

Clinical Presentation of 56 Patients of Carcinoma Larynx Admitted at Services Hospital Lahore

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ABSTRACT

Objective: To study the presenting clinical features of carcinoma larynx admitted and diagnosed at tertiary care hospital in Lahore.

Material and methods: The study was conducted in the Department of ENT head & Neck surgery Lahore from June 2002 to December 2006. Fifty six diagnosed cases of carcinoma larynx were included in the study. A detailed history was taken and a thorough physical examination performed on all patients. All patients were investigated including indirect laryngoscopy/IDL, direct microlaryngoscopy /DL and biopsy for confirmation, CT scan/MRI and findings recorded on proforma.

Results: Among 56 patients, 52(92.8%) were male and 4(7.2%) were female. The age ranged between 36-72 years with a mean age of 52.02 years. The majority of patients were between 45-65 years of age. Forty eight patients 85.7% were smokers three of them also used alcohol and 8 (14.2%) patients had a positive family history of laryngeal cancer. The main symptoms were hoarseness/change in voice 52 (92.86%), foreign body sensation/ globus pharyngeus 32(60.7%), stridor in 21(37.5%) neck lump 16 patients (28.57%) and Dyspnea in 14(25%), Dysphagia 12(21.2%), Throat pain 10(17.85%). Clinically 36 patients (64.3% patients presented with stage 1 and 2 and 20(35.7%) with stage 3 and 4 disease. The most common site involved was the glottic region 44.64%, followed by supraglottic 30.35%, transglottic 21.4% and subglottic area 3.57%.

Conclusion: Incidence of Carcinoma larynx is significantly higher in male smokers. Hoarseness in smokers should be suspected for cancer of the larynx. Early recognition of carcinoma larynx is a key factor to minimize the mortality and morbidity.

Key words: Carcinoma Larynx, Hoarseness, Neck mass, Globus, stridor.

INTRODUCTION

Excluding skin cancer, carcinoma larynx is the most common head and neck cancer worldwide^{1,2}. Laryngeal cancer is the eleventh most common cancer in men around the world, but is relatively uncommon in women³.

The most common risk factors involved in carcinoma larynx are smoking and alcoholism. As access to smoking and alcohol is increasing in previously under developed countries, the incidence and prevalence of carcinoma is on the rise. Every year more than half a million patients are diagnosed with squamous cell carcinoma of the head and neck. Smoking and alcoholism, history of past radiations to the neck, genetic factors, occupational exposure to asbestos, mustard gas, other chemicals and petroleum products are the most common risk factors for carcinoma of the larynx⁴. Although relatively uncommon in women, it is increasing in women probably due to increased tobacco consumption³.

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Pathologically, by far squamous cell carcinoma is the most common type of tumor, comprising 90-95% of all laryngeal malignancies in large series^{3,5}. The second common malignancy of the larynx is lymphoma⁶. Adenoid cystic carcinoma is rare, presumably arising from minor salivary glands⁵.

Mostly the tumors are arising from the glottic area or supra glottic and the subglottic site is least common⁷. Most patients with laryngeal cancer are male (78%) and the most common age at presentation is the 6th -7th decade⁸.

Glottic cancer presents early with voice change and patients with hoarseness of voice for three weeks or more should seek specialist attention. The commonest symptom with glottic cancer is hoarseness or voice changes, even carcinoma in situ may produce significant voice changes⁹.

The other common symptoms of glottic cancer are breathlessness may be superimposed with variable degrees of aspiration and as these tumors progress, advanced lesion may lead to airway obstruction with dyspnoea and stridor¹⁰. Hemoptysis is usually associated with larger tumors. Odynophagia, dysphagia and neck lump are

complaints with advance disease, if present, they signify deep invasion⁹.

CT scan and MRI have superceded the conventional x-ray for soft tissue involvement in the neck.¹¹ CT scan is a very useful investigation to find the extent tumor invasion of pre-epiglottic or paraepiglottic space, destruction of cartilage and lymph node involvement^{12,13}.

Some areas of larynx including infrahyoid epiglottis, anterior commissure, subglottis and ventricle, may not be clearly seen by mirror examination here direct laryngoscopy examination is mandatory to see the hidden areas of the larynx and extent of disease¹⁴. Once a clinical diagnosis of laryngeal cancer is suspected, direct examination and biopsy under general anesthesia is strongly recommended. Direct laryngoscopy under a microscope, better visualizes the small lesions of vocal cords and helps precise biopsy specimen without damaging the cord. Adequate multiple biopsies should be taken with fine delicate biopsy forceps under microscopic^{15,16}.

Management of laryngeal carcinoma requires a multidisciplinary team work including head and neck surgeons, oncologists, radiotherapists, nursing specialists, palliative care physicians, dedicated speech and swallowing therapists and nutritionist. Early stage T₁&T₂ disease may be treated endoscopically by radiotherapy, laser excision or some type of partial laryngectomy¹⁷. Advanced disease can be treated with surgery i.e. laryngectomy or laryngopharyngectomy, with or with out neck dissection, chemo or radiotherapy or combination of any of the three. In rare terminal cases or with metastasis only palliative management is considered as choise^{18,19}. High degree of suspicion is required in patients with hoarseness for 3 weeks or more particularly smokers and alcohol consumers and every effort should be made to diagnose carcinoma larynx and manage accordingly²⁰.

