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A DESCRIPTIVE STUDY ON PATIENTS OF CARCINOMA LARYNX ATTENDING TERTIARY CARE CENTRES IN HYDERABAD, TELANGANA

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ABSTRACT

BACKGROUND

Laryngeal cancer is the eleventh most common cancer in men worldwide, but is relatively uncommon in women. Cancer larynx constitutes 2.63% of all body cancers in India. Tobacco smoking and alcohol are the major risk factors for laryngeal cancer. The presenting complaints of laryngeal cancer are hoarseness, dysphagia and referred pain in the ear or mass of lymph nodes in the neck.

Objectives-

1. To describe sociodemographic factors among patients with carcinoma larynx.
2. To assess the spectrum of clinical features in patients with laryngeal carcinoma.
3. To determine the histopathological pattern in carcinoma larynx patients.

MATERIALS AND METHODS

A descriptive study was undertaken in ENT Department of Gandhi Hospital and MNJ Cancer Institute, which are tertiary care centres in Hyderabad, Telangana for a period of 2 years (November 2014 –October 2016). Fifty patients who were clinically diagnosed as carcinoma larynx were included in the study. Ethical clearance was obtained from institutional ethics committee. Informed consent was obtained from the patients before including them in the study.

RESULTS

The maximum incidence of carcinoma larynx in this study was found in the age group of 41-60 years (52%) followed by the 61-80 years age group (42%). Around 94% of Cases were male. Almost 96% of patients belonged to low socioeconomic status. Chief complaint noted in this study was change in voice – 48%. Alcohol consumption and beedi smoking were found to be the contributing factors in the occurrence of carcinoma larynx.

CONCLUSION

Around 98% of cases showed squamous cell carcinoma on histopathological examination. The most common site of carcinoma larynx was glottis (54%) followed by supraglottis region (44%).

KEYWORDS

Carcinoma Larynx, Histopathological Pattern, Sociodemographic Factors, Gandhi Hospital and MNJ Cancer Institute.

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BACKGROUND

Laryngeal cancer is the eleventh most common cancer among men worldwide,¹ but is relatively uncommon in women. Cancer larynx constitutes 2.63% of all body cancers in India. It is ten times more common in males (4.79%) than in females (0.47%). Its incidence is 3.29 new cases in males and 0.42 new cases in females per 100,000 population.

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Disease is mostly seen in the age group of 40–70 years but younger people in thirties may occasionally be affected.²

Within the larynx, tumours may arise from the vocal cords (glottic), superior to the vocal cords (supraglottic), or from below the vocal cords (subglottic).³

About 60% of larynx cancers start in the glottis, 35% develop in the supraglottic region and the remaining 5% occur in the subglottis.⁴ Throat pain, dysphagia and referred pain in the ear or mass of lymph nodes in the neck may be the presenting features. Hoarseness of voice is an early sign for Glottic Cancer because lesions of cord affect its vibratory capacity.

Tobacco smoking and alcohol are the main risk factors for laryngeal cancer, and their effects are synergistic. There is a strong association between laryngeal cancer and cigarette smoking. Smoking is the main risk factor for glottic cancers,

whereas alcohol appears to be the bigger risk factor for supraglottic tumours. The combined use of tobacco and alcohol increases the risk of laryngeal cancer by 50% over the estimated risk.³

About 90–95% of laryngeal malignancies are squamous cell carcinoma with various grades of differentiation. Verrucous carcinomas comprise 1% to 2% of all laryngeal cancers. One tenth of malignant tumours are represented by adenocarcinoma, salivary gland carcinoma, sarcoma, and malignant lymphoma.¹

Aims and Objectives

- To describe sociodemographic factors among patients with carcinoma larynx.
- To assess the spectrum of clinical features in patients with laryngeal carcinoma.
- To determine the histopathological pattern in carcinoma larynx.

MATERIALS AND METHODS

Study Design

Descriptive study.

Study Area

Ear, Nose and Throat Department of Gandhi Medical College, Secunderabad and MNJ Cancer Institute, Hyderabad.

