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HOARSENESS OF VOICE: AN ETIOPATHOLOGICAL STUDY OF 100 CASES IN A TERTIARY HOSPITAL: OUR EXPERIENCE

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ABSTRACT: AIMS: The aim of this study is to analyze the age& sex distribution, occupation, predisposing factors and an etiology of hoarseness of voice. **MATERIALS AND METHODS:** All patients who presented with hoarseness of voice to our department of otorhinolaryngology during the period from June 2013 to June 2014 constituted the study. Detailed history, age and sex distribution, occupation and clinical findings which included fiberoptic laryngoscopy were done in all patients of this study. **RESULTS:** A total of 100 patients who presented with hoarseness of voice were considered for this study. The commonest age group involved was 41-50 years with female preponderance (51%). Vocal abuse was the found to be the commonest predisposing factor. Commonest cause of hoarseness of voice was vocal nodule. **CONCLUSION:** Hoarseness of voice is a common problem encountered in otolaryngology. Hoarseness of voice especially in elderly should be evaluated thoroughly so that appropriate treatment can be given at the earliest.

KEYWORDS: Hoarseness, Etiology, Fibre Optic Laryngoscopy.

INTRODUCTION: Hoarseness generally refers to an abnormal voice quality or pitch. Hoarseness of voice is a result of abnormality of larynx or voice box. Hoarseness of voice is one of the commonest symptoms in otorhinolaryngology practice. Hoarseness is more prevalent in certain groups, such as singers and teachers, but all age groups and both genders can be affected.^[1] Hoarseness of voice is very early recognised and very often, an anxious patient and bystander turn up in ENT outpatient department for a proper diagnosis. In majority of the cases, hoarseness of voice is due to benign conditions but still a thorough and proper evaluation is required. Indirect laryngoscopy is the commonly done diagnostic procedure in ENT outpatient department for diagnosis of laryngeal conditions. It has its own merits and demerits. The introduction of stroboscopy and fiberoptic laryngoscopy has made early detection and possible diagnosis of various causes of hoarseness of voice.

MATERIALS AND METHODS: This study was a retrospective review of 100 patients who presented to our department of Otorhinolaryngology, with hoarseness of voice during the period between June 2013 and June 2014. All patients presenting to our department with hoarseness of voice were considered for this study. A detailed history, ENT examination which included indirect laryngoscopy and fibre optic laryngoscopy were done in all patients in this study. Age, sex, occupation, predisposing factors and examination findings of these cases were recorded.

Fiberoptic laryngoscopy was done in all the cases. Fibre optic laryngoscopy was done under local anesthesia. The patient was prepared by instilling decongestant nasal drops along with lignocaine aerosol nasal spray (10%). It was followed by lignocaine throat gargle (2%). Total preparation time was 10 minutes. Details of fibre optic laryngoscopy were recorded in detail in all patients. This study was approved by the ethical committee of this institution.

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RESULTS: A total of 100 patients who presented with hoarseness of voice were considered for this study. The commonest age group involved was 41-50 years (24%) (Table-1). Our study showed a female preponderance, there were 51 females and 49 males. Females showed a higher percentage in 41-50 age groups (13%), while males showed a higher percentage in 61-70 age group (14%) (Table-1). Maximum incidence of laryngeal diseases were found among homemakers (33%) followed by dependents, farmers and students (Table-2).

In females; homemakers comprised the largest group while in males it was mostly dependents. Vocal abuse seems to be the commonest predisposing factor (34.8%). No predisposing factors were found in 36 cases. Smoking as a predisposing factor attributed to 10.43% of cases (Table-3). While in 10 cases, recurrent respiratory tract infection was predisposing factor for hoarseness of voice. In our study, vocal nodule was the commonest cause of hoarseness of voice (27%) followed by vocal cord palsy (16%) and dysphonia plica ventricularis is (12%) (Table-4).

Vocal cord palsy frequently involved left vocal cord while bilateral vocal cord involvement was noted in 5 cases. Cause of vocal cord palsy was commonly idiopathic (13cases), while post thyroidectomy was noted in 2 cases (Table-5). In 10% of cases, malignancy of larynx was the cause. They had male preponderance of which smoking as predisposing factor was seen in 6 cases. Right vocal cord was involved in 50% of cases. Functional aphonia was noted in 2 cases.

AGE	SEX		PERCENTAGE (%)
	MALE	FEMALE	
1- 10	2	0	2
11- 20	3	2	5
21- 30	4	7	11
31 -40	6	11	17
41- 50	11	13	24
51- 60	6	9	15
61- 70	14	4	18
71- 80	2	4	6
81- 90	1	1	2
91- 100	0	0	0

TABLE 1: AGE AND SEX DISTRIBUTION OF HOARSENESS OF VOICE

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TABLE 2: OCCUPATION OF PATIENTS

TABLE 3: PREDISPOSING FACTORS FOR HOARSENESS OF VOICE

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TABLE-4: ETIOLOGY OF HOARSENESS OF VOICE

TABLE-5: CORD INVOLVEMENT IN VOCAL CORD PALSYP

DISCUSSION: In our study of 100 cases, most common age group was 41-50 years (24%), which was similar to the study done by Banjare et al.^[2] In our study, male: female ratio was nearly 1:1 which was comparable to the study done by Brodnita.^[3] This is may be due to high literacy rate and better health services in our state. We had a female preponderance (51%) which was in contrast to the work done by Parikh et al.^[4] and Ghosh et al.^[5] who had male preponderance (67%) and (56%) respectively.

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The incidence of laryngeal diseases in our study were maximum among homemakers that is females (33%) which was comparable to that of Ghosh et al.^[5] The reason being that most were housewives who had to manage small children at home.

In our study, commonest predisposing factor was vocal abuse. Parikh et al.^[4] in his study had reported 56% of cases had vocal abuse as a predisposing factor, which also concurred with the finding of Rosen et al.^[6] and Baitha et al.^[7] These were in contrast to findings of Banjare et al.^[2] in which smoking was the commonest predisposing factor.

Most of the patients in our study had more than one predisposing factor. Excessive smoking and alcoholic intake with associated poor health and nutrition were all contributory to development of hoarseness of voice in our country. No predisposing factor was found in 31.3% of the cases.

Our study confirmed the earlier findings of Ghosh et al.^[5] that vocal nodule was the commonest etiology for hoarseness of voice (27%) in contrast to Banjare et al.^[2] work where functional lesions were the commonest.

Vocal cord paralysis in our study was 16% in contrast to 2.1% by Shrestha et al.^[9] Cause of vocal cord paralysis was idiopathic in 81% of cases and left cord was involved more frequently (50%).

Early detection and treatment of pulmonary tuberculosis has reduced the incidence of laryngeal tuberculosis. Our study had only one case of tuberculosis larynx compared to Baitha et al.^[7] and Shrestha et al.^[9].

Out of 10 cases with suspected diagnosis of malignancy, 90% were males with more than half being smokers. This was comparable to the work done by Thomson et al.^[8] but higher than Shrestha et al.^[9] study.

CONCLUSION: Hoarseness of voice is commonly encountered in Otorhinolaryngology practice. Commonest cause for hoarseness of voice in majority cases was benign conditions like vocal nodule. Thorough assessment and evaluation for the cause of hoarseness by otolaryngologist is important especially in elderly.

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