

**A PROSPECTIVE STUDY OF THE OUTCOME OF TREATMENT AMONG
PATIENTS WITH HOARSENESS IN A TERTIARY CARE HOSPITAL**

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Abstract

Introduction: Hoarseness is the term used to describe a change in normal voice quality and it is invariably the earliest manifestation of a large variety of conditions directly or indirectly affecting the voice apparatus. Although patients frequently complain of hoarseness, it is a nonspecific term for a symptom and not a diagnosis. Since both benign and malignant lesions can produce hoarseness, proper evaluation is very important because delay in the diagnosis of malignancy can adversely affect the outcome.

Materials and Methods: This cross-sectional study was conducted in a tertiary care hospital from February 2022 to November 2022. As per enclosed proforma, the detailed history was taken followed by thorough ENT and systemic examination. Clinical diagnosis was arrived in support with the relevant investigations. The case history included the presenting complaints, history of present illness, history of past illness, personal history, family history and treatment history. The clinical examination included examination of throat by indirect laryngoscopy, examination of nose and ear. The endoscopic examination of throat was also done in every case.

Results: The study population consisted of 58.7% males and 41.3% females with a mean age of 40.17±16.64 (range 8-76) years. Majority of study population belonged to 21-30 years (22.7%) and 31-40 years (20.0%) age groups. 80.0% of the subjects were married. Majority of the subjects were housewives (29.3%) followed by students (21.3%), shopkeepers (18.7%), farmers (17.3%) and teachers (10.7%). Alcohol habit was found among 5.3%, alcohol & tobacco chewing among 1.3%, smoking alone among 13.3%, smoking & alcohol among 13.3%, tobacco chewing alone among 13.3% and tobacco chewing, smoking & alcohol habit among 1.3% patients.

Conclusion: The study concluded that the symptoms of hoarseness of voice should never be ignored as it is the most common symptom in laryngeal malignancy. Any patient with hoarseness should be thoroughly investigated to rule out malignant conditions and conditions that might cause respiratory distress leading to life threatening complications.

Key Words: Hoarseness, malignancy, respiratory distress, life threatening complications.

INTRODUCTION

Hoarseness is the term used to describe a change in normal voice quality and it is invariably the earliest manifestation of a large variety of conditions directly or indirectly affecting the voice apparatus.¹ Although patients frequently complain of hoarseness, it is a nonspecific term for a symptom and not a diagnosis. Since both benign and malignant lesions can produce hoarseness, proper evaluation is very important because delay in the diagnosis of malignancy can adversely affect the outcome.²

In India and other developing countries, the prevailing low economic status, poor nutrition, poor general health of population, different food habits, vocal habits, smoking and drinking habits, unhealthy environment and different social customs definitely influence the incidence

of hoarseness.³ The advent of fiberoptic telescope and stroboscope have reduced our dependence on mirror examination and greatly improved the diagnostic ability in cases of hoarseness. With the introduction of micro laryngoscopic surgery and video laryngeal surgery (VLS) using LASER, coblator, etc., great advancement has occurred in the treatment of laryngeal pathologies leading to hoarseness.⁴

The risks associated with cigarette smoking are also modified by alcohol consumption in a multiplicative manner. Alcohol ingestion increases cancer risk by increasing topical absorption of tobacco carcinogens and induction of microsomal enzymes, leading to increased generation of tobacco carcinogens that bind to DNA. Because of this interaction, cigarette smoking should be examined within the context of alcohol consumption.⁵

In light of the above mentioned factors, the present study was done to analyze the clinical profile, incidence of common etiological factors and their association with various causes of hoarseness of voice in a predominantly rural population of Pilkhuwa attending our tertiary care institute.

MATERIALS AND METHODS

This cross-sectional study was conducted in the in a tertiary care hospital from February 2022 to November 2022.

Sample Size: The study population has been calculated by using G-power software. The sample size was calculated with 80% of the power and 5% of the significance level. The total sample size was determined to be 150 patients with hoarseness of voice. The study subjects were chosen as per the inclusion and exclusion criteria as mentioned below:

Inclusion criteria: All cases of hoarseness of voice irrespective of age & sex were included in the study after obtaining proper consent.

Exclusion criteria: Cases where surgery was indicated but patient was unfit or refused surgery.

Methods of data collection: As per enclosed proforma, the detailed history was taken followed by thorough ENT and systemic examination. Clinical diagnosis was arrived in support with the relevant investigations. The case history included the presenting complaints, history of present illness, history of past illness, personal history, family history and treatment history. The clinical examination included examination of throat by indirect laryngoscopy, examination of nose and ear. The endoscopic examination of throat was also done in every case. The patients were investigated by X-ray Chest (PA view) and X-ray neck (AP/Lateral view) where indicated. CT scan of neck and/or thorax was advised where indicated. The treatment included medical / surgical management depending upon the underlying pathology. The surgical specimen was sent for HPE where applicable and the results were correlated with clinical findings.

Statistical analysis: The data was entered into the Microsoft excel and the statistical analysis was performed by statistical software SPSS version 21.0. The Quantitative (Numerical variables) were present in the form of mean and SD and the Qualitative (Categorical variables) were present in the form of frequency and percentage. The Chi-square test was applied for comparing the frequency. The p-value was considered to be significant when <0.05.

