

# Clinicopathological Profile Of Hoarseness Of The Voice

H Kumar, S Seth

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## Abstract

Whether the patient notices vocal fatigue or says that it's harder to go with a worsening voice as the day progresses, the underlying cause of hoarseness must be found. Proper knowledge of clinicopathological profile is important to treat it competently and to bring the patient voice back. Considering this fact in mind, the study was designed in 100 patients irrespective of their age, sex and duration of disease. Chronic non specific laryngitis was found to comprise largest group responsible for hoarseness followed by carcinoma larynx

## INTRODUCTION

Hoarseness is one of the commonest symptoms in ENT practice and is invariably the earliest manifestation of condition directly or indirectly affecting the voice apparatus. Hoarseness is defined as abnormal production of sound, perceived as raspiness, breathiness, harshness, vocal tension or lower pitched voice.

Pathophysiology of hoarseness

1. Insufficient glottic closure during phonation.
2. Changes in vocal cord stiffness.
3. Imbalance in mechanical properties between two folds which impairs vibration.

## AIMS AND OBJECTIVES

The study was aimed to study the clinicopathological profile and associated symptoms of hoarseness of voice.

## MATERIAL AND METHODS

We studied 100 patients of hoarseness of voice irrespective of their age, sex and duration of disease. Thorough history, clinical and ENT examination was done. Routine investigations like Hb, BT, CT, TLC, DLC, Urine-for albumin and sugar were carried out in all patients. X-ray chest- PA view and X-Ray soft tissue neck- AP and lateral view were done, when required. Larynx was examined by indirect laryngoscopy and if needed by direct or microlaryngoscopy followed by biopsy if suspicious looking area was seen. Laryngeal crepitus and tenderness were noted

by direct palpation.

## RESULTS

In the present study of 100 cases 66 were males and 34 females with M:F ratio of 2:1 and age ranged from 10-86 years with majority of cases (31%) in 4<sup>th</sup> decade of their life. All patients had history of hoarseness of voice with maximum number of patients (54%) having duration of disease between one month to one year. (Table 1)

### Figure 1

Table 1 (Duration of hoarseness of voice)

1day to<1week	8	8%
1 week to< 1month	12	12%
1month to<1 year	54	54%
1year onwards	26	26%

Bilateral lesion (74%) was predominated overall, with left sided(16%) of larynx affected more as compared to right side (8%), while in 2% of cases(functional) no lateralization was seen due to obvious reason of non-organic nature.(Table 2)

**Figure 2**

Table 2 (Lateralisation of lesions)

Lesions	Bilateral	Right	Left
Acute laryngitis	10	-	-
Tubercular laryngitis	5	-	-
Chronic hyperemic Laryngitis	14	-	-
Chronic hyperplastic Laryngitis	12	-	-
Vocal nodule	15	3	-
Vocal polyp	-	3	5
Carcinoma larynx	15	-	-
Papilloma	-	1	1
Fibroma	-	1	-
Vocal cord palsy	-	-	10
External trauma	1	-	-
Functional dysphonia	-	-	-
Radiotherapy induced	2	-	-
<b>Total</b>	<b>74</b>	<b>8</b>	<b>16</b>

Change in voice was the presenting feature in all patients. Other associated features included vocal fatigue, pain throat, weight loss, dysphagia, neck swelling etc. (Table 3)

**Figure 3**

Table 3 (Clinical presentation of patients with hoarseness)

Clinical feature	No. of patients	%age
Change in voice	100	100
Pain throat	23	23
Vocal fatigue	30	30
Cough	20	20
Fever	9	9
Weight loss	18	18
Dysphagia	14	14
Neck swelling	12	12
Odynophagia	10	10
URI (nasal discharge, sneezing)	9	9
Dyspnoea/Respiratory distress	4	4
Hemoptysis	6	6
Weight gain	1	1
Mania	1	1
External wound neck with subcutaneous emphysema	1	1

22% of cases had sudden in onset and 78% had gradual in onset of hoarseness. Chronic nonspecific laryngitis (52%) constituted the largest group among intralaryngeal conditions producing hoarseness. Amongst chronic nonspecific laryngitis, vocal nodules (18%) was the most common pathology constituting 34.5% of cases of chronic nonspecific laryngitis. Carcinoma larynx constituted 15% of all cases. All the cases were squamous cell carcinoma. The incidence of acute laryngitis was 10% and of tubercular laryngitis was 5%. In all cases of tubercular laryngitis, pulmonary tuberculosis (100%) was present. Out of the total 12% extralaryngeal causes, neurological (vocal cord palsy) comprised 83.33% and functional dysphonia 16.66% of cases. Idiopathic vocal cord palsy (60%) was the most

common cause of palsy followed by malignancy (20%) and post thyroidectomy (20%).

