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Clinical Study Of 100 Cases Of Hoarseness Of Voice- A Hospital Based Study

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ABSTRACT

Background and objectives: Hoarseness is defined as roughness of voice resulting from variations of periodicity or intensity of consecutive sound waves. Hoarseness is a symptom not a disease. **Materials and Methods**: The present study was carried out in the Department of ENT and Head and Neck Surgery, SMGS Hospital, Jammu over a period of 2 years from March 2016 to February 2018: During this period the patients who presented with hoarseness of voice were evaluated. **Results**: Total 100 cases were studied. Average age group was found to be between 15-85 years. The number of female patients were 36 (36%) and male 64 (64%). In the present series the most common lesion was vocal nodule (30%) followed by vocal polyp (23%), squamous cell carcinoma (16%), papilloma (10%), reinkes oedema (9%), keratosis (7%), vocal cord paralysis(4%) and laryngeal tuberculosis (1%).

Conclusion: Hoarseness is a common symptom of laryngeal dysfunction. The micro laryngeal surgery is a minimally invasive procedure used to correct voice disorder or other problems affecting the larynx.

Keyword: Hoarseness, vocal nodule, vocal polyp.

INTRODUCTION

The human voice is an extraordinary attainment which is capable of conveying not only complex thought but also subtle emotions. The vocal folds produce tones that becomes modified by pharynx, palate, tongue and lips to generate the individual sounds of speech.[1] Hoarseness is a coarse, scratchy sound most often associated with abnormalities of vibratory margins of vocal folds. Although the voice is not visible to eyes during speech production but its absence or malfunction is obvious. It is the most common symptom in otolaryngological practice and is invariably related to large number of diseases of vocal folds ranging from benign to malignant. Its importance derives from the fact that though benign lesions are numerically more common causes of hoarseness than malignant, opportunity for cure has been often lost by delay under a benign diagnosis.

MATERIAL AND METHODS

The present study was carried out in the Department of ENT and Head and Neck Surgery, SMGS Hospital, Jammu over a period of 2 years from March 2016 to February 2018 after taking proper approval of Institutional Ethical Commitee. During this period the patients who presented with hoarseness of voice were evaluated. All the cases presenting with hoarseness of voice were included in the study except for the cases with change in voice due to: 1) congenital disease 2) nasal and nasopharyngeal pathology, 3) oral and oropharyngeal pathology, 4) speech defects due to CNS lesions. A detailed history was taken, a complete general physical examination and a thorough ENT examination was done. The local examination was done using Indirect Laryngoscopy, Fibreoptic Laryngoscopy and Direct Laryngoscopy and treated. Routine investigations like complete blood count, fasting and post prandial blood sugar were carried out, urine routine examination, X ray chest, X ray soft tissue neck AP and lateral views was done, histopathological examination of suspected malignancies were done whenever required.

The therapy was based on diagnosis. The benign lesions were excised by microlaryngeal surgery and malignant lesions underwent treatment according to site and staging of tumor.

RESULTS

In our study out of 100 patients presenting with hoarseness of voice, the age range of patients was between 15-85 years. 64 (64%) were males and 36 (36%) were females, the male: female ratio was 1.7:1. The most common age of presentation in males was 41-50 years (20%) whereas in females maximum patients were in the age group of 21-30 years (14%). Majority of males (31.25%) presented in age group 41-50 years whereas majority of female (33.33%) presented in 31-40 years age group [Table 1][Figure 1][Figure 2].

