



ORIGINAL RESEARCH PAPER

General Surgery

CLINICAL PROFILE AND MANAGEMENT OF ORAL MALIGNANCY

KEY WORDS:

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ABSTRACT

Objectives: To study the clinical profile of oral malignancy and the results of different modalities of treatment like surgery, radiotherapy and chemotherapy in oral malignancy.

Materials and Methods: Total 37 patients were evaluated in ACPM Medical College and GMC, Dhule during a time period of 2 year from May 2016 to June 2018. All patients were evaluated thoroughly regarding size, shape, extent of the tumour or growth its metastatic spread and premalignant conditions like leucoplakia or submucous fibrosis. In patients with stage second and third diseases, radiotherapy was considered as an adjuvant therapy.

Discussion : The incidence of oral cancer, its distribution in the oral cavity, its age incidence and sex ratio all vary widely in different nations and races with difference in their nutritional states, their customs, their habits, their occupation and their awareness of general health and hygiene.

INTRODUCTION

Cancer is a major cause of death in the world. With recent advances in medicine the life expectancy has increased in patients with cancer. Cancer regarded as a group of diseases characterized by an abnormal growth of cells, ability to invade adjacent tissues and even distant organs and the eventual death of the affected patient if tumour has progressed beyond that stage when it can be successfully removed.

Cancer is often silent, hence diagnosis may not be possible until quite late but oral lesions can be easily inspected, measured, biopsied and documented. Objective response to treatment can be easily appreciated. Carcinoma arises from epithelial cells lining the internal surface of various organs. Oral cavity consists of lips, floor of mouth, tongue, buccal mucosa, upper and lower gingiva, hard palate and retromolar trigone. Cancers arising from various sites of oral cavity constitute oral malignancy.

Oral cancer is one of the ten most common cancer in world. In India it is most common cancer in males, and it is third most common cancer in female, next only to cervix and breast. In both sexes in India oral cancer is the most common.¹ As evident above oral cancer is the most common cancer in India. Also it is most common cancer in Indian subcontinent. Oral cancers affect 5,75,000 peoples each year of which 3,20,000 succum. In India they account for 50-70 % of all diagnosed cases as compared to 2-3 % in U.K and U.S.A¹

Epidemiological survey, proper application of preventive measures and proper use of the modern method of treatment will go a long way in reducing the incidence, curing the patients and making the life of the sufferers from this disease less miserable. In the area of basic sciences, tobacco carcinogenesis was one of the first problems to be studied in depth. Tumors in hamster cheek pouch were grown to serve as in experimental model. The carcinogenic properties of tobacco due to specific nitrosamines have been proved they are present in high concentrations in unburnt tobacco such as "betel quid". Most recently, elevated levels of mutagens have been demonstrated in urine of tobacco chewers as compared with that of control.

Major epidemiological factors for causations of oral cancers in india are tobacco chewing, alcohol consumption, pan and

betel nut chewing, tobacco smoking, poor oral hygiene, poor economics status and cultural factors. Unfortunately, in spite of all these favourable factors in the natural history of disease, nearly 60% patients present during stage III or IV of the disease at the time of diagnosis. All we have to offer them in such circumstances is combination of different treatment modality available like surgery, radiotherapy, chemotherapy. Majority of oral malignancies are squamous cell carcinoma of upper aerodigestive tract metastasis primarily through lymphatics to the lymph nodes of the neck. This lymph node field, the largest in the human body houses a third of all lymph nodes we possess.

"Cancer is older than the literature of medicine" oral cancer and specially that of the tongue was looked upon in the older days as devine punishment.

AIMS AND OBJECTIVES

1. To study the clinical profile of oral malignancy.
2. To study the results of different modalities of treatment like surgery, radiotherapy and chemotherapy in oral malignancy.

REVIEW OF LITERATURE

Oral cancer classified in the international classification of disease (ICD) WHO, 1947 comprise of number 140-148. The number of specific sites are however not the same in 7th (1951), 8th (1968) and 9th (1977) revision. Since 1966, the international agency for research on cancer in Lyon in collaboration continents. (Vol III Waterhyuse et al)³ which shows that oral cancer has a very wide variation in incidence of globe.

