

A prospective study of clinicopathological profile of patients with hoarseness of voice – Our observations

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Abstract

Aim: The aim of the study was to study the incidence, duration and sex predilection for hoarseness of voice. Also to study different etiological and predisposing factors for hoarseness of voice. **Materials and Methods:** This prospective study was carried out in 110 patients presented in the department of Otorhinolaryngology, Mamata Medical College, Khammam, Telangana state, from September 2015 – August 2017 with complaints of hoarseness of voice for more than 15 days. After taking detailed history of the patient complete ENT examination has been carried out. Indirect Laryngoscopy, direct Laryngoscopy, Fibre optic flexible endoscopy [FOFE] were done. Any suspicious tissue was sent for histopathological examination. **Results:** Out of 110 patients maximum were from 50 – 70 years age group. 97 patients were male and only 13 were female. Labourers [36.36%] and Farmers [29.09%] were the major groups affected. Smoking habit found in 56.36% of patients and Tobacco chewing in 33.63% of patients. Most common cause of hoarseness of voice was found to be laryngeal neoplasms of which supraglottic growth being commonest [36.36%]. **Conclusion:** Hoarseness of voice may be present due to various underlying pathologies. So proper diagnosis through history, clinical examination and investigations is mandatory to find out the cause and to start treatment.

Key Words: Hoarseness, Clinicopathology, Larynx, Vocal cords.

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Received Date: 23/12/2017 Revised Date: 18/01/2018 Accepted Date: 06/02/2018

DOI: <https://doi.org/10.2661/1016523>

Access this article online	
Quick Response Code:	Website: www.medpulse.in
	Accessed Date: 08 February 2018

acute onset is more common mainly caused by inflammation like acute laryngitis whereas other cause could be smoking, vocal abuse, laryngeal trauma or thyroid surgery⁴. The chronic onset is mainly caused by vocal cord nodule, polyp, laryngeal papillomatosis, tumour of vocal cord, functional dysphonia, smoking, vocal abuse, laryngopharyngeal reflux disease, post nasal drip, neoplasm of thyroid, esophagus, lung or chronic granulomatous disease like tuberculosis or systemic disease like diabetes mellitus⁵⁻⁷. The complaints of hoarseness of long duration may imply serious disease, so it should not be ignored⁸.

INTRODUCTION

Voice in an individual is produced by a combination of laryngeal, respiratory and resonance mechanisms and it was a primary means of communication¹. Hoarseness of voice is defined as perceived rough, breathy or harsh quality to the voice². Hoarseness is the early and most important symptom of laryngeal pathology caused by simple common cold to severe laryngeal malignancy. The hoarseness can be divided into acute or chronic³. The

MATERIALS AND METHODS

This prospective study was carried out on 110 patients attending the department of Otorhinolaryngology, Mamata Medical College, Khammam, Telangana State from September 2015 – August 2017. Patients presenting to the ENT OPD with hoarseness of voice of more than 15 days were included in this study. Detailed history for running nose, cough, pain in the throat, dryness of throat,

dyspnoea, stridor, swelling in the neck, history of any trauma or any other complaints if present were noted. The mode of onset of hoarseness of voice, patients vocal output, were noted. Past history of chronic sinusitis, recurrent hoarseness of voice, history of surgery, history of radiation to the neck, history of TB, Syphilis, Leprosy was noted. Personal history and family history were also enquired in detail. For all the patients whoever were included in this study, general examination, external examination of neck, systemic examination were done. Local examination of ear, nose, throat was done. Indirect laryngoscopy, as well as Fibre optic flexible endoscopy and direct laryngoscopy were performed to observe the findings and to take the biopsy. In suspected cases, specimens were sent for histopathological examination.

RESULTS

The present study included 110 patients in age group of 13–90 years. Out of 110 patients the maximum number of cases were found in the age group of 61–70 years [28.18%]. Youngest patients 13 years and eldest being 90 years. Out of 110 patients 97 patients were male and 13 were female. Male to female ratio was 7.46:1. The study revealed that incidence is more common among labourer [36.36%] and formers [29.09%]. Incidence of benign lesions like vocal polyp and vocal nodule were more common in patients who abuse their voice. In our study 29.09% patients had hoarseness for 3 -6 months. Only 3.63% patients had hoarseness for more than one year. Smoking was found out to be the most common predisposing factor for development of hoarseness [56.36%]. Tobacco alone was causative factor in 33.63% patients. Out of 110 patients in this study carcinoma was more common, growth supra glottis being commonest [36.36%]. Vocal cord polyp was commonest among benign lesions [12.72%].