MATERIAL AND METHODS

This study was descriptive, conducted at the department of ENT Head & Neck Deptt. Services Hospital, Lahore, between June 2002 to December 2006. A series of fifty-six cases of carcinoma larynx diagnosed recently clinically, confirmed by laryngoscopic, and histological findings were included in the study. Patients proved to have benign and infec-tive lesions on histology and patients who did not consent were excluded from the study. A detailed history was taken and a thorough physical examination performed on every patient. Relevant laboratory, radiological, laryngoscopic and histological investigations were done in all patients. The diagnosis and TNM staging of larynx cancer was

based on clinical, laryngoscopic, radiological, and histological assessment.

RESULTS

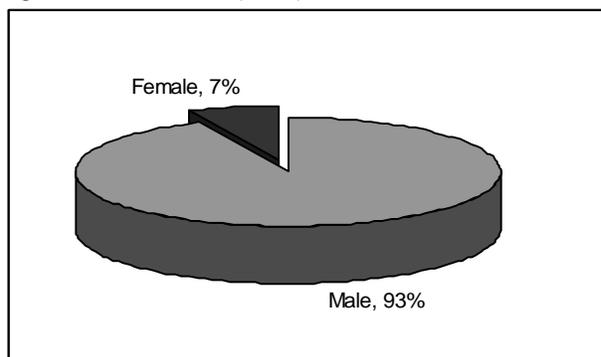
Out of 56 patients, 52(92.8%) were male and 4(7.2%) were female. Male to female ratio was 10.2; 1 (Fig.1). The age ranged between 36-72 years with a mean age of 52.02 years±6.2 years. The majority of patients were between 45-65 years Maximum patients were between 50-59 years. 32(71%), 10(18%) were of age 60-72 years and around 6(11%) ere between 36-44years. ears of age. The age ranged between 36-72 yrs with mean age of 52.02 yrs (Table 1)

Table 1: Age Distribution of patients (n=56)

Age Group	=n	%age
36-44	6	11
45-54	21	37.5
55-65	19	33.5.
66-72	10	18

Carcinoma larynx was more common in those patients who had been smokers for more than 10 years and the disease was in a more advanced stage in those whose symptom were present for more than 3 months. Ten percent of patients had family history of laryngeal carcinoma. Forty eight patients 85.7% were smokers. 3 of them also used alcohol and only 8(14.2%) patients had a positive family history of laryngeal cancer. Clinically 36(64.3%) patients presented with stage 1 and 2, and 20(35.7% with stage 3 and 4 disease. The most common site was the glottic region25/56 -44.64% followed by supraglottic17/56-30.35%, transglottic 12/56- 21.4% and subglottic area 2/56- 3.57% (Fig. 2)

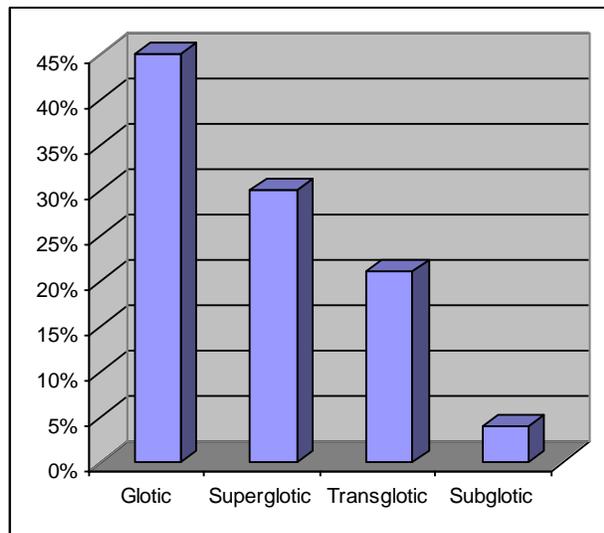
Fig 1: Sex distribution (n=56)



Majority of patients presented with local symptoms like hoarseness globus or foreign body sensation, strider and neck lump The main symptoms were hoarseness or change in voice 52 (92.86 %), neck lump 36 patients(64.3%),foreign body sensation/globus pharygeous 32(60.7 60%), strider in 21 37.5%

and Dyspnea in 14(25%24), Weight loss was the leading generalized symptom in 18 22(39. 2 36%), Dysphagia in 12 (21.4%), Throat pain in 10 (17.85%), Halitosis in 8(14.3%, Hemoptysis in 2(3.57%) and Otagia in 2-(3.57%) cases recorded (Table 2).

Fig 2: Showing primary site involvement of tumour (n=56)



The majority of patients (84%) had hoarseness for more than 4 weeks. Fourteen patients had disease duration of less than 1 year and 42 patients had disease duration of more than one year.