The largest group of patients comprised of housewives (31%), followed by businessmen (30%), vendors (15%), students (15%), teachers (8%) and singers (1%). [Figure 3]

In the present series the most common lesion was vocal nodule (30%)[Figure 5] followed by vocal polyp (23%)[Figure 6], squamous cell carcinoma (16%)[Figure 8] , papilloma (10%), reinkes oedema (9%)[Figure 7], keratosis (7%), vocal cord paralysis(4%) and laryngeal tuberculosis (1%).In males, the most common condition associated with hoarseness of voice was vocal polyp (19%) whereas in females the most common lesion encountered was vocal nodule (18%). (23%) cases of vocal cord polyps are responsible for hoarseness of voice with male: female ratio 4.75: 1. [Figure 4]

Out of 100 patients vocal abuse was present in 75% patients whereas in rest 25% patients there was no vocal abuse but other associated factors like smoking, alcohol were present. Out of 9 cases of reinkes oedema 6 (66%) were females, whereas out of 16 cases of malignancy of larynx presenting with hoarseness of voice 12 (75%) were males. The distribution of laterality of lesion is given in Table 2

DISCUSSION

In our study on 100 patients the age range of patients was between 15-85 years., majority of patients were seen in age group of 41-50 years (26 %) and 21-30years (24 %) and 31-40 years (24%) followed by 2nd decade (13 %). Baitha et al. [2] also found majority of patients (28.18 %) in the age group of 31–40 years. Hansa et al. [3] stated majority (22.31 %) group fall between the ages of 31–40 years. All these findings were similar to our study. Herrington-Hall et al. [4] stated that taking the variable of age into account, it is clear that laryngeal pathologies occur most frequently in the older age group because carcinoma and vocal fold paralysis being the most commonly found cause of vocal dysfunction in the elderly. Females presented with laryngeal pathologies at a slightly younger age. Majority of males (31.25%) presented in age group 41-50 years whereas majority of female (33.33%) presented in 31-40 years age group. A ratio of 1.7:1 with male predominance was observed in this study. Male to female ratio in Baitha et al. [2], Mehta [5], Parikh [6], Deshmukh [7] with 2:1, 1.8:1, 2:1 and 1.5:1 respectively. In our study, housewives comprised majority of cases (31 %) followed by 30 % of businessmen. This majority was associated with presence of small children at home. In females majority of cases were housewives (31%). Ghosh et al. [8] found majority of patients (29 %) were housewives.

Nodule was most common lesion found in our study in 30 % cases with male: female ratio of 0.67:1 whereas in a study in by Hansa et al. [3]it was seen in 11% patients with male: female ratio 1:1.7. In another study incidence was found only 12.72 % with male to female ratio 1:1.3 [2]. We found (23%) cases of vocal

cord polyps are responsible for hoarseness of voice with male: female ratio 4.75:1. Vocal abuse (75 %) was the most common predisposing factor. Mehta [5] found 11.66 % cases, Parikh [6] found 15 % cases and Hansa et al. [3] found 3.59 % cases of vocal cord polyp in their study. In our study 75 % patients gave the history of vocal abuse and 25 % gave the history of smoking. In our study malignancy responsible for hoarseness of voice was found in 16 % of the cases. Ghosh [8] found 8 % cases of malignancy as causative factor for hoarseness of voice in his study whereas Mehta [5] and Parikh [6] found it to be 7.50 and 12 % respectively. In our study we found 4 cases (4%) as unilateral vocal cord paralysis presenting as hoarseness of voice. According to Mehta [5] and Parikh [6] incidence of vocal cord paralysis was 9.16 and 3 % respectively. Hansa et al. [3] found 13.55 % cases of vocal cord paralysis with M: F ratio of 2.5:1. We observed left vocal cord paralysis (75%) more often than right (25%) in the ratio of 3:1. Left vocal cord was commonly involved (63.6 %) and neoplasm was the commonest causes of vocal cord paralysis as per Mehta [5]. This is attributed to the longer course of the left recurrent laryngeal nerve.

CONCLUSION

Management of hoarseness can be a challenge for the physician. Proper diagnosis through a detailed history and examinations is very important. Treatment is individualized depending on the diagnosis and individual needs of the patient. Voice therapy, vocal cord surgery, and drug therapy for appropriate groups of patients with hoarseness are well documented as effective by the available evidence. In patients with risk factors, especially smokers, hoarseness should be immediately evaluated by laryngoscopy. The etiological data varies in different geographical location and from one center to other, so every case should be carefully and thoroughly evaluated to know the diagnosis and underlying pathology for early and prompt management.