Study Duration

2 years (November 2014 - October 2016).

Sample Size- A convenient sample of 50 patients was taken.

Study population: All patients of carcinoma larynx were taken.

Inclusion Criteria

All proven cases of Primary invasive laryngeal carcinoma, who have not undergone any treatment.

Exclusion Criteria

Patients with Carcinomatous growths extending into Larynx from surrounding tissues, Carcinoma in situ lesions, Patients with Carcinoma Larynx who underwent any sort of treatment (Surgery, Radiotherapy, Chemotherapy) and patients with benign lesions were excluded from the study.

Study Tools

A semi-structured questionnaire was used to collect sociodemographic details, data on history of exposure and clinical presentation. Thorough Head & Neck Examination was conducted. Indirect Laryngoscopy and Direct Laryngoscopy were performed on all study subjects. Biopsy was taken from Laryngeal growth and was sent to the Department of Pathology for histopathological examination. CT Scan Neck was also done wherever it was essentially required.

Data Analysis

Data was analysed using MS excel and Epi info. Descriptive statistics in the form of percentages and proportions are mentioned.

Ethical considerations: Ethical clearance from institutional ethics committee was obtained prior to start of the study. Informed consent was taken from all the participants before administering questionnaire.

RESULTS

Age (Years)	Number	%
21 – 40	3	6
41 – 60	26	52
61 – 80	21	42
Gender	Number	%
Male	47	94
Female	3	6
Religion	Number	%
Hindu	42	84
Muslim	5	10
Christian	3	6
SES	Number	%
BPL	48	96
APL	2	4
Region	Number	%
Adilabad	3	6
Hyderabad	7	14
Karimnagar	4	8
Khammam	3	6
Mahboobnagar	10	20
Medak	5	10
Nalgonda	8	16
Nizamabad	2	4
Rangareddy	4	8
Warangal	4	8
Total	50	100

Table 1. Distribution of Study Population According to Sociodemographic Characteristics

Among the study population, the mean age was 57.28 years. The maximum incidence of carcinoma larynx was among 41-60 years (52%) followed by the 61-80 years (42%). The present study findings were similar to a study conducted by Maier H, Tisch M et al, where the highest incidence of laryngeal cancer was found in the age group of 50-69 years of age.^{5,6} The mean age of study participants was also concurrent with a study conducted by Muhammad Rashidzia, Ghulam Murtaza, et al wherein the mean age was 57 years.⁷The male to female ratio in the occurrence of carcinoma larynx was 15.66:1. In the present study, 84% of cases were among patients belonging to Hindu religion and 10% of cases were Muslims. The study findings in relation to gender distribution were similar to a study conducted by Chevalier Jackson and Hayes Martin where male predominance was found.⁸ Majority (96%) of study subjects were from below poverty line families, which was similar to a study conducted by J M El Wood J et al which found an association of increased risk of carcinoma larynx with low socioeconomic status.⁹

Majority of cases were from Mahboobnagar district (20%), followed by Nalgonda (16%). Around 14% of cases were reported from Hyderabad and 10% cases were from Medak district of Telangana region.

Occupation	Number	%
None	4	8
Labourer	14	28
Farmer	20	40
Mechanic	7	14
Rickshaw puller	1	2
Pot worker	1	2
Shop keeper	6	12
Total	50	100

Table 2. Distribution of Study Population According to Occupation

In the present study, it was found that 40% of study subjects were farmers by occupation and 28% of them were labourers. Around 14% of study subjects were mechanics and 12% were shop keepers. This was similar to a study conducted by Zagraniski RT et al.¹⁰

