

Ominous aspects of oral cancer among dentists of Andhra Pradesh – A questionnaire-based survey

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Abstract

Introduction: New data on cancer trends in India shows an alarming rise in cancers of the lip and oral cavity. Many people think that because of extraction cancer had developed in the extraction site, because they are unaware that in some situations, after extraction of a tooth, the carcinoma appears to grow very fast and proliferates out of the socket. While most of the dentists agree that biopsies are mandatory to diagnose oral cancer, very few are aware of the fact that malignancies can also occur as periapical granulomas, which are frequently (9.3% to 87.1%), encountered in clinical practice. This necessitates the histopathological study of these tissues.

Aim: To jeopardize the neglect among dentists in screening and in sending granulation tissues for further investigation procedures and to evaluate and spread awareness among dentists.

Method: Original research is conducted by taking dentists who are into clinical practice of Andhra Pradesh. A survey questionnaire is distributed to dentists and later the analyzed results were thoughtfully included in this article.

Results: few dentists are unaware of need of biopsy for any abnormal growth in the oral cavity.

Conclusion: Dentists should not neglect to send granulation tissue associated with extracted tooth for histopathological examination. Oral health care

providers must be diligent in maintaining an index of suspicion, developing a set of differential or possible diagnosis, and taking steps in obtaining a definitive diagnosis, including possible referral to others.

Keywords: Oral cancer, granulation tissue, biopsy, survey.

Introduction

Globally, oral cancer ranks sixth among all types of cancer. Oral cancer poses a serious health challenge to the developed and developing nations [1]. In India, around 28 77,000 new cases and 52,000 deaths are reported annually, which is approximately one-fourth of global incidences. The increasing cases of oral cancer are the most important concerns as it is one of the common types of cancers in India [3]. About 70% of the cases are reported in the advanced stages only. Because of detection in the late phases, the chances of cure are very low, leaving five-year survival rates around 33 20% only [4]. As we all know that tobacco and alcohol are widely recognized as risk factors of oral cancer, but the dental infections like periodontitis, periapical lesions, periapical granulomas, long standing granulation tissues, gingival swellings that present clinically as a common diagnostic finding but manifest as a fatal disease on histopathological confirmation which has frequently led to delay in diagnosis or misdiagnosis. Hence if the diagnosis is delayed the treatment is also delayed and which results in poor prognosis. So, every small tissue should be sent to histopathological conformation. Therefore, it is mandatory to perform a biopsy, particularly in patients with a known malignancy. ⁵ Hence this survey aims to jeopardize the neglect among dentists in screening, and also in sending granulation/biopsied tissues for further investigation procedures.

Materials and methods

A cross-sectional survey was conducted on 100 dentists of Andhra Pradesh. The questionnaire was designed to determine incidence, aetiology, prevalence and the importance of biopsy and sending of tissues for further investigation for the diagnosis of oral cancer. After obtaining the informed consent from the 50 dentists the questionnaire was distributed to the dentists and the results are 51 analysed.

Questionnaires to the general dental practitioners

Note: this questionnaire is solely meant for collecting Responses from the dentists to analyze different aspects of oral cancer. Your identity and your responses would be kept confidential. Thank you, for your precious time.

1. Do you know that oral cancer is one among the top 3 common cancers in India?

A) yes

B) no

2. Do you know that cancer is the second most cause of death in India?

A) yes

B) no

3. Are you aware of premalignant lesions, conditions and Potential risk factors of oral cancer?

A) yes

B) no

Have you ever encountered a patient with oral cancer having history of negligence of a dental practitioner in screening properly or misdiagnosis or delayed diagnosis of a dentist?

A) yes

B) no

5. Do you know the importance of biopsy and its types?

A) yes

B) no

6. How much essential it is to take biopsy for diagnosing an oral cancer? Give any one score from the following:

- A) score 0 (not essential)
- B) score 1 (least essential)
- C) score 2 (moderately essential)
- D) score 3 (very essential) []

7. Are you aware of indications and contraindications of different biopsy techniques? A) yes

B) no

8. How many times your provisional diagnosis is different from a biopsy diagnosis given by an oral pathologist.

- A) many times
- B) few
- C) never

9. Survival is low in patients with advanced stage of cancer, even after treatment with adjuvant modalities like radiotherapy or chemo-therapy.