Oral cancer accounts for 5% of human malignancies in the United States (Kornblut and Defries 1979)⁴ 1% of all cancers in West Germany and 45% in Mumbai (Donald 1984).⁵ In the far Eastern countries oral and pharyngeal cancer accounts for almost 50% malignant neoplasm (Batsaki 1979).

Combined sex specific incidence rates of oral and pharyngeal cancer for 1988-92 and oral:pharyngeal ratio from 49 different cancer registries in five countries. Incidence trends over a period of approximately 30 years were evaluated in 16 along active registries for men and four for women. The incidence of both oral and pharyngeal cancer among men is highest in Northern France, Southern Indian a few area of central and Eastern Europe and Latin America.

Among women, the highest incidence is observed in India.⁶ Oral:pharyngeal ratio is everywhere systemically lower in men compared to women. Recent trends for oral cancer are more favourable than those for pharyngeal cancer in developing countries, trends in oral cancer appear to be more closely correlated to changes in alcohol consumption than those of pharyngeal cancer.

High incidence by oral cancer in Southeast Asian countries was first reported Hirayama⁷ who linked association of oral cancer with the habit of chewing tobacco.

In all countries of world male preponderance is characteristic of oral cancer. However there is considerable variation in the male-female ratio in some places. Squamous cell carcinoma was most frequently observed (94.4%) oral tumour and leucoplakias were the most commonly observed (80.0%) premalignant lesion. Approximately half of the estimated 30 thousand cases diagnosed annually in this country have a fatal outcome.

At the TATA Memorial Hospital, Mumbai, which is a referral cancer treatment hospital in Western India, oral cancer forms 52% of all cancers in male compared to 7% in the United States and 15 % of all cancer in females, compared to 2% in the United States⁸ (Desai 1982).

According to my study in Dhule area, which record all histopathologically proved cases shows predominance of males, having 70.27% oral cancers of total cancers in males and 29.72% in females. A more detailed study of the registries, which have reported a high incidence of oral cancer, shows that there is considerable variation between registries in the distribution of intra-oral sites.

In Newfoundland and Czechoslovakia the registry records high incidence of cancer lip. Study at Dept of Oral Medicine, University of London UK March 1997- 40% cases found was lower lip cancer most common site of an oral cancer. The incidence of and mortality from squamous cell carcinoma of the tongue have increased during world.⁹ Incidence of oral cancer also varies between regions within the country. The most common subsite affected is the tongue in Mumbai and buccal mucosa in Chennai. In France, incidence of buccal mucosa and palate in one region (Bas-Rhin) is almost twice that of the others. (Doubs 5.3 per 10⁵ vs 2.5 per 10⁵).⁹

MATERIALS AND METHODS

The present study comprises 37 patients of oral cancers who visited ACPM Medical College and GMC, Dhule during the period of May 2016 to June 2018. A detailed information was collected as regards name, age, sex address, occupation religion etc. Patients were asked about habit of tobacco abuse its form, the quantity and duration, alcohol abuse and other.

Some patients came with already histologically confirmed diagnosis of the disease and histopathology report. The patients who did not previously undergo biopsies were subjected for biopsy confirmation at our hospital, commonly wedge biopsy was done. The patients were referral to us by their physicians dentist.

All patients were evaluated thoroughly regarding size, shape, extent of the tumour or growth its metastatic spread and premalignant conditions like leucoplakia or submucous fibrosis. Similarly all patients were subjected to routine ENT and dental examinations. The draining lymph nodes sites were examined and the respective levels involved, number, size, consistency, and mobility were all

All patients of oral cancers were investigated by doing haemoglobin estimation, total leucocyte count, differential leucocytic count, blood grouping, cross matching, blood sugar, anti HIV antibodies, VDRL and Australia antigen.

Radiological investigations carried out were standard chest x-ray. X-ray of mandible, x-ray of PNS, biopsy confirmation was done in all cases. Physician's opinion was taken into account to judge the fitness of the patients for general anesthesia and surgery. All patients were referred to the dentist for check up and dental hygiene.

Operation was planned according to the requirement of individual patients. Patients were explained regarding operative risks and postoperative reconstructive, procedure were hospitalized for 15 days and more depending on individual requirement. The post operative complications were managed conservatively.

