Alonge and Narendran [17]. Another shocking revelation was that only 13% counseled their patients with lesions regarding the stoppage of the habits which led to oral cancer. The role of the health care professionals as the communicators of public health messages, needs to be stressed and dentists must be familiar with the risk factors, clinical signs and the symptoms of oral cancer, if they are to be effective in identifying, referring and counseling the high-risk patients. It was noticed that many dentists did not feel comfortable with the idea of counseling patients on the matters such as smoking or alcohol cessation [11].

The dentists who attended an educational course in the preced-

ing year on oral cancer were more likely to have a higher level of knowledge on oral cancer. In the medical literature, similar findings have been found in previous studies which were done among the dentists who were practising in the United States. [9,10,14]. So, supplementary educational efforts are necessary, simply because a specific risk and benefit communication is a skill that can be taught.

A similar study assessed the oral cancer knowledge, attitude and the screening practices among 240 dental practitioners in Bangalore city [11], where 68% claimed to be adequately trained in conducting oral cancer examinations. Two hundred and thirty-seven (98%) dentists strongly agreed that the patients should be referred to specialists if they suspected oral cancer in any lesion; whereas 88% among our respondents referred their patients. 31% of the dentists educated their patients on the adverse effects of these habits and assisted them in cessation programmes, in contrast to 13%, as was noted in our study. They believe that there were missed opportunities in the dental office. First, with the dentists' focus being limited to the oral cavity, it is reasonable to believe that they might be able to easily obtain a focused medical and behavioral history, which included the key risk factors for oral cancer. Second, multiple opportunities exist during a patient's visit to a dental office for tobacco-use intervention services, as it has been established that the dental patients traditionally are receptive to preventive health messages [11].

Although 43.5% of the dentists were aware of the recent advances in the field of cytology, many felt that it was not suitable for their clinical usage, due to economic reasons. This is an important indication for researchers to develop techniques which are simple and economic, which can prove to be feasible in an Indian clinical setup. Although exfoliative cytology does have its limitations, it still suits the above mentioned needs. The procedure requires the necessary armamentarium, a microscope and above all, a qualified oral pathologist to interpret the smears. Researches on the techniques which are simpler, non invasive, economically feasible and less time consuming and those which require minimal armamentarium at site of the collection, may be fruitful and more readily accepted and implemented by the clinicians. An oral pathology consultant can contribute considerably to the control of oral cancer by detecting the dysplasia at the earliest; thereby, availing treatment to the patient at an early stage. This step can be a benchmark in increasing the 5 year survival rate of oral cancer, which to the dismay of the health care professionals, has remained unaltered for the past 50 years. Also, the dentists who are in group practice are generally involved in different specialties and, therefore, they may be able to share their collective knowledge and clinical experiences about oral cancer.

The results of this study must be interpreted in the context of the potential methodological limitations. First, since this was an observational study, it provides only circumstantial evidence for the causal nature of the relationships which we have observed. Second, as is typical of any survey which uses the self-reported data to measure, for example, the adherence to the preventive precautions, there exists the possibility that the reported behaviours may not match the actual clinical practice. The tendency of the respondents to provide socially acceptable answers would usually present a bias against the variability in the reported practices, possibly resulting in an underestimation of the non-adherence. However, the anonymous nature of the questionnaire has minimised this type of information error. Finally, in our survey, we chose a quasi-convenience cohort, although it was randomly selected, of the dentists who attended continuing education courses and academic institutions, and the results may not be generalised to all the dentists nationwide, because those who were sampled may have been more knowledgeable.

In summary, in view of the findings of this study, improving the level of the knowledge and the usage of exfoliative cytology by a population of dentists becomes a very important public health and preventive strategy, along with patient counseling for the reduction of the burden of the disease. Because such an improvement can be gradually achieved, an increased awareness on the role of the oral pathologists as consultants in the clinical practice, needs to be emphasised. This is a pilot study which was conducted on a convenient group of dentists; hence, a further survey on a larger scale, is necessary to assess and implement any measures. An increased awareness on the importance of the role of health care professionals as the communicators of public health messages, should be emphasised, so that appropriate and systematic educational strategies can be implemented quickly. A strategic alliance of the stake holders is proposed: individuals, communities, organizations, corporations and governments to deliver action through the conduction of nationwide surveys, policy development and interventions at individual, community and national levels [20].

CONCLUSION

This pilot survey identified an existing gap in the knowledge and practices among physicians and dentists and it emphasises the need to increase the numbers of oral cancer detection workshops among the professional groups.

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