



Study of histopathological spectrum of oral cavity lesions

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Abstract

Aims and objectives: The present study is designed to study the histopathological spectrum of oral cavity lesions, to compare the observed findings to similar studies with relation to age, sex and site distribution and to study the relationship between ill-fitting denture, to bacco chewing and cigarette smoking with pathological lesions benign and malignant.

Keywords: Inflammatory, Autoimmune, Age, Sex

Introduction

Oral cavity lesions are commonly presents as growth, ulcer, white plaque, bleeding, foreign body sensation. Spectrum of lesions in the oral cavity shows great variation in age, congenital lesions may be present at birth while carcinomas appears in any age ranging from adults to elderly. Oral malign ancies are on the rise. Easy and cheap availability of tobacco& betel nut leading to large scale consumption in early childhood. This is leading to marked rise in oral malignancies that is affect ting people in younger age groups. In present study, we want to assess various pathological lesions affecting oral cavity. Study will give us insight into various malignant conditions affecting oral cavity. This study gives rough

assessment of serious morbidities being introduce by these preventable promoting agents.

Various inflammatory, autoimmune, and infectious diseases show their expression in oral cavity. In flamma tory and hyperplastic reactive lesions constitute most common group of lesions involving oral cavity. Reactive lesions of oral cavity are non-neoplastic proliferation of soft tissue with very similar clinical appearance to benign neoplastic proliferation. Removal of offending agent shows remission in cases of inflammatory and reactive hyper plastic lesions. Leukoplakia, erythroplakia, oral sub mucous fibrosis and smokers’ palate fall into potentially malignant conditions. There risk to progress into squamous cell carcinoma is been proved in previous studies. High incidence of oral cancer has been correlated with prevalence of risk factors like tobacco chewing and smoking habits¹.

Material and method

The presented study is the clinical, epidemio logical and morphological findings of oral cavity lesions total 210 specimen in department of patho logy, in Government Medical College Kota, over a period of one year.

- Study design: Cross sectional.

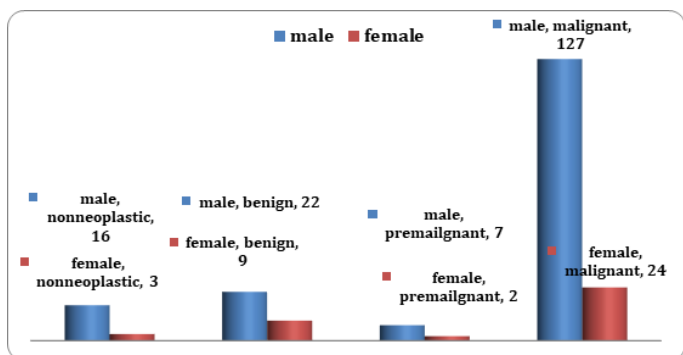
- Study type: Laboratory based descriptive type of observational study.
- Study duration: June 2019 to May2020.

Observations and Results

Table 1: Sex distribution of non-neoplastic, benign, premalignant and malignant lesions

Sex	Non-neoplastic	Benign	Premalignant	Malignant
Male	16	22	7	127
Female	3	9	2	24
Total	19	31	9	151
M: F	5.3:1	2.4:1	3.5:1	5.2:1

Figure 1: Sex distribution of non-neoplastic, benign, premalignant and malignant lesions



Site distribution

Buccal mucosa is the most common site affected followed by tongue. Lip and gingiva affected least.

Table 2: Site distribution of malignant oral lesions

Site of the lesion	No. of cases	Percentage
Buccal mucosa	110	52.3%
Tongue	74	35.2%
Gingivobuccal sulcus	5	2.3%
Hard palate	1	0.4%
Floor of mouth	1	0.4%
Retromolar trigone	2	0.9%
Lip	12	5.7%
Alveolus	4	1.9%
Jaw	1	0.4%

