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Clinical Profile Of Head And Neck Malignancies At A Rural Tertiary Care Centre: Retrospective Study.

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ABSTRACT

Head and neck cancers contributes to 25 % in males and 10 % in female cancers and these are more common in males than in females.¹India being a developing country and having multiple diversity of varied culture and traditions, regional beliefs, variety of demographic features leading to different characteristic of these cancers in different individuals. Data was collected in context to Age, sex, history of exposure to risk factors like smoking, alcohol, chewing habits, and other forms of drug addictions, socioeconomic factors, presenting clinical complaints, presenting signs and symptoms in patients with distant metastasis, staging of the disease, radiological investigations showing malignancy were recorded. Most common clinical presentation with oral cavity malignancy was Ulcerative growth seen in 78 % of the patients. Patients with malignancy of hypopharynx showed dysphagia (72%) as a predominant symptom followed by hoarseness of voice(10 %)and breathlessness(14%).Change in voice was common clinical presenting feature in malignancies involving hypopharynx, larynx,thyroid,and Non -Hodgkins lymphoma. Head and neck cancer accounts for highest incidence at our rural tertiary care centre. Screening sessions and educational programmes for creating awareness about the prevention of modifiable risk factors should be conducted at regular intervals.

Keywords: Head surgery, neck cancer, malignancy, breathlessness

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INTRODUCTION

Head and neck cancers contributes to 25 % in males and 10 % in female cancers and these are more common in males than in females [1]. India being a developing country and having multiple diversity of varied culture and traditions, regional beliefs, variety of demographic features leading to different characteristic of these cancers in different individuals. Being a developing country has higher risk of cancer due to population overgrowth [2, 3]. This necessitates the need of identification of differences in the common sites of cancers, presenting patterns, incidences, demographic and geographic features of the affected population, dietary factors and exposure to various modifiable and non-modifiable risk factors [4]. These cancers present to hospital at a very advanced and late stages of the disease leading to a delayed diagnosis and further management leading to a poor prognosis and decreased survival rates of the patient [5]. Here, this study emphasises about the clinical profile of these patients and various risk factors involved and stages of presentation and histopathological types.

Aims and Objectives

- To study the clinical presentation of head and neck malignancies.
- To study the common modifiable and non modifiable etiological factors involved in head and neck malignancies.
- To determine the stage of presentation in rural population.
- To determine the histopathological types of malignancies commonly found in rural India.

MATERIALS AND METHODS

This was a retrospective cross-sectional observational study of 135 patients conducted in the Department of Surgery at Rural Medical College, Pravara Institute of Medical Sciences, Loni.

Medical records of these patients with proven histopathological diagnosis of head and neck malignancy between the period of January 2020 to May 2022 were taken.

Data was collected in context to Age, sex, history of exposure to risk factors like smoking, alcohol, chewing habits, and other forms of drug addictions, socioeconomic factors, presenting clinical complaints, presenting signs and symptoms in patients with distant metastasis, staging of the disease, radiological investigations showing malignancy were recorded.

Data was tabulated and statistical analysis was done using appropriated methods.

Inclusion criteria

All the patients with proven diagnosis of head and neck malignancy with histopathological reports were included in the study

Exclusion Criteria

- Patients with no proven histopathological report of malignancy.
- Patients with metastasis with unknown primary.

RESULTS

All malignancies have a maximum incidence of age 41-60 years, with the exception of Non-Hodgkins lymphoma (NHL), which has maximum incidence of age 21-40 years . Males are more commonly affected than females except in cases of thyroid cancer and Non-Hodgkins lymphoma(NHL).