Table 2: Common symptoms of ca larynx patients (n=56)

Symptom	=n	%age
Hoarseness	52	92.86
Foreign body sensation (GlobusPh)	32	60.7
Stridor	21	37.5
Weight loss	18	35.7
Lump in neck-neck node	16	28.57
Dyspnea	14	25
Dysphagia	12	21.4
Throat pain	10	17.85
Halitosis	8	14.3
Hemoptysis	2	3.57
Otagia	2	3.57

DISCUSSION

Worldwide the commonest head and neck cancer is laryngeal carcinoma,^{3,7} while it is the 5th leading cancer in Pakistan.²¹ Incidence and preferential subsite, although not the histological type, of laryngeal cancer varies with geography. The incidence is highest in reports from Mediterranean and South American countries, while it is lowest in Finland. The incidence in UK is approx. 4/100,000 and approx. 70% are men (3-4:1) with peak incidence between 55 and 66 years of age, very similar to our study.^{7,19} Still there is variation in age and sex

distribution of incidence of carcinoma larynx in different parts of world e.g. in Scotland, the male to female ratio is 2:1, while in France it is 9:1. Zia et al has reported series having all 64 (100%0 male (1:0 male to female ratio) There are areas in the world where the incidence is higher (greater than 10/100,000), including Brazil, the Afro-Arabian population in parts of USA, India and France, Italy, and Switzerland, while areas of low incidence (less than 2/100.000) include Japan, Norway, Sweden.¹⁹ Limited data is available on the incidence and prevalence of carcinoma larynx in Pakistan; however, it does exist in Pakistan in all areas and groups, especially in the low socioeconomic group which smokes^{4,20}.

The ratio of male to female patients was 10.2:1 in our study, showing dominance of male gender for laryngeal cancer, it is in accordance with other studies 2;1-15.6;1^{3,19,,21,22}. The mean age of our patients was 52.02 year Hassan et al. has reported 51.27 years, similar to that in Western and Asian population^{7,8,9,21}. The peak period for the diagnosis of carcinoma larynx is in the 5th, 6th and 7th decade, which is in accordance with that in North American patients. The majority of patients in this series were between 45-65 years 40(71%) 10(18%) were of age 66-72 years and around 6(11%) were between 36-44 years of age. The age ranged between 36-72 years with a mean of 52.02 years like other reports^{8,14, 21,22}.

Change in voice / hoarseness is the alarming symptom and is present even carcinoma in-situ, most of the patients 92.86% in our study presented with progressive hoarseness of more than 4 weeks most of the studies attest our results Hassan et al. recorded 90% an Zia et al reported 98 % cases with hoarseness as other larger international centers has reported². Globus or foreign body sensation was the second commoner complaint of the patients in 64.3% Hassan et al had this symptom in 54 % while Zia et al noticed same symptom in % also previous studies are in accordance with our findings^{20,21}.

Twenty-one (37.5%) patients had some degree of strider; Zia et al. had only 13% Hassan et al noted in 40% in cases, indicating airway occlusion by the disease. Wait loss was another noticeable finding in 18(35.7%) patients depicting the generalized ill-effect of the laryngeal malignancy, Hassan el had in 36% cases where as Zia et al and other reported in 9% only. Lump in neck (neck node) was complained by 16(28.57%) Hassan et al. in 54% and Zia et al. noted in only 9% cases^{21,22}.

Dyspnea and dysphagia were found in 25% 21.4% cases respectively in our study. Dysphagia though rare, is a sinister sign present in advanced carcinoma larynx 21.4%. Throat pain was complained by 10(17.85%) cases Zia et al reported throat pain in

31% i.e., 20/64 cases while 16% 8/50 by Hassan et al, indicating invasive disease. Eight patients had complained of disturbing halitosis and changed taste, while two cases each had haemoptysis or otalgia in very advance disease with deep invasion, which is of the same values as been mentioned by other reports^{10,14,21,22}.

Finally staging the tumour clinically 36 patients (64.3% patients were placed in 1 and 2, and 20(35.7%) in stage 3 and 4 disease, coinciding the finding of Hassan et al mentioning T1, T2 62% and T3T4 tumour, 38% and other studies. Patients with T3, and T4 disease had advance with multiple complaints^{8,16,21,22}. The leading tumour site was glottic region 25/56 -44.64%, as been reported in most of the studies followed by supraglottic 30.35%, although some authors have recorded supraglottic as the most involve, while glottic tumour numbers the second one in our series the incidence of trans glottic lesion 21.4% was third common type, comparatively higher and subglottic area had only 2/56- (3.57%). These findings are in accordance with previous such studies^{7,12, 21,23}.

CONCLUSION

1. A high index of suspicion is necessary in those who smoke and present with hoarseness of voice of three or more than 3-4 week's duration.
2. D/L pan endoscopy and biopsy is mandatory for patient's having suspension of carcinoma larynx as sooner as possible

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