Radiotherapy :

In patients with stage second and third diseases, radiotherapy was considered as an adjuvant therapy.

It was also administered when the surgical margins were involved and when draining lymph nodes positive for metastasis. Radiotherapy was considered after completion of surgical procedures. The patients were given cobalt 60, 5 fractions per week for 6 weeks. The total dose was 6000 rads i.e. 200 rads/day patients who developed advanced lesions or recurrent lesions was subjected to palliative radiotherapy only.

Direct field techniques were used to encompass the primary and the neck nodes.

Chemotherapy :

It was used an adjuvant to surgery and radiotherapy. It was used in patients with a disease more than T₂ stage and in those patients or, who showed muscle infiltration by the tumour.

Patients's general condition, renal and hepatic functions were taken into account before the chemotherapeutic drugs were used in combination by the intravenous route.

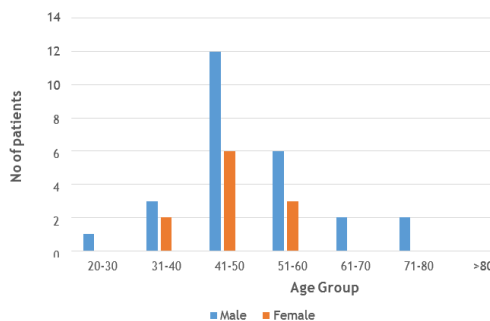
The drugs were used cisplatin, methotrexate. Inj. Cisplatin 50mg in two divided doses for two days with 5% DNS and Inj. Methotrexate 50 mg iv bolus. Averagely six cycles given at internal of one month. Before each cycle was given CBC, BUL, and LFTS were checked routinely. After the completion of surgical and radiotherapy treatment, maximum attempts to ensure a regular follow up were tried.

OBSERVATIONS

The study included 37 cases of oral malignancy which came to our hospital during May-2016 to June- 2018.

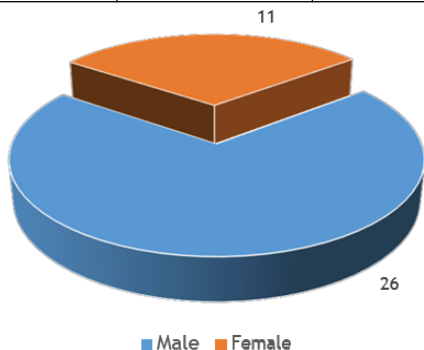
Age distribution of oral malignancy

Age	Male	Female	Total
20-30	01	00	01
31-40	03	02	05
41-50	12	06	18
51-60	06	03	09
61-70	02	00	02
71-80	02	00	02
>80	00	00	00
	26	11	37



The commonest age group was 4th decade. Average age was 47 to 50 years. The lowest was 25 years and oldest was 80 year
Sex distribution of oral malignancy.

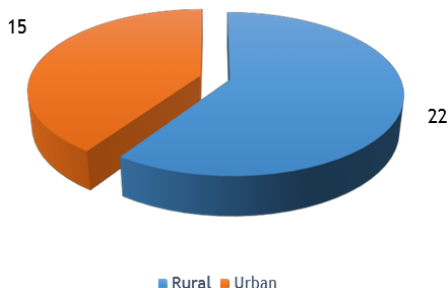
Sex	No. of cases	% of cases
Male	26	70.27%
Female	11	29.72%
Total	37	100%



The male to female ratio was 2.3:1 this clearly shows male predominance.

2) Urban / Rural distribution

Population	No. of cases	% of cases
Rural	22	59.45%
Urban	15	40.54%
Total	37	100%



Considering the urban and rural distribution of general population incidence of disease was seen in rural area 59.45% and that of urban is 40.54%.

3) Socio – Economic Status :

Socio-economic status	No. of cases	% of cases
Higher + Middle	27	72.97%
Lower	10	27.02%
Total	37	100%

The differentiation of cases was based on patient's income, occupation and education of patient. Classes I, II, III were considered higher and middle socio-economic group class IV & V were considered lower socio-economic group.

