

Original Article

Clinicopathological Study of Oral Carcinoma

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Abstract

Background: Oral carcinoma is the 6th most common carcinoma worldwide. The 5 year survival rate for oral carcinoma is only 50%. Patients of oral carcinoma are at high risk from secondary neoplasm. Over 90% of all primary malignant tumour of the oral cavity is squamous cell carcinoma.

Aim: To find out the difference of clinical presentation and pathological aspects of oral cancer.

Methods: In this cross sectional study 30 patients with carcinoma oral cavity from the department of otolaryngology and Head neck surgery, Bangabandhu Sheik Mujib medical University, Dhaka Medical College hospital and National Institute of cancer research & hospital, Mohakhali, Dhaka were included , period from march 2009 to September 2009. The patients were examined after admission into Hospital pre-operatively and in the post-operative period. The surgical specimen were sent for Histopathology.

Results: Majority of the patients were at 6th decade where female outnumbered the male with male female ratio is 5:4. Out of 30 patients majority of the patients complains of soreness/irritation and ulceration in the oral cavity followed by difficulty in mastication, foul breath, pain in the lesion, dysphagia, spitting of blood and excessive salivation. About the site of the lesion maximum patients having the lesion in buccal mucosa(30%) then anterior 2/3rd of tongue (23.33%), retromolar area (13.33%) in decreasing frequency.

Conclusion: Oral carcinoma usually a disease of middle age and elderly people. Irritation or soreness is the commonest symptom. Most affected sites are buccal mucosa and anterior 2/3rd of tongue.

Key words: Oral Carcinoma, Neck node, metastasis.

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Introduction

Oral carcinoma is the 6th most common carcinoma worldwide. It is one of the common cancer in man in high risk countries like Srilanka, India, Pakistan, Bangladesh and accounts up to 30% of all new cases of cancer compared to 2% in UK and 8% in France¹. The 5 year survival rate for oral carcinoma is only 50%. Patients of oral carcinoma are at high risk from secondary neoplasm. Up to 30% of patients later develop another tumour. During its earliest stage, oral cancer may be totally asymptomatic or it may present with mild irritation. Pain usually occurs when the lesion becomes more advanced and ulcerated. So oral cancers are notorious for

their late presentations. Oral intake may worsen the pain and lead to malnutrition and dehydration. Associated symptoms include bleeding, poor dental fit, Dysphagia, odynophagia and trismus. Comprehensive examination of the head and neck should be conducted with a focus on oral cavity. Mucosa of all the sub sites of the oral cavity and oropharynx should be examined systematically. Over 90% of all primary malignant tumour of the oral cavity is squamous cell carcinoma. Approximately 5% of tumours are minor salivary glands origin & less than 1-2% being melanoma, lymphoma or sarcoma. Approximately 30% of patients present with palpable metastatic nodes and from the rest another 25% will develop nodal metastasis within 2 years. Up to 30% of patients with T₁ (<2 cm diameter) tumours have occult metastasis at presentation³. Carcinoma of tongue accounts for around 35% of squamous cell carcinoma of oral cavity. Most common site of carcinoma tongue is its lateral margin or ventral surface. Carcinoma floor of the mouth normally presents in the lateral and anterior aspect. Carcinoma of tongue appears to have a higher risk of metastasis to the regional lymph nodes and subclinical nodal metastasis may be found in up to 30% of T₁ and T₂ oral tongue carcinoma. For early diagnosis thorough clinical examination & imaging techniques like USG, CT scan, MRI, FNAC is helpful. Biopsy confirms the diagnosis.

Treatment modalities of oral cancer are surgery and radiotherapy. Photodynamic therapy and chemotherapy have occasional applications. Surgery includes removal of primary tumour with or without neck dissection and reconstructive surgery.

Aims and objectives

- 1) To find out different clinical presentations of oral cancer.

- 2) To reveal the pathological aspects of oral cancer.

Methods

Thirty cases of oral carcinoma were studied from the department of otolaryngology and head Neck surgery, BSMMU, DMCH, National institute of cancer research and hospital, Mohakhali, Dhaka within the period of march 2009 to September 2009. Histopathologically confirmed cases of oral cancer were included in this study in different age and sex groups belonging to different socioeconomic conditions.

Results

30 patients diagnosed as oral carcinoma were included in this study. Lowest age of the patients was 35years and highest age was 67 years.

Table -I

Age distribution of patients (n=30)

Age in years	No. of patients	Percentage
<40 years	1	3.33
41-50 years	12	40.00
51-60 years	15	50.00
61 years	2	6.66

The above table shows highest incidence of patients were in 6th decade & lowest incidence in below 40 years of age.

Table -II

Sex distribution of patients (n=30)

Sex	Number of patients	Percentage
Male	17	56.66
Female	13	43.34

The above table shows female outnumbered male patients.