REFERENCES

1. Colton RH, Casper JK, Hirano M(1990) Understanding voice problem edited by John P Butter, Baltimore, Williams and Wilkins 1-9.

2. Baitha S, Raizada RM, Kennedy Singh AK, Puttewar MP, Chaturvedi VN (2002) Clinical profile of hoarsens of voice. Indian J Otolaryngol Head Neck Surg 54(1):14–18.

3. Banjara H, Mungutwar V, Singh D, Gupta A (2011) Hoarseness of voice: a retrospective study of 251 Cases. Int J Phonosurg Laryngol 1(1):21–27.

4. Herrington-Hall BL, Lee L, Stemple JC, Niemi KR, MC Hone MM (1988) Description of laryngeal pathologies by age, sex, and occupation in a treatment-seeking sample. J Speech Hear Disord 53:57–64.

5. Mehta AS (1985) An etiological study of hoarseness of voice. A thesis submitted for master of surgery (Otorhinolaryngology), Gujarat University.

6. Parikh N (1991) Aetiology study of 100 cases of hoarseness of voice. Indian J Otolaryngol Head Neck Surg 43(2):71–73.

7. Deshmukh (1976) Clinical study of hoarseness of voice. A thesis submitted for master of surgery (Otorhinolaryngology), Gujarat University.

8. Ghosh SK, Chattopadhyay S, Bora H, Mukherjee PB (2001) Micro laryngoscopic study of 100 cases of hoarsens of voice. Indian J Otolaryngol Head Neck Surg 53(4):270–272

9. Batra K, Motwani G, Sagar PC (2004) Functional voice disorders and their occurrence in 100 patients of hoarseness as seen on fibreoptic laryngoscopy. Indian J Otolaryngol Head Neck Surg 56(2):91–95.

DECLARATIONS

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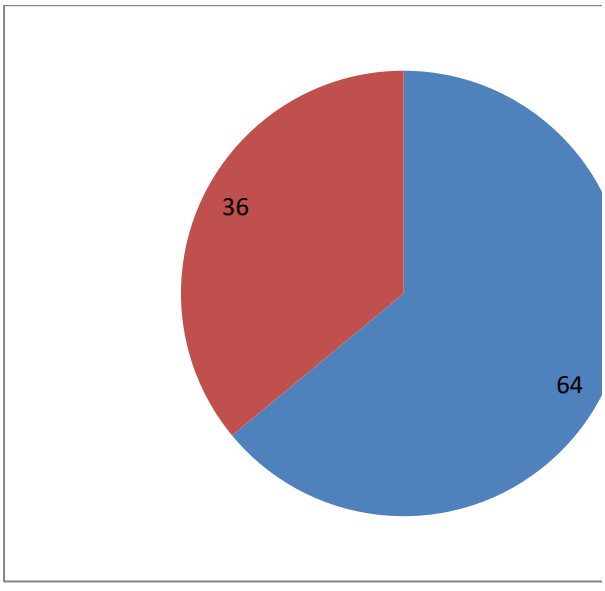

Figure 1: Sex distribution of patients with hoarseness of voice.

Table 1: Age and genderwise distribution of patients

Age group	Males	Females	%
1-10	0	0	0
11-20	9	4	13
21-30	14	10	24
31-40	12	12	24
41-50	20	6	26
51-60	8	2	10
61-70	1	1	2
71-80	0	1	1
Total	64	36	100