This shows incidence of oral malignancy more in higher and middle than lower socio-economic status i.e. about 2.7:1 %

4) Oral Hygiene

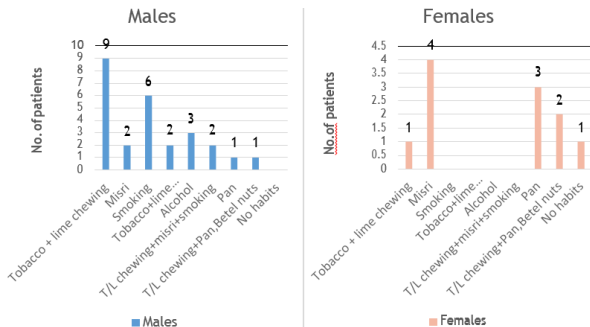
Status	No. of cases	% of cases
Satisfactory	07	18.91 %
Poor	30	81.08 %

Oral hygiene was poor in 81.08 % and satisfactory in 18.91 % patients.

5) Risk Factors

Risk factors	Males		Females		Total	
	No	%	No	%	No	%
Tobacco + lime chewing	09	34.61	01	09.09	10	27.02
Misri	02	07.69	04	36.36	06	16.21

Smoking	06	23.07	00	00	06	16.21
Tobacco+limechewing+smoking	02	07.69	00	00	02	05.40
Alcohol	03	11.53	00	00	03	08.10
T/L chewing+ misri+smoking	02	07.69	00	00	02	05.40
Pan	01	03.84	03	27.27	04	10.81
T/L chewing+Pan,Betel nuts	01	03.84	02	18.18	03	08.10
No habits	00	00	01	09.09	01	02.70
Total	26	72.22	11	27.88	37	100

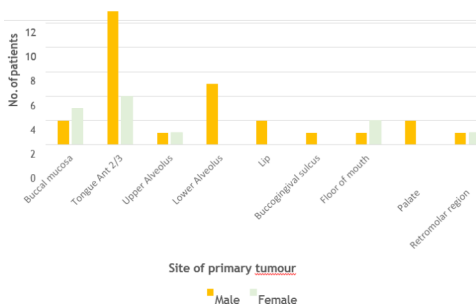


From above table it is clear that most of male patients having tobacco chewing habit i.e. 34.61 % and female patients using misri were 36.36 %.

There are only 01 patients out of 37 who did not have any habit known to predispose to oral cavity malignancy.

6) Site of primary Tumour :

No	Site of primary tumour	Male		Female		Total	
		No	%	No	%	No	%
1	Buccal mucosa	02	07.69	03	27.27	05	13.51
2	Tongue Ant 2/3	11	42.30	04	36.36	15	40.54
3	Upper Alveolus	01	03.84	01	09.09	02	05.40
4	Lower Alveolus	05	19.23	00	00	05	13.51
5	Lip	02	07.69	00	00	02	05.40
6	Buccogingival sulcus	01	03.84	00	00	01	02.70
7	Floor of mouth	01	03.84	02	18.18	03	08.10
8	Palate	02	07.69	00	00	02	05.40
9	Retromolar region	01	03.84	01	09.09	02	05.40
	Total	26	100	11	100	37	100



In this series incidence of ca tongue was 40.54 %. Next two sites of common occurrence of malignancy were alveolus (18.91 %) and cheek (13.51 %)

8) Clinical Type of Tumour :

Sr.	Site	Exophytic	Endophytic	Mixed	Total
1	Buccal mucosa	04	01	-	05
2	Tongue Ant 2/3	13	02	-	15
3	Upper Alveolus	01	01	-	02
4	Lower Alveolus	04	01	-	05
5	Lip	02	-	-	02
6	Buccogingival sulcus	01	-	-	01
7	Floor of mouth	02	01	-	03

8	Palate	02	-	-	02
9	Retromolar region	01	01	-	02
		30	07	-	37

From above table it is shown that exophytic lesion were high i.e 30/37 and exophytic lesion commonest in tongue i.e 15

9) Stage of Malignancy :

Stage	Number of cases	%
0	-	-
I	02	05.40
II	06	16.21
III	12	32.43
IV	17	45.94

In present series the incidence of stage III & IV disease were found very high probably because of high percentage of illiteracy & low socioeconomic status of patient of stag III & IV.