Table –III
Clinical Features

Clinical Features	Frequency	Percentage
Soreness/irritation in the oral cavity	23	76.66
Ulceration in the oral cavity	21	70.00
Difficulty in mastication	18	60.00
Foul breath	17	56.66
Pain in lesion	8	26.66
Dysphagia	7	23.33
Spitting of blood	7	23.33
Excessive salivation	6	20.00
Odynophagia	5	16.66
Referred earache	4	13.33
Health status		
Good	9	30.00
Below average	14	46.66
Emaciated/debilitated	7	23.33

Above table shows that highest percentage of patients (76.66%) complains of soreness in the oral cavity followed by ulceration in the oral cavity (70%), difficulty in mastication (60.00%), foul breath 56.66% etc.

Table -IV
Macroscopic type of lesion (n=30)

Type of lesion	No. of patients	Percentage
Ulcerative Lesion	18	60%
Exophytic Lesion	11	36.66%
Infiltrative Lesion	01	3.33%

Table-V
Site of primary tumour (n=30)

Site	No. of patients	Percentage
Buccal mucosa	9	30.00
Anterior 2/3 rd of tongue	7	23.33
Retromolar area	6	20.00
Hard palate	2	6.66
Lip		
Upper lip	-	-
Lower lip	2	6.66
Upper gingiva	-	-
Lower gingiva	4	13.33

From above table it is evident that maximum patients (30%) had lesions in the buccal mucosa, followed by anterior 2/3rd of tongue (23.33%) & retro molar region (20%).

Table VI
Regional extension (n=30)

Tumour size	No. of patients	Percentage
T ₁	16	53.33
T ₂	13	43.33
T ₃	1	3.33
T ₄	-	-

It was evident from above table that 16 patients (53.33%) presented with T₁ lesions. 13 patients (43.33%) presented with T₂ lesions, 1 patient presented with T₃ lesion and no patient presented at T₄ lesion.

Table –VII
Histopathological analysis (n=30)

Type of carcinoma	Sex		No. of patients	%
	Male	Female		
Squamous cell carcinoma	11	16	27	90.00
Verrucous carcinoma	2		2	6.66
Adenoid cystic carcinoma	1		1	3.33

Discussion

Oral carcinoma is one of the common cancers in high risk countries like Sri Lanka, India, Pakistan, Bangladesh and accounts up to 30% of all new cases of cancer compared to 2% in UK and 8% in France. It is the sixth most common cancer worldwide¹.

In the present study, 30 cases of oral cavity carcinoma were studied in 03 Hospitals of Dhaka city from March 2009 to September

2009 and highest incidence (50%) was found in the 6th decade followed by 5th decade (40%) and only 01 patient (3.33%) below 40 years of age. This corresponds to the age incidence found in the Zimbabwean population². Another study at Netherland reveals less than 4% incidence in the age group below 40 years³. The study shows increased incidence in female patients (57%) than male patients (43%) might be due to the habit of chewing betel nut with tobacco in these females which differs from other studies but one study at Nigeria shows male female ratio 1.4:1⁴.

Almost all the patients presented with multiple symptoms & 76.66% of the patients complain of soreness or irritation in the oral cavity, 70% complain of ulceration in the oral cavity, 60% complain of difficulty in mastication, 56.68% foul breath, 26.66% mild pain in the lesion, 23.33% Spitting of blood, 20% excessive salivation, 23.33% Dysphagia and odynophagia which is almost equal with other studies^{5,6,7}

In this study it was found that 60% of the lesions were ulcerative in type followed by 36.66% exophytic and 33% infiltrative in nature. The figures are in similarity with that found by Martinez-Conde-R et al⁸.

Regarding site of primary tumor, it was found that most of the lesions were at buccal mucosa (30%), followed by ant. 2/3rd of tongue (23.33%), retromolar area (20%), lower gingiva (13.33%) and each of the hard palate, lower lip is equal being 6.66%. Maximum incidence at buccal mucosa is consistent with the findings of study at Ayub Medical college⁹. But Tabbar AA et al found tongue as the most affected site of oral carcinoma¹⁰.

In the present study, 90% of the lesions were squamous cell carcinoma, 6.66% were verrucous carcinoma and 3.33% was adenoid

cystic carcinoma. Study at Ayub medical college, Abottabad showed that 94% of the all oral malignancies were squamous cell carcinoma⁹ which is consistent with our findings.

In this series, analysis of the histopathological report of the patients reveals that 80% of the lesions were grade I, 10% were grade II and 6.66% were grade III. None of the lesions was grade IV. In a Zimbabwean study, 64.8% were well differentiated and 24.8% moderately differentiated and 10.4% were poorly differentiated carcinoma².

