

## A CLINICAL STUDY ON ETIOPATHOGENESIS OF HOARSENESS OF VOICE OF THE PATIENTS ATTENDING TERTIARY CARE HOSPITAL

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### ABSTRACT:

**Introduction:** Hoarseness of voice is generally due to change in quality of voice. The etiology of hoarseness of voice varies from benign conditions to malignant disease, hence should not be ignored. The study's goal is to examine the demographic profile, etiopathological factors, and predisposing factors of hoarseness of voice

**Materials and Methods:** This prospective case study was carried out in 100 patients presented in Department of ENT, Viswabharathi Medical College, Kurnool. patients of both sexes with hoarseness of voice for more than 2 weeks duration were included. All patients were subjected to detailed history, complete ENT examination, laryngoscopic examination, micro laryngeal excision or biopsy was taken to arrive at the diagnosis and management was done accordingly.

**Results:** A majority of the patients were seen in the age group of 31 to 60 (78%) Hoarseness of voice is commonly seen in males, and male-to-female ratio is around 2.03:1. Smoking is found out to be the most common predisposing factor (40%) for the development of Hoarseness of voice. incidence being more common in laborers/farmers with 32%. The most common clinical presentation was Hoarseness of voice (100%), foreign body sensation 20%), neck swelling (20%) followed by dysphagia (13%), dyspnoea(15%) and vocal fatigue(15%). Out of the 100 cases in our study chronic specific laryngitis (32%) was found to be the most common cause of hoarseness of voice

**Conclusion:** The symptom of hoarseness of voice should not be neglected because it may indicate laryngeal cancer. Any patient with hoarseness should be extensively checked to rule out laryngeal cancer, which can induce respiratory discomfort and life-threatening consequences.

**Keywords:** Hoarseness of voice, Laryngitis, Etiology, Predisposing factors

### INTRODUCTION:

Hoarseness is a symptom, not an illness, and it describes a change in normal voice quality that is rough, grating, harsh, lower in pitch, and more or less disruptive. The harsh voice may have unvoiced air, but it also contains fricative tones from the larynx. [1]

Voice hoarseness can be caused by a range of disorders, including inflammatory conditions, neoplasms (both benign and malignant), and neurological conditions. Hoarseness may also be caused by vocal cord disease or improper vocal cord movement. Raucous is a Latin term that literally means 'hoarseness,' but it also means 'loudness' and refers to a naturally abrasive rough voice. [2]

There are two types of hoarseness: acute and chronic. [3] The acute onset is more prevalent and is primarily caused by inflammation, such as acute laryngitis; however, other reasons include viral infection, smoking, vocal abuse, laryngeal damage, or thyroid surgery.[4] The chronic onset is primarily caused by a vocal cord nodule, polyp, laryngeal-papillomatosis, vocal cord tumor, functional dysphonia, smoking, vocal abuse, laryngopharyngeal reflux disease, post-nasal drip, thyroid, esophageal, or lung neoplasm, chronic granulomatous disease such as tuberculosis, or systemic disease such as diabetes.[5-7]

The study's purpose is to study the demographic profile, etiopathological variables, and risk factors for hoarseness of voice.

### MATERIALS AND METHODS:

This one-year prospective observational study was undertaken in the ENT department at Viswabharathi Medical College & General Hospital in Kurnool. A total of 100 cases with hoarseness of voice were included, all of which were seen in the ENT outpatient department. All patients were told about the procedure and their participation in the study, and they

provided voluntarily informed consent. To make a diagnosis, each patient completed a clinical history, physical examination, ENT examinations (indirect laryngoscopy, fiber optic laryngoscopy, endoscopic rods), and other relevant standard tests. All data were collected on a predesigned data sheet and then analyzed.

#### **Inclusion Criteria-**

1. Either sex
2. Age range 5-70 years
3. All cases of hoarseness with duration of more than two weeks

#### **Exclusion Criteria-**

Patients of hoarseness with less than two weeks duration of hoarseness were not included

#### **Procedure methodology:**

All 100 cases of hoarseness of voice were investigated first by indirect laryngoscopy in the outpatient department, followed by video laryngoscopy. The benign lesions, such as voice nodules, were treated medically, with some instances undergoing micro laryngeal surgery and the lesions being sent for histological evaluation. All cases suspected of malignancy underwent direct laryngoscopic examination, with a biopsy taken and sent for histological investigation. Lesions were classified based on their histological findings.