10) Site of disease and stage of presentation :

Site	Stage 0		I		II		III		IV		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
Buccal mucosa	00	00	00	00	01	20	02	40	02	40	05	13.51
Tongue	00	00	00	00	03	20	03	20	09	60	15	40.54
Alveolus	00	00	00	00	00	00	04	57.14	03	42.85	07	18.91
Others	00	00	02	20	02	20	03	30	03	30	10	27.02

11) Early and Advanced lesion :

Lesions	Cases	%
Early	08	21.62
Advanced	29	78.37

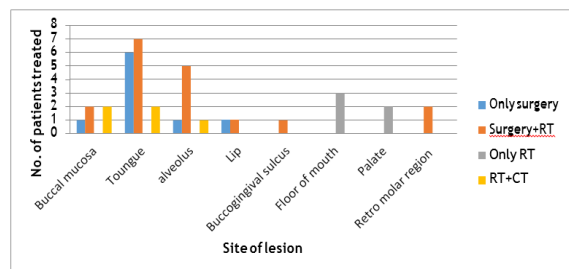
In this series of patients registrations of advanced lesions were high i.e 78.37% i.e (stage III & IV)

12) Duration in relation to clinical stage :

Months	0	I	II	III	IV	Total
Up to 1	-	-	-	02	02	04
1-2	-	-	01	03	06	10

16) Site of lesion and modalities of treatment used:

Mode of treatment	Buccal mucosa	Tongue	Alveolus	Lip	Buccogingiv al sulcus	Floor of mouth	Palate	Retro molar region	Total	%
Only surgery	01	06	01	01	0	0	0	0	09	24.32
Surgery+RT	02	07	05	01	01	0	0	02	18	48.64
Only RT	0	0	0	0	0	03	02	0	05	13.51
RT+CT	02	02	01	00	0	0	0	0	05	13.51



In present series 18 patients received surgery + RT and 09 patients received only surgery.

17) Distribution of cases as per modality of treatment and corresponding to the stage of disease.

Stage	Surgery	Surgery + RT	RT only	RT + CT	Total
Stage 0	00	00	00	00	00
Stage I	02	00	00	00	02
Stage II	05	01	00	00	06
Stage III	02	10	00	00	12
Stage IV	00	07	05	05	17
Total	09	18	05	05	37

2-4	-	02	02	04	07	15
2-6	-	-	01	03	02	06
6-12	-	-	01	-	-	01
12-18	-	-	01	-	-	01

Most of admissions were in 2-4 months, this delayed presentation was leading to advanced stage of malignancy in most of patients i.e III & IV stage i.e 15/37 are from this period.

Only 04 cases reached to hospital within 1 month i.e 10.81%

13) Site of growth and palpable lymph nodes:

Site	Total	metastasis	%
Buccal mucosa	05	12	80
Tounge	15	04	80
Alveolus	07	05	71.42
Other	10	05	50

Incidence of metastasis was very high i.e 72.97%.

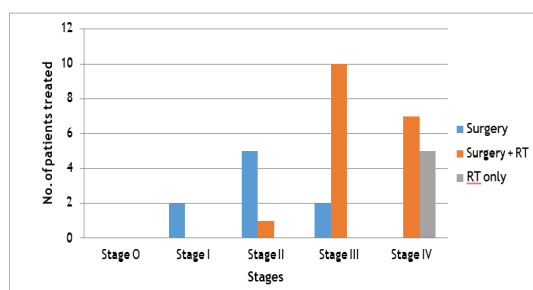
14) Level of palpable lymphnodes :

Level	Number of cases
I	10
II	08
III	03
IV	03
V	02

Level I & II lymphnodes were enlarged in 48.68 % cases.

15) Histological grading of malignancies in present study:

Grade	No. of cases	%
Well differentiated sq.cell carcinoma	16	43.24
Moderately differentiated sq. Cell carcinoma	05	13.51
Poorly differentiated sq. Cell carcinoma	03	08.10
Well to moderately differentiated sq. Cell carcinoma	08	21.62
Moderately to poorly differentiated sq. Cell carcinoma	05	13.51



Most of patients in stages III & IV receives surgery + RT receives surgery + RT i.e. 18 patients.

Patients who received surgery + RT later developed recurrence and so palliative CT was started in them.