Conclusion

Carcinoma oral cavity usually presents at 5th and 6th decade & is commoner in female than male. The commonest site of lesion was buccal mucosa. Squamous cell carcinoma was around 90% of all malignant neoplasm.

References

1. Webster K. Oral cavity tumours including lip. In: Scott Brownes otorhinolaryngology & Head neck surgery. 8th ed. Hodder Arnold, AJK 2008; 2:2543-76.
2. Chidzonga MM, Mohamva L. Squamous cell carcinoma of the oral cavity, maxillary antrum and lip in Zimbabwean people. Oral Oncol. 2006; 42(2):184-9.
3. Stock-Liefferink-SAM, Damaus AG et al. Oral squamous cell carcinoma in children, review of an usual entity. International journal of paediatric otolaryngology. 2008; 72:127-
4. Effiom OA, Adeymo WL et al. oral squamous cell carcinoma: a clinicopathologic review of 233 cases in Lagos, Nigeria. Journal of oral and maxillofacial surgery. 2008; 66(8):1595.
5. 99Rhodus NL, Oral cancer, early detection and prevention. Continuing

- Education (an education grant of GSK).2007
6. Has SP, Cheng MH. Cancer of the buccal mucosa and retromolar trigone. Operative techniques in otolaryngology 2004;15 :239-45
 7. Riberio ACP, Silva Ars, Simonato LE et al. Clinical and histopathological analysis of oral squamous cell carcinoma on young people A descriptive study in Brazilians. British journal of oral and Maxillofacial surgery 2009;47: 95-98..
 8. Martinez-Conde R, Aguirre JM et al. Clinicopathological factors in early squamous cell carcinoma of the tongue and floor of the mouth in Biscay, Spain. Med Oral 2000; 6(2):87-94
 9. Wahid A, Ahmed S, Sajjad M. Pattern of carcinoma of oral cavity reporting at dental depart of Ayub Medical College. Journal of ayub Medical College, Abbottabad. 2005;17(1):65-6.
 10. Rounanes G.J The Tongue. In: Cunningham's Mannual of practical Anatomy. 15th ed. Oxford University Press, Oxford. 1996:1666-171.
 11. Guyton CA, Hall JE. Secretory Functions of the Alimentary tract. In: Text Book of Medical Physiology, Guyton & Hall. 11th ed. Saunders, An imprint of Elseiver, Philadelphia, USA. 791-807.
 12. Stucker FJ, Lian TS. Mngement of cancer of the lip. Operative techniques in otolaryngology. 2004; 15:226-233.
 13. Liewellyn CD, Linklater K, Bell jhonson NW, Warnakulasuriya KA. Squamous cell carcinoma of the oral cavity in patients aged 45 years and under. Oral oncology. 2003;39(2):106-14.
 14. Lam KY, NG IOL, Yuen APW. Cycling D1 expression in oral squamous cell carcinoma: Clinicopathological relevance and medicine. 2000; 29(6):167-172.
 15. Bouquot, JE Oral verrucous carcinoma inclusion in two US Population, Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 1998;86;318-324.
 16. Sadler T.W. Head and Neck. In: Medical Embryology, 6th ed. Williams & Siskins, USA. 1990:297-327
 17. Chidzonga MM. Oral malignant neoplasia: a survey of 428 cases in two Zimbabwean hospitals. Oral Oncol.
 18. Sculy C, Porter S. Oral Cancer. British Medical Journal 2000; 321:97-100.
 19. Williams NS, Bulstrode Christoher J.K, Oconnell P.R. Oropharyngeal Cancer. In: Baily & loves short practice of surgery. 25th ed. Hodder Arnold, UK. 2008:734-51.
 20. Dark RL, Adam WV, Michell W.M. Regional anatomy, Oral cavity. In: Grays Anatomy for students. 1St ed. Elsevier, Chrchill Livingstone. 2005.
 21. Watkinson JC, Gaze M N, Wilson JA. Tumours of the lip and oral cavity. In: Stell and Marans Head and neck surgery. 4th ed. Butter Worth Heineman, Oxford. 200:275-317.
 22. Pelucchi C, Gallus S et al. Alcohol and tobacco use and cancer risk for upper aerodigestive tract and liver. Eur J Cancer Prev. 2000;17(4):340-4.
 23. Liewellyn CD, Linklater K et al. Squamous cell of the oral cavity in patients age 45 years and under. Oral oncol. 2003;39 (2):106-14.
 24. Mehrotra R, Yadav S. Oral squamous cell carcinoma: Etiology, Pathogenesis and prognostic value of genomic alteration. Indian Journal of Cancer. 2006; 43(2):60-66.
 25. Tadvir AA, Mehrabani D, Heydari ST. Primary malignant tumours of orofacial origin in Iran. J Cranioface Surg. 2008;19(6):1538-41.