Original Article

Oral Cancer

Histological Types and Common Sites of Oral Cancer in Patients Presenting at Liaquat University Hospital Jamshoro/Hyderabad Sindh

1. Zaib un Nisa 2. Qadeer ul Hassan 3. Qamer un Nisa Memon 4. Ghulam Habib 5. Salman Shams

1. Asstt. Prof. of Periodontology, 2. Asstt. Prof. of Oral & Maxillofacial Surgery, 3. Asstt. Prof. of Orthodontics, 4. Lecturer of Oral & Maxillofacial Surgery, 5. Trainee, Oral & Maxillofacial Surgery, Liaquat University of Medical and Health Sciences Jamshoro, Hyderabad Sindh

ABSTRACT

Objective: To determine the frequency of histological types and comman sites of oral cancer in patients presenting at Liaquat University Hospital Jamshoro/Hyderabad Sindh.

Study Design: Descriptive Study.

Place and Duration of Study: This study was conducted on patients presenting at Oral and Maxillofacial Surgery Department, Liaquat university hospital Jamshoro/ Hyderabad Sindh over a period of one year from January 2010 to December 2010.

Materials and Methods: Patients of all age group and gender with biopsy proven oral cancer along with its Histopathological types were included in the study. Patients reported irradiated,metastatic,benign and inflammatory lesions were excluded from the study.

Results: Total number of patients was 100. There were 53 Males and 47 Females. Age range was 3years to 85years. means age was 44.2 years. Most comman site was cheeck mucosa. Histopathological analysis showed 75% patients having well diffrentiated squamous cell carcinoma, 13% patients having moderately diffrenciated squamous cell carcinoma, 2% patients having poorly diffrenciated anaplastic carcinoma,7% patients having basel cell carcinoma.1% Patients having Melanoma, 1% patients having Mucoepidermoid Carcinoma and 1% patients having Rhabdomyosarcoma.

Conclusion: This study gives a detailed account of the histopathological types of oral cancer along with their frequency and site. oral cancer occurred at a younger age with male prepondrance.

Key Words: Oral Cancer,Comman Site,Histological Type.

INTRODUCTION

Various pathalogical conditions affecting oral cavity ranged from benign inflamatory lesions to malignant lesions. Benign lesions can be neoplastic or non neoplastic. Non neoplastic lesions are usually inflammatory or represent reaction to some kind of irritation. Neoplasm represent a process characterized by progressive growth[1].

Malignant lesions of oral cavity has been recognized as a huge threat to public health because of its high morbidity and mortality [2-5].These lesions has high prevalence in various parts of world as well as in Pakistan [6-9].

More then 90% of oral malignancies are squamous cell carcinoma or one of its variants [10]. Early detection of pre-malignant and malignant oral lesions are important regarding prognosis [11-15]. Epidemiological evidence shows a correlation between use of smokeless tobacco and these lesions [16-18].

Clinically benign oral lesions can occasionally resemble malignancies[19]. When clinical features are not diagnostic or the persistent lesions for long time and suspected malignant only then the biopsy is done[20].

Oral Carcinogenesis is a highly complex multifocal process that takes place when squamous epithelium is affected by several genetic alterations. Now a days the use of several molecular biology techniques to diagnose oral precancerous lesions and cancers may markedly improve the detection of alterations that are invisible under the Microscope. This would Identify Patients at a high risk of developing oral cancer [21]

MATERIALS AND METHODS

This study was carried out on 100 patients at oral and Maxillofacial surgery department in collaboration with pathology department (Diagnostic research lab) Liaquat University hospital Jamshoro /Hyderabad Sindh from January 2010 to December 2010. All histopathologically proven oral cancers included in the study. Those reported irradiated,metastatic ,benign and inflammatory lesions were excluded from the study. Tumor Sites included were as follow cheeck, buccal mucosa, tongue, gums and alveolus, palate, floor of mouth, lips and angle of mouth. Frequency and proportions were calculated for age, Sex, Site and histological type of oral cancer.