DISCUSSION :

The incidence of oral cancer, its distribution in the oral cavity, its age incidence and sex ratio all vary widely in different nations and races with difference in their nutritional states, their customs, their habits, their occupation and their awareness of general health and hygiene.

In our country the incidence of oral cancer is very high as compared to western countries. Paymaster¹⁶ quotes an incidence of 45% and 47% of total cancer in India. Similarly jussawall quotes the incidence of 37.5% of all cancers. As against this, the figures quoted by western scientist are very low. Incidence of oral malignancy computed by Rush¹⁷ was 8% and Lowerence, Brasin, Ackerman and Regato Hays martin is 3%, 5%, 4% and 8 to 10% respectively. (quoted by paymaster)¹⁸

Out of all cancers reported by TATA Cancers registry, 38.5% were head and neck malignancy. In this hospital incidence of head and neck malignancy was about 41% during my study.

Age distribution:-

our series, the age range encountered is between 22 to 78 years covering 37 patients.

The commonest decade is 4th decade the average age was 47 to 50 years. 18 patients are from age group of 41 to 50 years . i.e. 48-64% On other hand western authors distinctly quoted the commonest age group as being at least one decade higher. Sipro quotes the median age as 60 years specifying the peak for tongue cancer.

The reasons for this cancer and probably many other cancers occurring at a younger age group in our country are not known. Early onset of senility, shorter life span cutting out later decades from incidence of cancer and predisposing habits such as chewing of tobacco, betel leaf, poor oral hygiene may all be contributory factors, particularly in case of oral and oropharyngeal cancers.

Sex distribution:

The sex wise incidence of cancers differs in different countries, In our series, the male to female ratio is 2:3:1. Mehta M.J. also quotes male to female ratio is 3:1 similar to one quoted by paymaster. Spiro and Schwarts¹⁷ have shown a higher preponderance of male than found in our country quoting ratio of 5:1 an 10:1 respectively. The incidence of oral cancers in males and females on our series are 70.27% and 29.72 respectively showing male predominance.

Urban Rural distribution:

In this series there is preponderance of the disease in rural population, as tobacco chewing and tobacco misri application is common in rural areas than in urban areas. Use of tobacco misri and tobacco chewing in form of betel quid with or without limr is common in peri urban population and slum dwellers.

Incidence of rural population in my study is 59.45% i.e. 22 cases out of 37.

Socio- economic status:

In this series there are only two groups higher + middle and low socioeconomic. Incidence of oral cancer upper + middle to low group is 2.7.1. Joshi M.J. quotes more frequently occurrence oropharyngeal cancer in patients who are socially and economically under privileged.

Dental Hygiene:

The presence of broken carious teeth and infected gingival have long been thought to the etiologically significant although no consistent statistical proof or a link with cancer have been forthcoming (Donald, 1984)

The connecting proof so far is conflicting (code and Lee, 1957; Lash et al 1961). However, the condition such as chronic infection following dental caries, the presence of a sharp edges broken teeth, a badly fitting denture and rough filling are so common that occurrence of carcinoma may be coincidental and it is extremely difficult to prove direct relationship between the irritant and the development of oral cancer.

Oral trauma due to poor dentition is known to enhanced the risk of oral cancer. (Graham S). There is no substantial evidence for long incriminated poor oral hygiene and increase in risk for oral cancer.

However, in this series, oral hygiene was poor in 81.08% of cases.

Chewing and Smoking:

Among the varies use of tobacco, by far the strongest evidence has accumulated over the years for the association of tobacco, chewing with betel quid and bidi smoking with oral cancer.²⁷ Several epidemiological studies on this association are available from south and south east Asia countries like Bangladesh, Philippines, Malaysia as well as India.

It has been suggested that the technique of tobacco processing and proportion of tobacco and limes important factors in determining the carcinogenicity of the mixture.²⁸ Association of use of burnt tobacco, tobacco misri alone used in some parts of India for cleaning teeth and increased risk for oral cancer is not yet proved.

Study made by Gupta P.C. Murti P.R. Bhonsle R.B. 26th feb. 1996 proved in areas where tobacco is used in smokeless form, oral cancer incidence is generally high.

The most common form of tobacco used, cigarette smoking demonstrate a very high relative risk- in recent cohort study even higher than ling cancer. In india tobacco is smoked in many ways.

