Research Article

Clinicopathological Study of Oral Cavity Lesions in a Tertiary Care Hospital

Authors

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Abstract

Oral cavity is a common site for development of congenital and acquired lesions as well as localized benign and malignant lesions. Congenital lesions include entities such as dermoid cyst, odontogenic cyst, lingual thyroid. The great majority of acquired localized overgrowths of the oral mucosa are considered to be reactive rather than neoplastic in nature. Aim of this study is to find out the frequency of different histological types of oral cavity lesions reported at our institute along with their clinicopathological correlation. Patients coming in ENT and Dental outpatient departments and wards with definitive oral masses, leucoplakia or ulcers are included in this descriptive study over a period of one and half year at present institute. Total 210 cases of oral lesions diagnosed on scrape cytology and/or histopathology were included. Out of total 210 cases, most of cases were in the 51-60 age group, were males and presented with swelling or ulceroproliferative swelling and site involved was buccal mucosa. Histopathologically, Premalignant and malignant lesions were 108 cases out of 210 and associated with tobacco chewing or addicted to tobacco chewing and smoking or alcohol together. Present study was discussed and compared with other studies done. From the present study, it was observed that majority of the oral cavity lesions are benign in nature; however, malignant lesions are reported in greater frequency. Any mass lesion especially in the oral cavity should be biopsied to rule out malignancy.

Keywords: oral masses, ulceroproliferative swelling, Oral cancer, tobacco chewing.

Introduction

Oral cavity is a common site for development of congenital and acquired lesions as well as localized benign and malignant lesions. Congenital lesions include entities such as dermoid cyst, odontogenic cyst, lingual thyroid. The great majority of acquired localized overgrowths of the oral mucosa are considered to be reactive rather than neoplastic in nature. Clinically benign tumors or tumor like lesions are slow growing. These include eosinophilic granuloma, fibroma, papilloma, epulis, granular cell tumor, keratoacanthoma, lipoma, schwannoma, verruciform xanthoma, pyogenic
Granuloma and odontogenic tumors. They do not recur after complete surgical excision. Oral cancer represents 2-4% of malignancies in the West but accounts for almost 40% of all the cancers in the Indian subcontinent. Over 90% of these tumors are squamous cell carcinoma which arise from oral mucosal lining.

Aims & Objectives
1) To find out the frequency of different histological types of oral cavity lesions reported during the study.
2) To study clinicopathological characteristics of oral cavity lesions.
3) To study association between tobacco or betel nut chewing or smoking and oral malignancies

Material and Methods
This prospective study included patients with definitive oral masses, leucoplakia or ulcers.

Study Period- The cases were referred from ENT and Dental outpatient departments and wards, of a secondary referral hospital in the one and half year period.

Observation and Results
Table 1: Age-wise distribution of oral cavity lesions

| Sr No | Age Group (Years) | Number of cases | (% of Group) |
|-------|-------------------|-----------------|--------------|
| 1     | 0-10              | 7               | 3.33         |
| 2     | 11-20             | 19              | 9.05         |
| 3     | 21-30             | 29              | 13.81        |
| 4     | 31-40             | 29              | 13.81        |
| 5     | 41-50             | 32              | 15.24        |
| 6     | 51-60             | 53              | 25.24        |
| 7     | 61-70             | 31              | 14.76        |
| 8     | 71-80             | 9               | 4.29         |
| 9     | 81-90             | 1               | 0.48         |
| Total |                   | 210             | 100.00       |

Of the total 210 patients, 53 (25.24 %) were in the 51-60 yrs age group, followed by those in 41-50 yrs age group (15.24%).

Table 2: Sex-wise distribution of oral cavity lesions

| Sr No | Sex   | No of Cases | %   |
|-------|-------|-------------|-----|
| 1     | Males | 122         | 58.10 |
| 2     | Females | 88     | 41.90 |
| Total |       | 210         | 100% |

Of the total 210 patients, most of the patients were male 122(58.10 %)
Table 3: Site-wise distribution of oral cavity lesions

| Sr. no. | Site                | Number of cases | %    |
|---------|---------------------|-----------------|------|
| 1       | Tongue              | 47              | 22.38|
| 2       | Lip                 | 21              | 10   |
| 3       | Buccal mucosa       | 67              | 31.90|
| 4       | Gingiva             | 30              | 14.29|
| 5       | Retromolar region   | 6               | 2.86 |
| 6       | Palate              | 12              | 5.71 |
| 7       | Floor of mouth      | 11              | 5.24 |
| 8       | Maxilla             | 8               | 3.81 |
| 9       | Mandible            | 5               | 2.38 |
|         | Total               | 210             | 100  |

Most common site involved in the patients presenting with oral cavity lesions was buccal mucosa 67 (31.90 %) followed by tongue 47 (22.38 %).