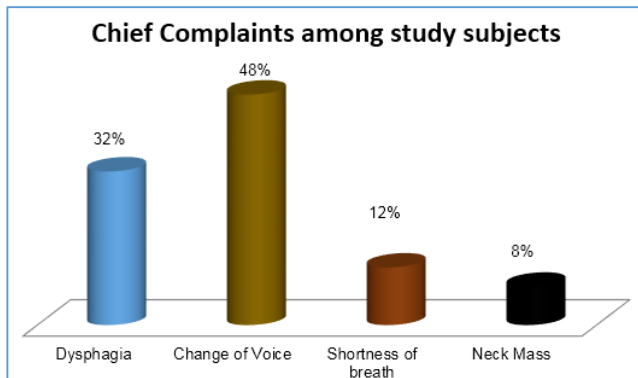


Figure 1. Distribution of Study Population According to Chief Complaints

In the present study, 48% of study subjects presented with change in voice, and 32% presented with dysphagia. Twelve percent presented with shortness of breath and around 8% of them presented with neck mass.

Location of Tumour	Complaint	Number	%
Supraglottic	Dysphagia	12	54.54
	Change of voice	4	18.18
	Shortness of breath	2	09.09
	Neck Mass	4	18.18
Total		22	100
Glottic	Dysphagia	4	14.81
	Change of voice	20	74.07
	Shortness of breath	3	11.11
	Total	27	100
Subglottic	Shortness of breath	1	100
	Total	1	100

Table 3. Distribution of Study Population According to Location of Tumour and Chief Complaint

DISCUSSION

In the present study, it was found that 54% of study subjects had glottis cancer, 44% had supraglottic cancer and 2% had subglottic cancer. Among the subjects with supraglottic cancer, dysphagia (54.54%) was the commonest presentation. Among cases with glottic cancer, change in voice (74.07%) was the commonest clinical presentation. Only one case of subglottic cancer was reported during study period and the presenting complaint was shortness of breath. These findings were consistent with a study by Shukla et al¹¹ where change in voice (75.41%) and dysphagia (63.35%) were the common clinical presentations. Similar findings were found in a study by Yerma et al¹² and Hanni Raitiola et al.¹³

In this study, it was found that 54% of them had glottis cancer and 44% of cases had supraglottis cancer. These findings were different when compared to a study conducted by Purohit k et al,¹⁴ where supraglottis cancer (63%) was the commonest site of presentation.

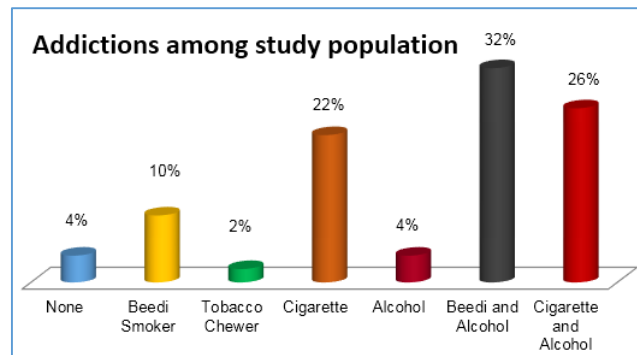


Figure 2. Distribution of Study Population According to Addictions

In the present study, 32% of the subjects were both chronic beedi smokers and Alcoholics and 26% of them were both chronic cigarette smokers and alcoholics. Around 22% of cases were chronic cigarette smokers alone, 10% were Beedi smokers alone. These findings were concurrent to Maier H et al findings where tobacco and alcohol consumption increased the risk of head and neck cancer in a dose-dependent manner and acted as independent risk factors also.⁶

The most common histopathological pattern in this study was squamous cell carcinoma (98%) followed by lymphoma (2%) which was comparable to a study by Thakur et al.¹⁵

In the present study, 40% of cases had palpable neck nodes, while 60% of them did not have palpable lymph nodes. This finding was consistent with a study conducted by Hanni Raitola et al.¹³

CONCLUSION

In the present study, it was found that carcinoma larynx was common in older age group and among males. It was found that cigarette consumption alone or in combination with alcohol was related to occurrence of carcinoma larynx. The most common site of tumour was glottis, followed by supraglottic region. The most common clinical presentation was change in voice and dysphagia and the most common histopathological presentation was squamous cell carcinoma.

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