The most common is bidi others being chutta, including reverse smoking hukka and clay pipe. These studies encompass case and case series report and case control, cohort and intervention studies collectively, the evidence fulfilled the epidemiological criteria of casualty strength, consistency, temporality and coherence. The biological plausibility is proved by the identification several carcinogens in tobacco the most abundant and strongest, being tobacco specific N-Nitrosamines such as an - nitrosomonicotine (NNN) and for - (methyl nitrosomine) - 1-(3-pyridyl) - 1- butanone (NNK) these are formed by N-nitrosation of nicotine, the major alkaloid responsible for addiction to tobacco use and oral cancer as provided us with comprehensive model for understanding carcinogenesis²⁹.

In my study it si a found that number of chewer (tobacco + lime) were 10/37 and misri smokers are six each, chewers developed oral cancer with less duration than smokers because of dose and frequency used and local site of keeping, tobacco quid, common site were lower buccogigivalsucus, In this series there was only one patient (2.7%) with oral cancer who did not have any tobacco related ris

Site or primary tumours:

In this series of 37 cases, the commonest site of malignancy was ca. tongue constituting 15 case i.e. 40.54%, males are 11 and females are 04. Paymaster himself quotes incidence of tongue cancers of 22% though Khanolkarcuotes an incidence of tongues cancers of as high as 50% (cuoted paymaster).

In this series, next common site was alveolus 7 cases out of 37 i.e. 18.91% which happens to be higher than that cuoted by Bales 12%. Edgerton also cuots similar incidence buccal mucosa is third commonest site of malignancy in series i.e. includes 05 cases i.e. 13.51%. leap carcinoma is uncommon in this series constitute 2/37 i.e 5.4% this figure is low as compared to western authors.

In this study, the incidence of malignancy arising from floor of mouth is 8.1% and that from buccoginivalsulcus is 2.7%. the incidence of malignancy arising from palate and retromolar region is 5.4% each.

The gross appearance of the tumour on presentation:

The tumours were classified according to the clinical appearance as follows.

Exophytic: where the tumour was predominantly cauliflower like growth. In this series, incidence was 81.08%.

Endophytic: where the tumour formed ulcer with deep infiltration frequently associated with trismus. In this series incidence was 18.91%.

Mixed type: where tumour shows both above type of characters. In our series no case repeated of mixed type

TNM staging: with advances in treatment, it has been noticed that earl lesions fare much better than advanced malignancies with prognostic value attached to staging, in 1971, TNM staging has been extended to oral cancers by S Saki and Musaki. It has been recommended subsequently union against 1974.

The classification of tumour done by TNM method is better than any of the ulternative methods of recording for the purpose of comparing results. However it has its own limitations. Deep infiltration can not be measured accurately. It is only after excretion that some measurement can be done. This is also not accurate because of contraction tissue especially after fixation. TNM does not take into account the intrinsic biological actively of individual tumour and factor of tumour post interaction with its relation to the immune response.

We have classified cases according to the TNM classification (VICC- 1992) In this series they are 37 cases out of these 29 cases are stage 3 and 4 i.e. 78.37% and 8 cases i.e. 21.62% from stage 1 and 2.

This hospital being major drainage center in this area, there is higher population of referred cases.

They delay in diagnosis from the onset of disease may account for high percentage of 3 and 4 cancer. As we are conducting activities for prevention, early diagnosis and treatment directed toward general population as well as rural practitioners may go a long way in downstaging of oral malignancy. Tobacco is known predisposing factor in all form namely chewing, tobacco misri and smoking and gutkha substitution for tobacco misri, which will be acceptable to rural population, may be prmoted like tooth power prepare out of charcoal. Creating awareness of leucoplakia as precancerous and non healing ulcer as early cancerous lesions leading promote attention can reduce the time lag between onset of disease and onset of treatment.

Metastasis in regional lymph nodes:

Crile(1906) recognised that palpable glands may be inflammatory or carcinomatous. the external measurement may be Imprecise, but lymph nodes greater than 2-3 cm are more likely to be carcinomatous than inflammatory. Clinical evaluation in previously irradiated necks is more difficult. Clinically fixed nodes in irradiated necks could be representative of postirradiation fibrosis.