RESULTS

One hundred patients were confirmed as cases of oral cancer. The youngest patient was 3 years old male and oldest was 87 years old female. Mean age of oral cancer patients was 44.2 years. Maximum number of patients (32%) were in 31-40 years of age group while very few patients were above 70 years of age(4%) table-1. out of one hundred patients of oral cancer 53% were males and 47% were females. Most common site of oral cancer was cheek (31%) followed by buccal mucosa (29%). Detailed distribution of site of oral cancer is given in table-2

Most common histological type was well differentiated squamous cell carcinoma accounting for (75%) cases, followed by the moderately differentiated squamous cell carcinoma (13%) cases. Detailed distribution of histological types of oral cancer is given in table-3.

Table No.1: Age Distribution

Age in years	No. of cases	%age
1-10	1	1%
11-20	3	3%
21-30	10	10%
31-40	32	32%
41-50	27	27%
51-60	12	12%
61-70	11	11%
71-80	2	2%
81-90	2	2%
Total	**100**	**100%**

Table No.2: Distribution According To Site

Site	No. of cases	%age
Buccal mucosa	29	29%
Cheek	31	31%
Tongue	17	17%
Palate	02	02%
Gums &alveolus	06	o6%
Floor of mouth	0 2	02%
Lips	10	10%
Angle of mouth	03	03%
Total	**100**	**100%**

Table No.3: Histological types of oral cancer

Histological type	No.of cases	%age
Squamous cell carcinoma	90	90%
a. well differentiated	75	75%
b. moderately differentiated	13	13%
c. poorly differentiated anaplastic carcinoma	02	02%
Basal cell carcinoma	07	07%
Melanoma	01	01%
Mucoepidermoid carcinoma	01	015
Rhabdomyosarcoma	01	01%
Total	100	100%

DISCUSSION

The most common age group affected by oral cancer as reported in the literature is 60-69 years [22] and 50-59 years[23] . While in this study most of the cancer were present in a youngest age group of 31-40(32%) followed by 41-50 years of age group (27%). The season could be the use of tobacco, pan, & betal nuts which is very common in our population. This is also supported by the study of Isaac U [24]. The youngest patient reported in the literature is a six month old baby suffering from Kaposi sarcoma[23] while in our study youngest patient was 3years old having Rhabdomyo-sarcoma.

Oral cancer in our study was more common in males (53%). Other previous studies also indicate high ratio in males.[24-25]

Tongue is the most common site involved by oral cancer in western world [26-28] . In this study cheek is common site (31%) cases followed by buccal mucosa (29%) cases. This is also supported by other studies conducted in Pakistan [23,29,30] .

The difference may be due to environmental factor in different parts of the world and can be attributed to betal nuts, smokeless tobacco chewing and peoples in this part of world put snuff (naswar) in their cheek is also common.

In this study most common histological types of oral cancer was well differentiated squamous cell carcinoma (75%) followed by moderately differentiated squamous cell carcinoma (13%). This is well supported by other Studies [22,24,31]. Haq M,E.U, et al reported that poorly differentiated squamous cell carcinoma is the most common histological type in his study [32] .It is concluded from other previous studies that higher the grading of tumor and poorer its differentiation more are its chances of metastasis.

CONCLUSION

Oral cancer occor at a younger age with male preponderance. Most common site is cheek. Well differentiated oral squamous cell carcinoma is most common histological type of oral cancer in this part of world.

REFERENCES

1. Boveri T. Concerning the origin of maliganant tumors. New York: Cold Spring harbour press; 2008.
2. Sano D, Myers JN. Metastasis of squamous cell carcinoma of the oral tongue, Cancer Metastasis Rev 2007;26(3-4):645-662.
3. Jemal A, Siegal R, Ward E, Hao Y, Xu J, Murray T, Thun MU: Cancer Statistics, 2008. CA Cancer J Clin 2008;58(2):71-96.