- A) yes
- B) no

10. do you agree that early detection would not only improve the cure rate, but it would also lower the cost and morbidity associated with treatment?

- A) yes
- B) no

11. do you send granulation tissues associated with tooth extraction for further investigation procedures?

- A) yes
- b) no

Results

The results of our study show that 100% of the dentists are aware that oral cancer is one among the most common cancers. 90% of the dentists are aware of indications and contraindications of different biopsy techniques and 90% are aware of premalignant lesions, conditions and potential risk factors (Table.1).

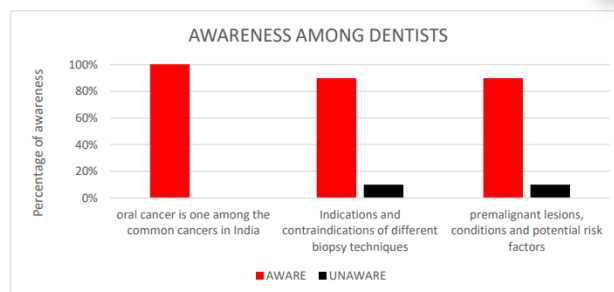


Table 1

In the present survey, 90% of dentists are aware that biopsies are important to diagnose the oral cancer and 10% of the dentists are unaware of the importance of biopsy (Table.2).

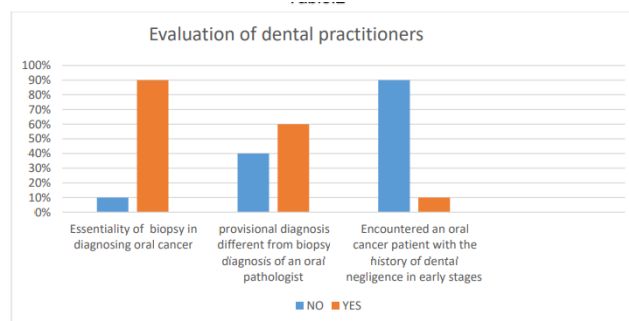


Table 2

Results of our survey shows that (Table.3) 80% of the dentists are not sending granulation tissues associated with teeth for further investigation procedures and only 20% of the dentists are sending the granulation tissues associated with the teeth after extraction for histopathological confirmation. very few are aware of the fact that malignancies can also occur as periapical granulomas which are frequently encountered in clinical practice. This necessitates the histopathological study of these tissues.

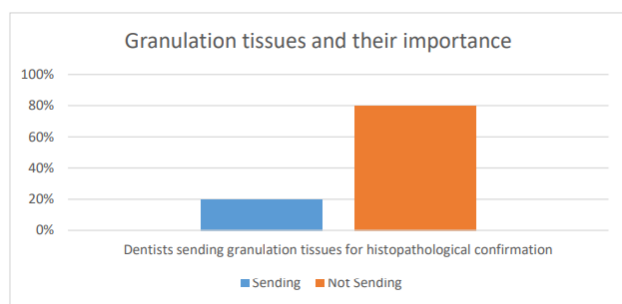


Table 3

Discussion

Oral cancer negatively interferes with the general and oral health of an individual. In 2018, new data was released, indicating an increase in new cases of cancer, with 18.1 million new cases and 9.6 million deaths around the world. In India, the burden of cancer of oral cavity is very high, contributing greatly to morbidity and mortality. Currently, biopsy of the tissues remains the gold standard for oral cancer diagnosis¹⁴.

Our present survey shows that 80% of dentists are not sending granulation tissues and they are unaware of periapical granulomas which are frequently encountered in clinical practice turned out to be malignancies. Few cases from the literature like A patient had an extraction and the clinician didn't think to biopsy the area and thought that this extraction socket just wasn't healing properly. This granulation tissue turned out to be a cancer. In some instances, after extraction of a tooth, the carcinoma appears to develop rapidly and proliferate up out of the socket, which could probably be due to the unobstructed growth of the neoplastic tissue along the periodontal ligament and then sudden proliferation after extraction.¹² Occasionally, cases of carcinoma of the gingiva appear to arise following extraction of a tooth. However, if such cases are carefully examined, it can usually be ascertained that the tooth was extracted because of gingival lesion or disease or mobility which in fact was a tumour, which at the time of treatment