Clinical appraisal of status of lymph node is extremely important as it has bearing on treatment.

As accurate estimation a possible is desired because treatment may become unnecessarily radical or undesirably conservative.

Node is said to be clinically malignant if it is enlarges, feels hard in consistency has fixity to skin or underline structures.

In this study of 37 cases 26 were having neck node metastasis

i.e. 70.37% this incidence of clinically positive nodes out or this 26 cases 18 cases were showing histopathology report positive for malignancy i.e. 69.23% As nodal metastasis from oral cavity malignancy progressed to lower level 2,3 and 4other more patient had multiple node involvement and cure rate decreased to 28%,24% and 18% respectively. When level 5 nodes were also involved there was no 5 year survival.

Kalnins et al in there article on co relation between degree of nodal involvement and prognosis in carcinoma of oral cavity have commented that level of lymph node involvement affects the prognosis of disease.

As carcinoma spreads to nodes lower in neck there are seems to be corresponding reduction in five year survival at least in those patient with involvement of lower one-third of the neck. Thus , the lowest survival will be found in those patients having positive nodes in lower 1/3 of the neck. They further say that intermediated nodes may be frequently by passed by cancer and in some cases all nodes can be passed. In this series 48.68% patients with level 1 and involvement and 8.1% ,8.1% and 5.4% with level 3,4 and 5 respectively.

History of oral cancer:

Considering histological types of oral cancer, in this series all patient had well differentiated squamous cell carcinoma 13.51% of patients had moderately differentiated squamous cell carcinoma and 8.10% of patients had poorly differentiated squamous cell carcinoma.

Modalities of treatments in oral cavity malignancy according to stage :

Observation table 16 and 17 shows site of lesion and various modalities of treatment according to stage of disease in our study with treated stage 1 disease with surgery alone i.e. 2 patients stage 2 disease patients were treated with surgery except 1 patient were surgery alone with radiotherapy was used. Stage 3 disease was treated with surgery or surgery plus radiotherapy in 02 and 10 patient respectively. Stage 4 disease were treated with surgery and radiotherapy in 7 patients and with radiotherapy only in 5 patients and with. Chemotherapy and radiotherapy combination in 5 patients.

In present study surgery was the main stay of treatment. In all patient early or late stages surgery was planed according to size of primary lesions and neck metastasis, the patients condition, associated disease, patients compliance, patients consent and available facilities.

The patients in late stage i.e. stage 3 and 4 in whom surgical treatment was planed the surgery was executed and the specimen was sent for histopathological examination, which included the neck dissection specimen.

Thus the further line of treatment was usually plan according to the histopathological report.

In those patients in whom neck nodes were positive at histopathological examination the radio therapy was added further in those patients of stage three and four disease in whom nodes found to be negative on histopathological examination received only surgical treatment and no further treatment was given. Thus in this study there were only two patients in stages three and four, which were node negative on histopathological examination in this 2 patient received only surgical treatment. The patients who were node positive further a course of radiotherapy was added. thus 10 patients in stage 3 and 07 patients in stage 4 received radiotherapy after surgical treatment . hence 17 patients received surgery plus radiotherapy in stage 3 and 4.

Among patient in stage 2 (i.e. T₂N₀M₀) who underwent elective neck dissection one patient had nodes involved in histopathological examination and he underwent radiotherapy.

In present study we had 10 patient in stage 4 i.e. locally advanced malignancy which were unresectable due to wide spread locational metastasis 5 of which had bilateral nodal metastasis N_{2c} disease, 3 had N_3 involvement. 2 patients were 4 c i.e. with distant metastasis. Both patients had pulmonary metastasis thus 5 of these patients received radiotherapy only and 5 patients received radiotherapy and chemotherapy in wick chemotherapy was started followed by radiotherapy. Thus radiotherapy and radiotherapy + chemotherapy was used palliation only.

Patients in stage 3 and 4 i.e. with advanced disease received combination of treatment with surgery and radiotherapy which is also supported by Recharado et al who concluded that combination of radical neck dissection or modified neck dissection and radiotherapy is highly effective in controlling neck disease in absence of persistent or recurrent local disease.

CONCLUSION:

Oral malignancy,

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