4. Parkin DM, Bray F, Ferlay J, Pisani P. Global cancer statistic, 2002. CA Cancer J Clin 2005; 55(2):74-108.
5. Kademani D. Oral Cancer. Mayo Clin Proc 2007, 82(7)878:887.
6. Su CC, Yang HF, Huang SJ, et al. Distinctive features of oral cancer in Changhua Country: highest incidence, buccal mucosa preponderance, and a close relation with prevelance of betel quid chewing habit. Formos Med Assoc 2007;106: 225-33.
7. Bhurgri Y, Bhurgri A, Pervaiz S, Bhurgri M, Kayani N, Ahmed R, et al. Cancer Profile of hyderabad, Pakistan 1998_2002, Asian Pac J Cancer Previous 2005;6:474-80.
8. Feraly J, Brey F, Pisani P, Parkin DM, Globocan. Cancer Incidence, and prevalence worldwide. In IARC Cancer Base No. 5, Version 2.0 Lyon: IARC Press, 2004.
9. Greenile RT, Hill-Harmon MB, Murray T, Thun M. Cancer Statistics Cancer J Chin 2001;50:7-33.
10. Jin Y, Jin C, Oral squamous cell carcinoma. Atlas genet Cytogent Oncol Haematol 2006.
11. Gillenwater A, Papadimirakopoulou V, Richards R. Oral premaligancy: new methods of detections and treatment," Current Oncology reports 2006; 2:146-154.
12. Peterson PE. "Oral cancer prevention and control the approach of the world Health Organization. Oral Oncol 2009; 45(4-5):454-460.
13. Tanaka T. Chemoprevention of oral carcinogenesis. Euro J of Cancer part B 1995; 31(1):3-15.
14. Tanaka T. Effect of Diet on human carcinogenesis. Critical Reviews in Oncology/Haematol 1997; (2);73-95.
15. Tanaka T. Chemoprevention of human cancer: biology and therapy; Critical Review in Oncology. Haematol 1997;25(3):139-174.
16. Hetch SS. Progress and challenges in selected areas of tobacco carcinogenesis. Chem Res Toxicol 2008;21(1);160-171.
17. Warnakulasuria KA, Ralhan R. Clinical, Pathological, Cellular and Molecular lesions caused by oral smokeless tobacco a review. J Oral Pathol Med 2007;36(2):63-77.
18. Rodu B, Jansson C. Smokeless tobacco and oral cancer a review of the risks and the determinants. Crit Riv Oral Biol Med 2004;15(5):252-263.
19. Al-Khateeb TH. Benign Oral Masses in a northern Jordanian Population a Retrospective study open duet. 2009;3:147.
20. Silverman S. Demographics and occurrence of oral and pharyngeal cancers the outcomes the trends the challenges. J am Dent Assoc 2001;132:7-11.
21. Joseph BK. Oral cancer; prevention and detection medical principles and practice. 2002;11(1): 32-35.
22. Krolls SO, Hoffman S. Squamous cell carcinoma of oral soft tissues: a statistical analysis of 14,253 cases by age, sex and race of patients. J Am Dent Assoc 1976;92;571.
23. Kayembe MKA, kalengayi MMR. Histological and epidemiological profile of oral cancer in cango (zaire). Odonto-stomatologie tropicale 1999; 88:29-32.
24. Isaac U, et al. presentation of histological types and common sites oral cancer in lower Sindh. JLUMHS 2009;08:2010-13.
25. Dias GS, Almeida AP. A histological and clinical study on oral cancer. Med Oral Pathol Cir Buccal 2007;12(7):474-8.
26. Warnakulasuria S. global epidemiology of oral cancer. Oral Oncol 2009;45:309-16.
27. Aurujo-jounior RF. Prognostic significance of anatomical location and TNM classification in oral squamous cell ca. Med Oral Pathol 2008;13:344-7.
28. Lam L. Epidemiological analysis of tongue cancer in south asia 1977-2001. Aust Dent J 2006;(51): 16-2.
29. Shah I, et al. clinical stage of oral cancer patients at the time of initial diagnosis, J Ayoub Med Coll Abottabad 2010;22(3):61-63.
30. Wahid A, et al. Pattern of carcinoma of oral cavity reporting at Dent Dept. Ayoub Med Coll 2005;17(1);65-6.
31. Rich AM. Squamous cell ca of oral mucosa. J Oral Path Med 2006;13:459-71.
32. Haq MEU, et al. Frequency and pattern of oral and maxillofac carcinomas. Annals 2009;15(4).

Address for Corresponding Author:
Ghulam Habib Arain.
Lecturer Oral surgery,
LUMHS Jamshoro/Hyderabad sindh.
Cell: 03332606590
E-mail : drhabib750@gmail.com