Table 1: Incidence of hoarseness of voice in different age groups [n=110]

Age group [years]	No. of cases	Percentage [%]
0 – 10	0	0
11 – 20	3	2.72
21 – 30	9	8.18
31 – 40	10	9.09
41 – 50	20	18.18
51 – 60	29	26.36
61 – 70	31	28.18
71 – 80	7	6.36
81 – 90	1	0.90

Table 2: Occupation wise incidence [n=110]

Occupation	No. of cases	Percentage [%]
Labourer	40	36.36
Former	32	29.09
Housewife	10	9.09
Student	6	5.45
Businessman	3	2.72
Teacher	5	4.52
Driver	2	1.81
Preacher	3	2.72
Unemployed	9	8.18

Table 3: Incidence of duration of hoarseness [n=110]

Hoarseness duration	No. of cases	Percentage [%]
2 – 4 weeks	22	20
4 – 12 weeks	26	23.63
3 – 6 months	32	29.09
6 – 12 months	26	23.69
>1 year	4	3.63

Table 4: Predisposing factors for the development of hoarseness [n=110]

Predisposing factors	No. of cases	Percentage [%]
Smoking	62	56.36
Alcohol	13	11.81
Tobacco	37	33.63
Vocal abuse	8	7.27
Smoking + alcohol	10	9.09
Smoking + tobacco	17	15.45

Table 5: Causes of hoarseness [n=110]

Etiology	No. of cases	Percentage [%]
Growth supraglottis	40	36.36
Growth hypopharynx	24	21.81
Growth glottis	11	10
Trans glottic growth	7	6.36
Growth oropharynx	2	1.81
Vocal cord polyp	14	12.72
Vocal cord paralysis	5	4.54
Vocal nodule	4	3.63
Glottis papilloma	2	1.81
Diffuse laryngeal edema	1	0.90

DISCUSSION

In the present study age group most commonly presented with hoarseness of voice was 50–70 years [54.54%]. Kambic *et al.*⁹ in a series of 591 patients described the age group of 30 – 40 years in whom maximum incidence of benign lesions of larynx were observed. This could be explained by the fact that coupled with their occupational exposure, this age group is more prone for vocal abuse in western countries. In India upper aerodigestive tract malignancy is more common and in laryngeal growths supraglottis being commonest. Carcinoma of larynx is rare under the age of 30 years and is common in 5th – 6th decade of life. In the present study male to female ratio was 7.46:1. Possible explanation for male predominance

is due to different habits e.g smoking, chewing tobacco with lime, alcohol in take. Males are also exposed to occupational hazards which are denied to women who mostly lead indoor life. In the present study among 110 cases of hoarseness 56.36% were smokers. Pal *et al.*¹⁰ found smoking habit in 33% cases with hoarseness. This could be explained by the fact that majority of our patients were having malignant lesions as compared to Pal study whose majority patients were having benign lesions. Also our setup usually covers rural, poor, illiterate people who are mostly negligent about change in voice and usually seek medical advice when they have more distressing symptoms like dysphagia and dyspnoea which are usually symptoms of underlying aerodigestive tract malignancy. The relationship of hoarseness of voice with vocal abuse and preceding upper respiratory tract infection is well known but is not always present. In case of polyps or nodules of vocal cords, hoarseness was explained by the fact that lesion involving the free margin of the cords which disrupts the vibratory function of vocal folds¹¹⁻¹². In our study most of the patients had hoarseness of voice complaint with a duration of 3 – 6 months [29.09%]. Banjara *et al.*¹³ found that most of the patients [61.35%] were having hoarseness for duration of less than 3 months. Dysphagia was major associated symptom with hoarseness of voice in our study. Majority of the patients with dysphagia had growth in larynx involving hypopharynx as supraglottis share its lateral wall i.e. aryepiglottic fold with pyriform fossa, so by the time patients seek medical advice growth usually extend to pyriform fossa causing dysphagia.

CONCLUSION

Management of hoarseness of voice is usually a challenge for otorhinolaryngologist. So proper diagnosis through detailed history and thorough examination along with fibre optic flexible endoscopy, direct laryngoscopy and biopsy for histopathological examination is paramount in treatment of hoarseness of voice. Referral to voice

specialist is indicated when hoarseness persists for more than 15 days.

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Source of Support: None Declared
Conflict of Interest: None Declared