Figure 2: Site distribution of malignant oral lesions

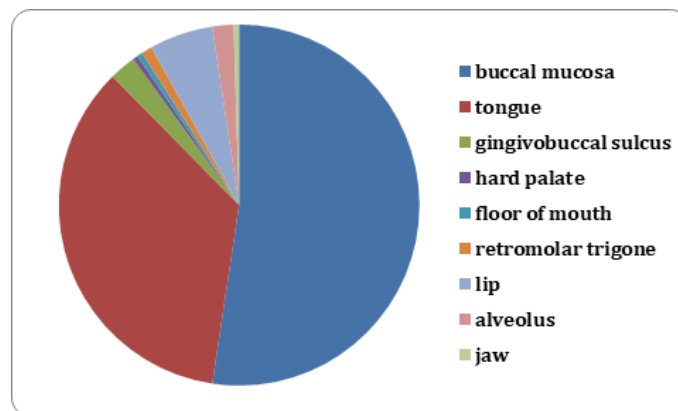


Table 3 a: malignant neoplasm –(151cases)

Squamous cell carcinoma (SCC)	142
Spindle cell variant of SCC	2
Verrucous carcinoma	4
Malignant melanoma	1
Basaloid carcinoma	1
Spindle cell neoplasm	1

Table 3 b: differentiation of squamous cell carcinoma

Well differentiated SCC	108
Moderately differentiated SCC	32
Poorly differentiated SCC	2

Discussion

This sample size is almost similar to studies done by Ranjan Agrawal et al⁶ - 133, Dilem Modi et al⁴-119, Nadia Zaib et al¹⁰ - 114, Bhargava et al⁹-213, Nikunj V. Mehta et al⁸ -100, and Manisha A Atram et al⁷ - 213. In present study, out of 210 cases, 173 are male and 37 are female with male to female ratio is 4.6:1.

In present study buccal mucosa was the most common site affected in malignant neoplasm comprising of 52.3%, followed by tongue (35.5%), lip (5.7%), gingivobuccal sulcus (2.3%), alveolus (1.9%) retro molar Tri gone (0.9%), hard palate and jaw (0.4%).

Kosam & Kujur⁶ found buccal mucosa (54%) as most common site followed by tongue (16.6%) for various oral lesions. Dilem Modi et al⁴, Claudia et al², Ravi Mehrotra

et al³, Dowerah & Bhuyan⁵, Bhargava et al⁹, Nikunj V. Mehta et al⁸. also found buccal mucosa as common site. Patel MM et al² reported 12.9 % of oral and oropharyngeal malignancy below 35 years. Durazzo MD et al reported 8.6% of patient below 40 years. Other Indian studies shows very low incidence of oral cancer in below 35 years of age.

In present study, out of 210 cases ,19 cases (9.04%) are non- neoplastic, 31 cases (14.76%) are benign, 9 cases (4.28%) are precursor/ premalignant and 151 cases (71.90%) are malignant.

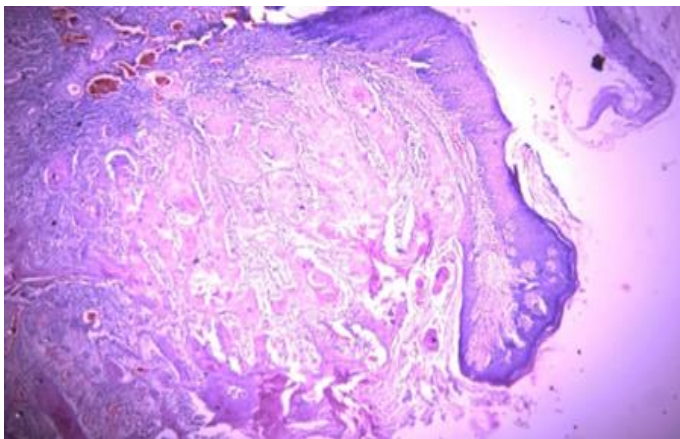


Figure 3: H&E section shows Well differentiated squamous cell carcinoma. (40x view)

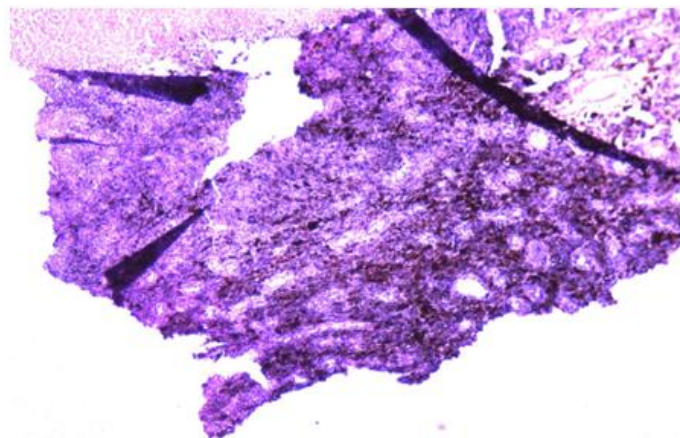


Figure 4: H&E section shows malignant melanoma. (100x view)