#### **RESULTS:**

Among 100 patients, A majority of the patients were seen in the age group of 31 to 60 (78%) as shown in table 1

**Table 1: Age distribution**

Age group	No. of cases	percentage
<10 years	1	1%
11-20	6	6%
21-30	10	10%
31-40	28	28%
41-50	18	18%
51-60	32	32%
61-70	5	5%

Hoarseness of voice was commonly seen in males, and male-to-female ratio is around 2.03:1 as shown in table 2

**Table 2: Sex distribution**

Gender	No. of cases	percentage
Male	67	67%
Female	33	33%

The study shows incidence being more common in laborers/farmers with 32% and housewives with 20% as shown in Table 3

**Table 3: occupation**

Occupation	No. of cases	percentage
Laborers/Farmers	32	32%
Housewives	20	20%
Teacher	14	14%
singers	13	13%
Vendor	9	9%
Students	8	8%
Driver	4	4%

Smoking was found out to be the most common predisposing factor (40%) and vocal abuse (31%) the next most common predisposing factor as shown in Table 4

**Table 4: Predisposing Factors**

Predisposing factors	No. of cases	percentage
smoking	40	40%
Vocal abuse	31	31%
Tobacco chewing	10	10%
URTI	7	7%
Alcohol	6	6%
GERD	6	6%

The most common clinical presentation was Hoarseness of voice (100%), foreign body sensation (20%), neck swelling (20%) followed by dysphagia (13%), dyspnoea (15%) and vocal fatigue (15%) as shown in Table 5

**Table 5: clinical presentation**

Clinical presentation	No. of cases	percentage
Hoarseness of voice	100	100%
Foreign body sensation	20	20%
Neck swelling	18	20%
Dysphagia	15	12%
Dyspnoea	13	15%
Vocal fatigue	13	15%
Cough	8	13%
Pain in throat	4	4%

Out of the 100 cases in our study chronic specific laryngitis (32%) was found to be the most common cause of hoarseness of voice followed by vocal nodules (18%), carcinoma of larynx (13%) as shown in Table 6

**Table 6: causes of Hoarseness of voice**

etiology	No. of cases	Percentage
Chronic specific laryngitis	32	32%
Vocal nodule	18	18%
Carcinoma larynx	13	13%
Chronic nonspecific laryngitis	10	10%
Vocal cord palsy	10	10%
Vocal polyp	8	8%
Functional lesion	3	3%
Vocal cyst	2	2%
Benign tumors	2	2%
Trauma	2	2%

## DISCUSSION:

This study found that males were more affected than females, which is consistent with previous results (8-12). Male dominance can be described by a variety of behaviors, including smoking, chewing tobacco with lime, and alcohol intake. Males were exposed to more occupational dangers than women who spent the bulk of their time indoors (13). In our study, the most common age range for hoarseness of voice was 31-60 years old (78%). Soni et al. found a greater incidence (55%) among those aged 50 to 70 years (13). Ghosh et al. and Batra et al. found that the incidence in the 20-50 age range was 66%, 70%, and 61.81%, respectively. [14,15]

In the current study, the majority of the patients in approximately 30 cases were laborers or farmers. The similar observation was made in a study by Shambhu Baitha et al., namely that the majority of patients (36.36%) were labourers. [8] In the present study, 40% of the overall cases were smokers. Whereas 60% of the cases in the Soni et al. study were smokers, Pal et al. found 33% of smokers with hoarseness (13, 16).

In our study, the most prevalent clinical manifestation was hoarseness of voice (100%). Hansa et al. [17] reported hoarseness as a major complaint. Parikh [18] and Baitha et al. [19] conducted comparable research and found that all cases presented with hoarseness. In this study, 32% of instances of chronic laryngitis cause hoarseness of voice. Chronic laryngitis was the most common cause in Parik N's study [18], and Kumar H et al's study [20] found that chronic laryngitis impacted 52% of cases. In our study, vocal nodules were found in 18% of the cases. In study by Parik N [18], vocal nodules were found in 43.3% of patients. In our study, Carcinoma of the larynx occurred in 13% of cases, which was consistent with research by Parik N [18] and Batra K et al. [19].

**CONCLUSION:** The symptom of hoarseness of voice should not be neglected because it may indicate laryngeal cancer. Any patient with hoarseness should be extensively checked to rule out laryngeal cancer, which can induce respiratory discomfort and life-threatening consequences.

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