Table 4: Clinical Presentation-wise distribution of oral cavity lesions

| Sr No | Clinical Presentation                  | Number of cases | % of Group |
|-------|---------------------------------------|-----------------|------------|
| 1     | Swelling                              | 134             | 63.81      |
| 2     | Ulcer                                 | 25              | 11.90%     |
| 3     | Ulceroproliferative Swelling          | 27              | 12.86      |
| 4     | Papule                                | 1               | 0.48       |
| 5     | Bleeding                              | 17              | 8.10       |
| 6     | White patch                           | 22              | 10.48      |
| 7     | Red patch                             | 1               | 0.48       |

Most common presentation was swelling in 134 cases (63.81 %) followed ulceroproliferative swelling in 27 cases (12.86 %).

Table 5: Distribution of oral cavity Lesions according to major histopathological categories

| Subtypes                      | Non Neoplastic (% of Group) | Neoplastic (% of Group) | Total (% of Group) |
|-------------------------------|-----------------------------|-------------------------|--------------------|
|                               | Number of Cases             | Benign                  | Premalignant       | Malignant          | 210 (100%) |
| Non Neoplastic                | 74 (35.24%)                 | 28 (13.33%)             | 23 (10.95%)        | 85 (40.48%)        | 210 (100%) |
| Neoplastic                    |                             |                         |                    |                    |            |
| Benign                        |                             |                         |                    |                    |            |
| Premalignant                  |                             |                         |                    |                    |            |
| Malignant                     |                             |                         |                    |                    |            |

Histopathologically, malignant cases 85 (40.48 %) were most common followed by non-neoplastic cases 74 (35.24 %).

Table 6: Distribution of Habits related to Premalignant and malignant lesions of Oral Cavity

| Habits                     | Premalignant Lesions (% of Group) | Malignant Lesions (% of Group) |
|----------------------------|-----------------------------------|-------------------------------|
| Tobacco Chewing            | 8 (34.78%)                        | 38 (44.71%)                   |
| Smoking                    | 3 (13.04%)                        | 10 (11.76%)                   |
| Alcohol                    | -                                 | 1 (1.18%)                     |
| Tobacco Chewing + Smoking/Alcohol | 4 (17.39%)                  | 12 (14.12%)                   |
| Smoking +Alcohol           | 1 (4.35%)                         | 4 (4.71%)                     |
| Nil                        | 4 (17.39%)                        | 12 (14.12%)                   |
| Total                      | 23 (100%)                         | 85 (100%)                     |

Histopathologically cases diagnosed as premalignant and malignant were addicted most commonly to tobacco chewing 46 cases and in 16 cases addiction to tobacco chewing, smoking and or alcohol found.
Images (benign lesions)

Fig.1 Tongue Fibroma

Fig.2 Epulis

Fig.3 Ranula

Fig.4 Haemangioma

Fig.5 Leucoplakia

Fig.6 Malignant Ulceroproliferative Swelling

Fig.7 Scrape Cytology Showing cells with moderate atypia

Fig.8 HPE Well Differentiated SCC
Discussion

| RESULT OF PRESENT STUDY                                                                 | OTHER STUDIES HAVING SIMILAR RESULTS |
|---------------------------------------------------------------------------------------|--------------------------------------|
| Most oral cavity lesions are found in the age group of 51-60 years                     | Zaib N et al                          |
| Male : Female Ratio of all oral lesions was 1.39:1 with predominance of males over females | Luqman and Al-Shabab and Ali and Sundaram |
| Most common site of involvement amongst oral cavity lesions is buccal mucosa           | Mehta N V et al and Parikh S et al    |
| Malignant oral cavity lesions are most common of all oral cavity lesions followed by non-neoplastic oral cavity lesions | Agrawal R et al, Parikh S et al       |
| Maximum cases of oral cancers had a habit of tobacco chewing                          | Shiv Shetty B S and Prithal G         |

Conclusion

Scrape cytology and FNAC are significant as minimally invasive procedures to diagnose oral lesions including oral malignancies at an early stage and to decide the course of management.

From the present study, it was observed that majority of the oral cavity lesions are benign in nature; however, malignant lesions are reported in greater frequency. Any mass lesion especially in the oral cavity should be biopsied to rule out malignancy. The origin and nature of the oral cavity lesions cannot be confirmed by clinical examination alone. Hence, it is must to have a histopathological examination to confirm the histogenesis and malignant potential of the oral lesions.

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