Table 1: Site of malignancy distribution of study population

Site of Malignancy	Percentage
Oral cavity	34 %
Oropharynx	5 %
Hypopharynx	17 %
Larynx	31 %
Nose and Paranasal sinuses	5 %
Nasopharynx	1 %
Thyroid	3 %
Salivary Glands	1 %
Non -Hodgkins lymphoma	3 %
Others like- Basal cell carcinoma of Eyelids	1 %
Carcinoma of ear and pinna	2 %
Sebaceous glands	0 %

Table 2: Gender wise distribution of Head and neck malignancies

Gender	Oral cavity n=46	Oro Pharynx n=6	Hypo Pharynx n=23	Larynx n=42	Nose and PNS n=7	Thyroid n=5	Naso Pharynx n=2	Salivary Glands n=1	NHL n=4	Others n=4
Male	26	6	13	38	5	1	2	1	1	2
Female	21	0	10	4	2	4	0	0	3	2

Figure 1: Occupation of the patients

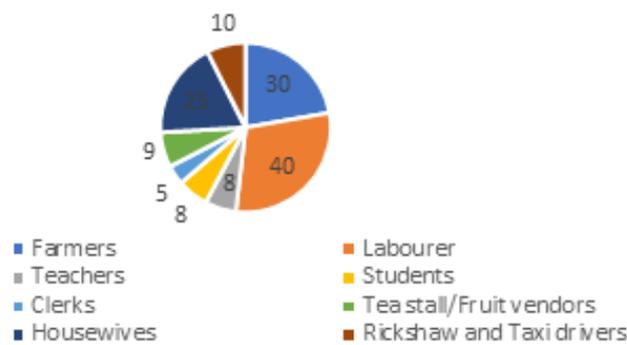


Figure 2: Socioeconomic status of the Patients

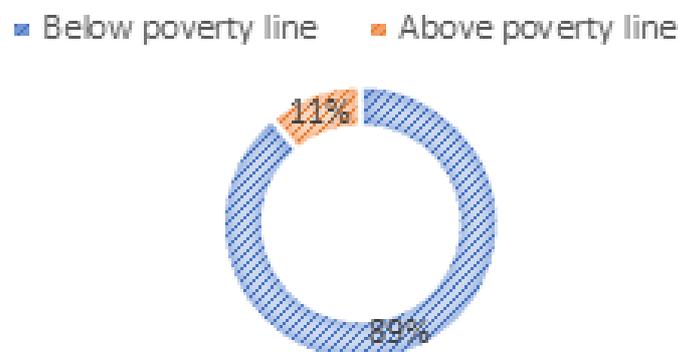


Table 3: Risk factors distribution of study population.

Risk Factors	Oral cavity	Oro pharynx	Hypo pharynx	Larynx	Nose and paranasal sinuses	Thyroid	Salivary glands	Non-Hodgkins Lymphoma	Naso Pharynx	Others
Beedi cigarette smoking	21.7 %	50 %	2 %	41 %	22 %	-	34 %	-	19 %	67%
Alcohol	1 %	34 %	44 %	10 %	15 %	-	33.33	-	-	-
Smoking and alcohol	43 %	16 %	35 %	47 %	15 %	-	33.33 %	-	-	-
Tobacco chewing	30 %	0 %	2 %	-	0 %	-	-	-	-	-
Radiation	-	-	-	-	-	4 %	-	-	27 %	3 %
No exposure	2 %	-	17 %	2 %	42 %	96 %	-	100 %	52 %	30 %

Most common clinical presentation with oral cavity malignancy was Ulcerative growth seen in 78 % of the patients.

Patients with malignancy of hypopharynx showed dysphagia (72%) as a predominant symptom followed by hoarseness of voice(10 %)and breathlessness(14%).

Change in voice was common clinical presenting feature in malignancies involving hypopharynx, larynx,thyroid,and Non -Hodgkins lymphoma.

Figure 3: Stage of presentation in patients with various head and neck malignancies.