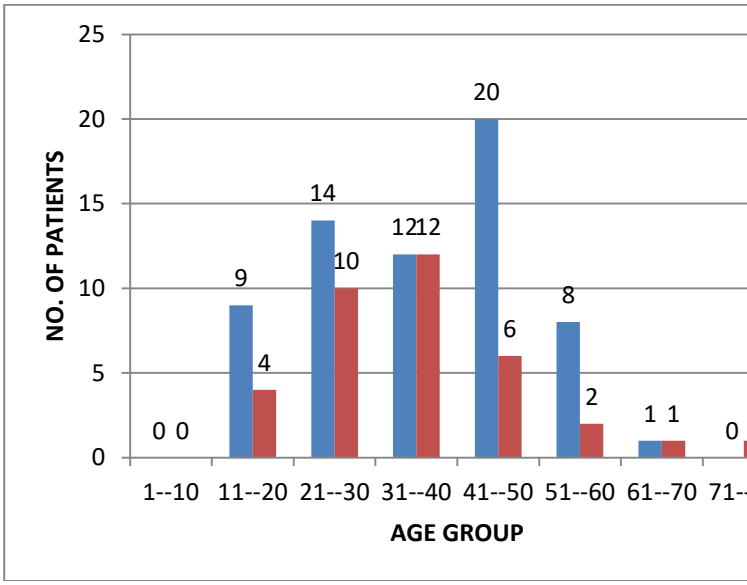

Figure 2: Age and gender wise distribution of patients.

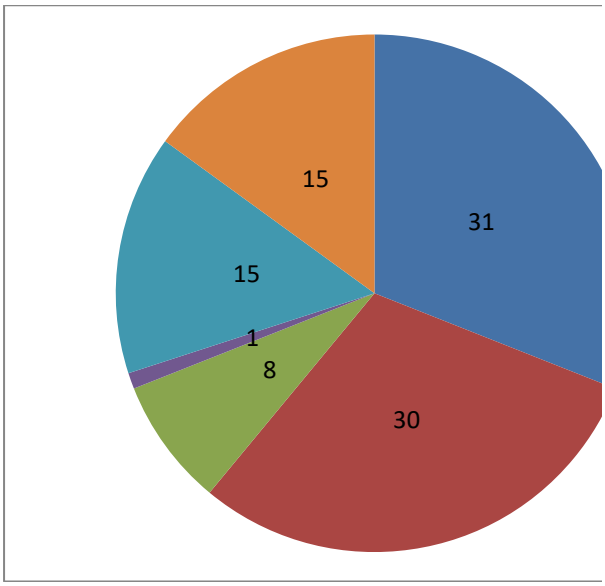

Figure 3: Occupation of patients with hoarseness of voice.

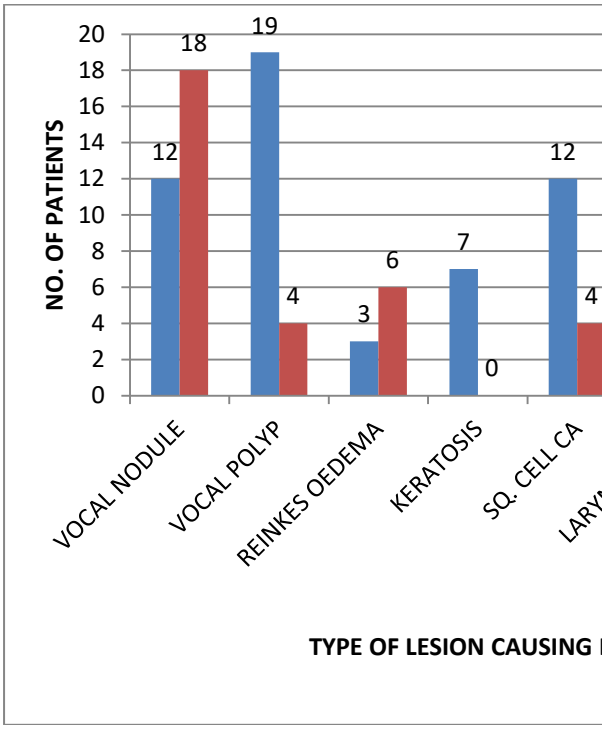

Figure 4: Genderwise distribution of lesions causing hoarseness of voice.

Table 2: Laterality of the lesions.

Lesion	Right	Left
Vocal nodule	0	0
Vocal polyp	13	7
Reinkes oedema	1	2
Keratosis	3	0
Squamous cell carcinoma	5	3
Laryngeal tuberculosis	1	0
Papilloma	1	3
Vocal cord paralysis	1	3

Figure 5: Vocal nodules.

Figure 6: Vocal polyp.

Figure 7: Reinkes oedema.

Figure 8: Growth Right vocal cord.