RESULTS

The study population consisted of 58.7% males and 41.3% females with a mean age of 40.17±16.64 (range 8-76) years. Majority of study population belonged to 21-30 years (22.7%) and 31-40 years (20.0%) age groups. 80.0% of the subjects were married. Majority of the subjects were housewives (29.3%) followed by students (21.3%), shopkeepers (18.7%), farmers (17.3%) and teachers (10.7%).

Alcohol habit was found among 5.3%, alcohol & tobacco chewing among 1.3%, smoking alone among 13.3%, smoking & alcohol among 13.3%, tobacco chewing alone among 13.3% and tobacco chewing, smoking & alcohol habit among 1.3% patients.

		Frequency	Percentage
Gender	Male	88	58.7%
	Female	62	41.3%
Location	Rural	43	57.3%
	Urban	32	42.7%
Age	0-10 years	2	1.3%
	11-20 years	18	12%
	21-30 years	34	22.7%
	31-40 years	30	20%
	41-50 years	26	17.3%
	51-60 years	26	17.3%
	61-70 years	8	5.3%
	More than 70 years	6	4%
Marital status	Unmarried	30	20%
	Married	120	80%
Occupation	Engineer	2	1.3%
	Farmer	26	17.3%
	House wife	44	29.3%
	Shopkeeper	28	18.7%
	Singer	2	1.3%
	Student	32	21.3%
	Teacher	16	10.7%

Table 1: Demographic profile of the study population

Personal Habit	Frequency	Percentage
No	78	52%
Alcohol	8	5.3%
Alcohol, Tobacco chewing	2	1.3%
Smoking	20	13.3%
Smoking, Alcohol	20	13.3%
Tobacco Chewing	20	13.3%
Tobacco chewing, Smoking, Alcohol	2	1.3%
Total	150	100%

Table 2: Distribution of personal habits among study population

Complaints	Frequency	Percentage
No	42	28%
Cough	20	13.3%
Dysphagia	14	9.3%
Fever	6	4%

Odynophagia	8	5.3%
Throat irritation	32	21.3%
Throat pain	26	17.3%
Weight loss	2	1.3%
Total	150	100%

Table 3: Distribution of complaints among study population

Diagnosis	Frequency	Percentage
Acute laryngitis	16	10.7%
Chronic laryngitis	10	6.7%
Carcinoma larynx	12	8.0%
Functional aphonia	4	2.7%
Keratosi s of posterior commissure	2	1.3%
Vocal cord polyp	26	17.3%
Vocal cord cyst	12	8%
Vocal cord palsy	20	13.3%
Laryngopharyngeal Reflux (LPR)	2	1.3%
Reinke's oedema	16	10.7%
Vocal cord papilloma	2	1.3%
Tubercular laryngitis	2	1.3%
Ventricular Dysphonia	2	1.3%
Vocal nodule	24	16%
Total	150	100%

Table 4: Distribution of diagnosis among study population

HPE	Frequency	Percentage
Keratosi s without dysplasia	2	1.3%
Vocal cord cyst	2	1.3%
Vocal cord polyp	28	18.7%
Reinke's oedema	8	5.3%
Retention cyst	2	1.3%
Right aryepiglottic fold cyst	2	1.3%
Right intracordal cyst	4	2.7%
Right vocalcord papilloma	2	1.3%
Squamous cell carcinoma	12	8%
Tubercular laryngitis	2	1.3%
Vocal nodule	6	4%
Total	70	46.7%

Table 5: Distribution of histo-pathological diagnosis among study population

Surgery	Frequency	Percentage
No	80	53%

Yes	70	47%
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Table 6: Distribution of surgical management among study population**DISCUSSION**

In our study, the age of patients with hoarseness of voice ranged from 8 to 76 years majority of patients i.e. 31 % cases were in the group of 19-30 years and minimum number of patients i.e. 2 % case were in the age of group of <10years. In a study by Baitha et al, majority of patients i.e. 31 cases (28.18%) were in the age group of 31-40 years. In a study by Ghosh et al, maximum patients i.e. 28 cases (28%) were in the age group of 21-30 years.⁶

In the study by Amarnath and Purushotham, the age of patients with hoarseness of voice ranged from 9 to 85 yrs. Majority of patients i.e. 40 cases (26.66%) were in the group of 41-50 years and minimum number of patients i.e. 2 cases (1.33%) were in the age of group of <10 years.⁷

In our present study, 58.7% patients were males and 41.3% patients were females, thus male to female ratio of approximately 1.4: was observed. This finding was similar to the study done by Baitha et al, where 74 cases (67.27%) were males and 36 (32.72%) were females.⁸

Amarnath and Purushotham found in their study that 66% were males and 34% were females. Thus male to female ratio of approximately 2:1 was observed and Babuet al, found the male female ratio to be 1.89:1.⁹

In our study, majority of patients (29.3%) were housewives and least i.e. 1.3% cases were singer and engineer. It was similar to the study done by Ghosh et al, where majority of patients were housewives (29%). This was contrasting to the study by Baitha et al, where majority of patients were of labourer class (36.36%) and in the study by Amarnath and Purushotham, the majority of patients i.e. 64 cases (42.66%) were again of manual laborer class.¹⁰

CONCLUSION

The study concluded that the symptoms of hoarseness of voice should never be ignored as it is the most common symptom in laryngeal malignancy. Any patient with hoarseness should be thoroughly investigated to rule out malignant conditions and conditions that might cause respiratory distress leading to life threatening complications.

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