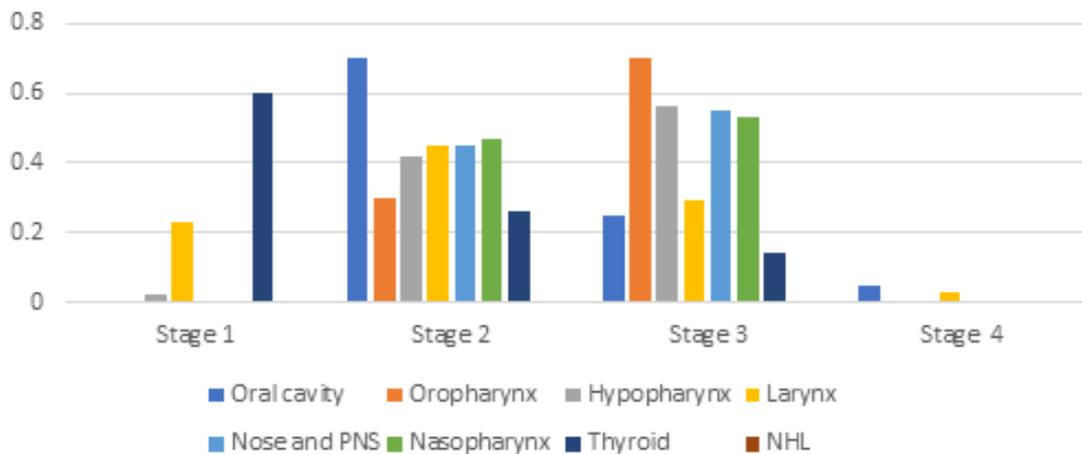
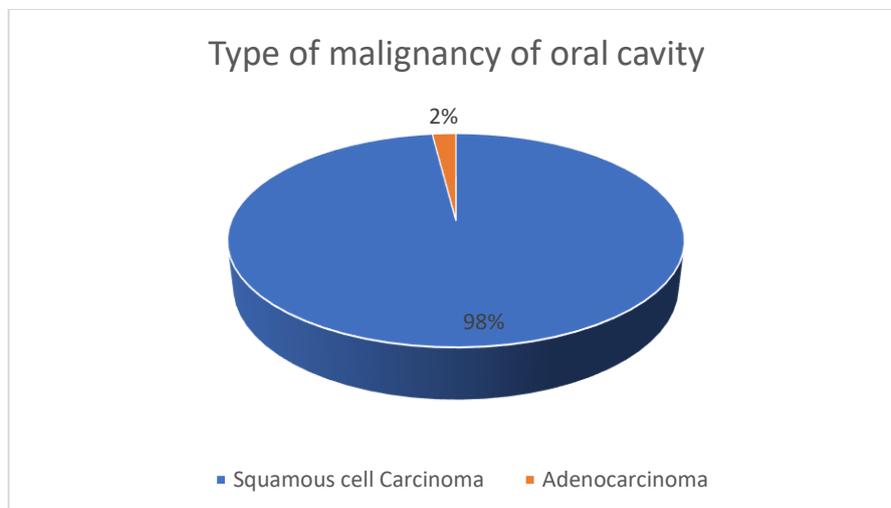


Figure 4: Type of malignancy of oral cavity



DISCUSSION

In present study 135 cases of head and neck malignancies which presented to a rural tertiary care centre, Loni were studied retrospectively. All the above types of malignancies (oral cavity, oropharyngeal, hypopharyngeal, nasopharyngeal, thyroid, salivary gland tumours) were found in 40- 60 years of age group. Non-Hodgkin's lymphoma(NHL),which has maximum incidence of age 21-40 years. These findings were in concordance with the study conducted by Alam et al in which the maximum incidence was found in 41-60 years of age group [6].

The oral cavity was the most common site of malignancy which was seen in 34% patients followed by Larynx 31% followed by Hypopharynx 17% and Oropharynx respectively. Non-Hodgkin's lymphoma(NHL) was seen in 3% of the patients. The malignancies of oral cavity, oropharynx, larynx, nose, nasopharynx were predominantly seen in male gender as seen in table 2 whereas Thyroid malignancies and NHL were dominantly in females. This finding is similar to a study by Carcinagu et al and Francis where a similar pattern of gender distribution was seen [1, 7].