**DISCUSSION**

Numerous studies in the past have studied the clinicopathological profile of HOV. Banjara et al (2011) mentioned age range to be 11-78 years in their study and majority of patients presented in 4<sup>th</sup> and 6<sup>th</sup> decades of life (22.31% each). This is in accordance with our study in which age of presentation ranged from 4-86 years with maximum cases in fourth decade of life, which is the period of most active life when man indulges in vocal abuse. In the present study male : female ratio was found to be 2:1. Similar observation was given by Khavasi and Prabhu S(2005). Banjara et al (2011) also observed male preponderance with male: female ratio as 1.89:1 in their study where male patients showed higher percentage (26.83%) in 51-60 years age group while female patients (33.33%) in 31-40 years age group. This can be attributed to the fact that males indulge more in smoking, alcoholism, pollutant exposure and misuse of voice. In contrast, Brodnitz(1963) has documented an almost equal number for both sexes with a slight preponderance of males but the individual conditions exhibited marked difference.

In our study, besides change in voice other associated features were vocal fatigue(30%), pain throat (17%), cough (20%) weight loss (18%) dysphagia (14%) and neck swelling (12%) while Ghulam et al reported hoarseness of voice (100%) to be the most common presenting feature followed by dysphagia(63%), dyspnoea (36.95%) and pain throat (48.91%). Banjara et al (2011) reported change in voice (95.61%) as most common complaint followed by dysphagia (16%), foreign body sensation (16%) and vocal fatigue(10%). In the present study, chronic laryngitis (57%) was the most common pathology followed by carcinoma larynx (15%) and neurological (10%). Out of chronic laryngitis, vocal nodule (18%) was the most common pathology seen. Khavasi and Prabhu S(2005) mentioned the most common pathology as carcinoma larynx (40%) followed by chronic laryngitis (36.36%) while Baitha S (2004) documented chronic non specific laryngitis (43.63%) as the most pathology of hoarseness followed by acute laryngitis(23.63%), carcinoma larynx (14.54%), vocal cord palsy (9.09%) and tubercular laryngitis (5.45%). Banjara et al (2011) mentioned functional lesions (16.33%) to be most common etiology followed by vocal nodule (11.95%), vocal palsy (11.16%), cancer and chronic laryngitis (9.56% each). In our study incidence of carcinoma larynx was 15% and all were squamous cell carcinoma. Ghosh et al (2001) reported

a with lower incidence of carcinoma larynx in 8% but all were squamous cell carcinoma. In our study, idiopathic recurrent laryngeal palsy (60%) was the most common cause of vocal cord palsy followed by malignancy lung (20%) and post thyroidectomy (20%) while Fitzpatrick and Miller (1998) mentioned a dramatic reduction in the incidence of vocal cord palsy due to thyroid surgery from one third cases to less than 5 %.

### CONCLUSION

The age range of patient was from 10-86 years with peak incidence in 4th decade of life. Male preponderance was seen with M:F ratio 2:1. Majority of cases (88%) had intra laryngeal pathology. Chronic non specific laryngitis (52%) comprised largest group responsible for hoarseness followed by carcinoma larynx (15%), acute laryngitis(10%)and vocal cord palsy (10%). Smoking and vocal abuse were the common predisposing factors. Associated clinical features with hoarseness of voice included vocal fatigue, pain throat, cough, weight loss, dysphagia, upper respiratory tract infection, fever, hemoptysis etc.

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**Author Information**

**Harvinder Kumar**

Associate Professor, Maharaja Agrasen Medical College

**Sonia Seth**

Associate Professor, Maharaja Agrasen Medical College