(surgery) went unrecognized or undiagnosed¹². The etiology of carcinoma of gingiva appears to be no more specific or defined than that of carcinomas of other areas of the oral cavity. Since the gingiva is a site of chronic irritation and inflammation, because of calculus formation and collection of micro-organisms in many individuals, one may speculate on the possible role of chronic irritation in the development of cancer of the gingiva. Approximately 1% of newly diagnosed oral malignancies are secondary to metastatic tumours. Oral cavity metastasis is not common, and the prognosis is usually poor. Most of the patients die within the first year with a 4-year survival of approximately 10%.⁶

The cancers can be insidious in onset and progression and can be misdiagnosed for persistent gingivitis, periodontal disease, or any other abscess. targeting these masquerades without thorough examination and necessary investigations like radiographs can lead to extraction of these teeth. Furthermore, classical clinical benign features may be present in malignant lesions; hence the submission of every surgical specimen to histological analysis is mandatory to provide the patient the adequate treatment¹¹. Hence identifying the cancerous lesions in early stages will help in providing good treatment and the ultimate prognosis of the patient will be better which decreases the morbidity and mortality rate associated with oral cancer.

Conclusion

The dentists should conduct regular screenings to detect any abnormal growth in the oral cavity. The dentists should properly educate the common people that most of the carcinomas are painless in the initial stages and about possible risk factors of oral cancer. Dentists should not neglect to send granulation tissue associated with extracted tooth for histo-pathological examination. Missed diagnosis, wrong diagnosis, or, most commonly,

delayed diagnosis is encountered during the clinical practice. Delayed diagnosis is associated with reduced survival and can significantly impact the chances of curative therapy for the patient, which is the most critical reason to be vigilant.

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References

1. Attitudes of General Dental Practitioners toward Biopsy Procedures Oral 184 and Maxillofacial Pathology Journal, January-June 2017;8(1):9-15.
2. Oral cancer awareness of the general public in coastal village areas of 186 Tamilnadu, India: a population based cross sectional study (IJCMPh) 187 Rajeshkumar Konduru et al.
3. Challenges of the Oral Cancer Burden in India Journal List J Cancer Epidemiol v.2012; 2012 PMC3471448 Ken Russell Coelho 1, 2, *
4. J Conserv Dent. 2010 Oct-Dec; 13(4): 240–245. Nonsurgical management 191 of periapical lesions Marina Fernandes and Ida de Ataíde.
5. Ozgegumusay, Basakbostankolu, Ipek isikgonul, Ahmet Ozet Tumor homing to the oral cavity after tooth extraction in a patient with metastatic lung adenocancer: A case report. 2016.
6. J.G. Batsakis, T.A. McBurney Metastatic neoplasms to the head and neck. Surg Gynecol Obstet, 133 (1971), pp.
7. N. Zachariades Neoplasms metastatic to the mouth, jaws and surrounding tissues. J Craniomaxillofac Surg, 17 (1989), pp. 283-290
8. A. Hirshberg, A. Buchner Metastatic tumours to the oral region. An overview. Oral Oncol Eur J Cancer, 31B (1995), pp. 355-360.
9. D. Hanahan, R.A. Weinberg The hallmarks of cancer. Cell, 100 (2000), 202 pp. 57-70.
10. Epstein JB, et al, Head and neck, oral, and oropharyngeal cancer: a review of medicolegal cases. Oral Surg Oral Med Oral Pathol Oral Radiol, 2015. 119 (2): p. 177-86
11. Celina Faig Lima. Renata Acay. Ana Lia An binder. Janet Dias Almeida. Yasmin Rodarte Carvalho Oral Aden squamous Carcinoma Mimicking a Pyogenic Granuloma: a Challenging Diagnosis. Braz. Dent. J. vol.27 no.6 Ribeirão Preto Nov./Dec. 2016
12. Sheikh S, D'Souza J. A case of well-differentiated squamous cell carcinoma 211 in an extraction socket. J Indian Soc Periodontol 2012; 16:602-5
13. Kanchan Dholam and Pankaj Kharade. "Association of History of Tooth 213 Extraction and Carcinoma of Alveolus as Well as Gingiva". EC Dental 214 Science 14.1 (2017): 03-06.
14. Chen, XJ., Zhang, XQ., Liu, Q. et al. Nanotechnology: a promising method for oral cancer detection and diagnosis. J Nanobiotechnol 16, 52 (2018). <https://doi.org/10.1186/s12951-018-0378-6>.