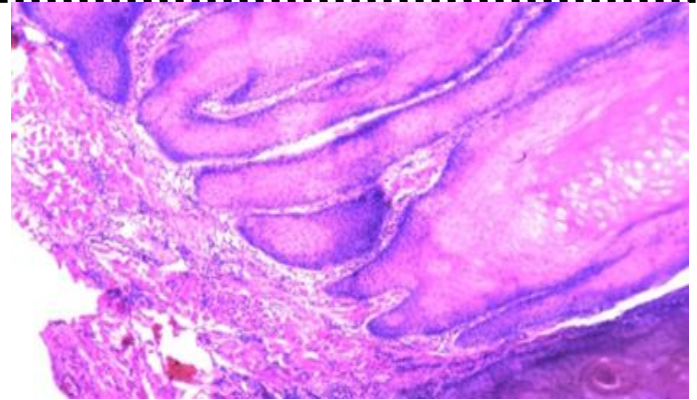


Figure 5: H&E section shows verrucous carcinoma. (100x view)

Conclusion

From the present study it is concluded that majority of oral cavity lesions are malignant in nature. Malignant lesions are seen more in 4th, 3rd and 5th decade of life. Males are predominantly affected both in benign, premalignant and malignant lesions. Finally, it is concluded from the present study that awareness among population including young adults and females regarding harmful effects of tobacco products and clinical presentation of their oral lesions should be exercised. Every lesion in oral cavity is to be submitted for histopathology for correct diagnosis and assessment of malignant potential in early stage. This aids in better patient care, reduced morbidity and mortality and improves survival.

References

1. Global Adult Tobacco Survey (GATS) Fact Sheet 2009-2010.
2. Claudia Fierro-Garibay 1, Nieves Almendros-Marqués 2, Leonardo Berini-Aytés 3, Cosme Gay-Escoda. Prevalence of biopsied oral lesions in a Department of Oral Surgery. J Clin Exp Dent. 2011; 3 (2):e73-7.
3. Mehrotra R, Pandya S, Chaudhary AK, Kumar M, Singh M. Prevalence of oral pre-malignant and malignant lesions at a tertiary level Hospital in Allahabad, India. Asian Pacific J Cancer Prev 2008; 9:263-6.

4. Modi D, Laishram RS, Sharma LD, Debnath K.

Pattern of oral cavity lesions in a tertiary care hospital in Manipur, India. *J Med Soc.* 2013;27:199-202.

5. Dowerah E and Bhuyan A P. Clinico patho logical study of oral cavity neoplasm: experience at a tertiary care hospital of Assam, India. *The clarion* vol 3 no.2 (2014)PP1-6.

6. Ranjan Agrawal, Ashok Chauhan and Par bodh Kumar. Spectrum of oral lesions in a Tertiary Care Hospital. *J Clin Diagn Res*, 2015 June 9(6) EC11-EC13.

7. Dr. Manisha A Atram, Dr Vijay Bhalavi, Dr Sunita Dan kale. A clinico patho logical study of tumors and tumor like lesions of oral cavity. *IJBAMR* June 2016; 5 (3) 146-153

8. Nikunj V Mehta, Kalpana K Dave, R N Gonsai, Purvi S Patel, Tarang B Kada. Histopathological study of oral cavity lesions : A study on 100 cases. *Int J Cur Res Rev*, May 2013/ vol 05 (10) 110-116

9. Bhargava OP, Totade S, Oral Cavity Malign ancies : A clinico patho logical study: *Int J Med Res Rev* 2016;4(4):582-586.

10. Nadia Zaib, Madiha Sajid, Amina Iltaf, Sabeen Abbas, Salma Shaheen. Oral biopsies: Study of 114 cases. *Pakistan Oral & Dental Journal* Vol 32, No. 3 (December 2012)