Occupation and socio-economic status distribution of study population as seen in figure 1 and figure no 2. Farmers (40%)was the commonest population of people who were affected by head and neck cancers followed by Labourers 30%,Housewives 25% in rural population and then the people of other occupation.Our study revealed that majority of head and neck cancers were seen in the below poverty line (BPL) patients 89%. This explains about how the level of education and awareness plays a role in life threatening diseases occurring in rural population who are exposed to the various risk factors for such diseases.These both the results were in concordance to study by Francis and Rani, Bonu, Jha, et al where malignancy was commonly found in socioeconomically backward classes[1, 7].

The highest found risk factor associated with oral malignancies was tobacco chewing and alcohol consumption for oral cavity malignancies in concordance with the Dandekar et al study and Jayant et al [2, 13]. Alam et al study showed Bidi/cigareete smoking as commonest risk factor for oropharyngeal malignancies which was also seen in our study in 21.7 % of patients and 44 % of patients had alcohol consumption as a risk factor leading to hypopharyngeal malignancies [4, 8]. Smoking + alcohol consumption was found in 47 % of patients as a predisposing risk factor leading to laryngeal malignancies in accordance with Maier et al study [8]. Cancer of the tongue, oropharynx and larynx where bidi smoking is the dominant risk factor could be explained on the basis of available data in our study as well as in a study documented by Balkrishna B Yeole et al [14].

In cancer arising from nose and PNS, thyroid about 42 % ,96 % patients and in carcinoma nasopharynx 52 %%% patients had none of these risk factors. This was also seen in our study and also seen in alam et al study [4].

Most common clinical presentation with oral cavity malignancy was Ulcerative growth seen in 78 % of the patients. Patients with malignancy of hypopharynx showed dysphagia (72%) as a predominant symptom followed by hoarseness of voice(10 %)and breathlessness(14%) in accordance to a study by Lathi et al [9]. Neck swelling was found to be the major presenting feature in all the patients of thyroid malignancy in our study as well as Pramod et al study [10]. Patients with nose paranasal air sinus and nasopharynx malignancy reported with nasal obstruction as the predominant symptom and the most common site was maxillary sinus as seen in a study by Satarkar et al [12].

The most common stage of presentation of the commonest oral cavity malignancy was in Stage 2 followed by some patients presenting in stage 3. The oropharyngeal, laryngeal, nasopharynx, nose malignancy patients also maximally presented in stage 2 and stage 3 of the disease. The late presentation of laryngeal malignancy was also seen in a Chauhan JPS et al whereas our study showed mixed presentation in all stages from stage 1 to stage 4 of presentation [15]. This late presentation in stage 2 and stage 3 of the malignancy leads to poor prognosis of the patients and increased morbidity and mortality rates in such malignancy patients. Early and prompt diagnosis with the early initiation of appropriate treatment in such patients decreases the morbidity and increases chances of their survival with better quality of life.

In all Oral cavity, oropharyngeal, laryngeal, nasopharynx, nose and PNS were suggestive of squamous cell carcinoma accounting to 98%,90%,97%,80%,91% respectively. Our study also reveals

squamous cell carcinoma to be the commonest findings seen in histopathological reports of head and neck malignancy patients. This was also a similar finding in the study by Alam et al and Rao et al [4, 11]. The Papillary carcinoma of thyroid(70%) was seen as the predominant histopathological finding seen at our centre followed by other types Follicular carcinoma seen in (10%) in concordance with Sanghvi et al study [11].

CONCLUSION

Head and neck cancer accounts for highest incidence at our rural tertiary care centre. Screening sessions and educational programmes for creating awareness about the prevention of modifiable risk factors should be conducted at regular intervals. These sessions should target both exposed as well as non-exposed population. Awareness programmes can lead to avoid exposure in non-exposed and decrease and stop further exposure in already exposed population. Early detection and prompt treatment in the earlier stages of presentation leads to decrease morbidity and mortality. Also, this can give a good quality of life in the surviving patients.

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