Original Article

Microlaryngoscopic observation and incidence of vocal nodules among the patient having hoarseness

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Abstract

Problem Statement: Hoarseness of voice is the most common symptom related to laryngeal pathology and may be caused due to mild upper respiratory tract infections to life threatening laryngeal malignancies. etiopathological factors will cause hoarseness of voice but most commonly irritant or infective laryngitis, laryngeal cancers, vocal nodule, vocal polyps, laryngealpapilloma, vocal cord paralysis are identified as causatives. **Aims:** The aim of this study is to evaluate various causes, predisposing factors and clinical profile of patients presenting with hoarseness of voice. **Methods:** Observation was conducted on a group of 25 patients attending the outpatient and the indoor of the Department E.N.T. Darbhanga Medical College and Hospital during the period of 2015-2017. **Results:** The observations are recorded under different 'hands'. Total 25 patients were distributed age and sex wise, 76% were male and 24% were female. Maximum number of cases were found in age group between 40 to 49 years. The individual diseases observed in the study are discussed under different subheads. Patients presented with hoarseness but other symptoms like dyspnoea, stridor and dysphagae were also associated with hoarseness in some patients. **Conclusion:** The etiological data varies in different geographical location, so every case should be carefully and thoroughly evaluated to know in early diagnosis of underlying pathology for prevention and accurate management.

Key Word: Laryngitis, Laryngeal cancers, Vocal nodule, Vocal polyps, Laryngealpapilloma, Vocal cord paralysis

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INTRODUCTION

Hoarseness is a subjective term and usually refers to a weak or altered voice. *Dysphonia* is similar but may also mean difficulty making sounds. Some terms which may be used to describe a voice change are: breathy, harsh, tremulous, weak, reduced to a whisper, or vocal fatigue (voice deteriorates with use)[1] Hoarseness may be a feature of laryngeal obstruction - so can be a warning of impending airway obstruction. This may occur in:

- Infections - acute epiglottitis, diphtheria, croup, laryngeal abscess.
- Inflammation/oedema - airway burns, anaphylaxis, physical trauma, angio-oedema, hereditary angio-oedema.
- Vocal cord immobility - laryngeal nerve palsy (depending on the position of the cords) or cricoarytenoid joint disease.[2]

Possible signs of laryngeal obstruction are:

- Dyspnoea, stridor, wheeze, exertional dyspnoea, anxiety or signs of hypoxia.
- Dysphagia or drooling.
- Facial or oral oedema.

METHODS

This present study was conducted on a group of 25 patients attending the outpatient and the indoor of the Department of E.N.T. Darbhanga Medical College and Hospital during the period of 2015-2017. In this study only those cases were taken for Microlaryngoscopy who had hoarseness which did not respond to medical treatment and where the lesion could not be clearly evaluated due to marked overhang of epiglottis or in cases with marked gag reflex where the full view of the larynx could not be obtained.

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RESULTS

Table 1: Age and sex wise distribution

No	Age in years	Male	Female	Total	Percentage (%)
1	0-9	2	0	2	8
2	10-19	0	0	0	0
3	20-29	2	1	3	12
4	30-39	3	2	5	20
5	40-49	4	2	6	24
6	50-59	4	1	5	20
7	60-70	4	0	4	16%

Table 2: Disease wise incidence

SL.No	Disease	No of Patients	Percentage (%)
1	Cancer Larynx	8	32
2	Vocal Nodule	6	24
3	Chronic Laryngitis	5	20
4	Vocal polyps	2	8
5	Laryngeal papilloma	2	8
6	Vocal cord paralysis	2	8

Table 3: Incidence of presenting symptoms

Nature of symptoms	No of Patients	Percentage (%)
Hoarseness	14	56
Hoarseness + Dyspnoea	6	24
Hoarseness + Stridor	2	8
Hoarseness + Dysphagae	3	12

The occupational distribution of the patients with vocal abuse and associated respiratory diseases is given in Table No.4. This includes teachers, housewives, vendors and hawkers. Associated respiratory diseases were upper respiratory tract infect ion and lower respiratory tract infect ion.

Table 4: Occupat ional vocal abuse and associated respiratory diseases

SL. No	Occupational vocal abuse and associated respiratory diseases	No of Cases	Percentage(%)
1	Occupational		
(i)	Teachers	2	33.3
(ii)	Housewives	2	33.3
(iii)	Vendors and hawkers	2	33.3
2.	Respiratory diseases		
(i)	Upper respiratory tract infection	3	49.5
(ii)	Lower respiratory tract infection	2	33.3

Figure 1: Photograph showing laryngoscope in position and microscope being focused

DISCUSSION

This present study was conducted on a group of 25 patients attending the outpatient and the indoor of the Department of E.N.T. Darbhanga Medical College and Hospital during the period of 2015-2017. Age and sex incidence of total number of patients is shown in Table1. Total 25 patients were distributed age and sex wise, 76% were male and 24% were female. Maximum

number of cases were found in age group between 40 to 49 years. The individual diseases observed in the study are discussed under different subheads. Disease wise incidence in 25 patients is shown in Table 2. Form Table 3. we found patients presented with hoarseness but other symptoms like dyspnoea, stridor and dysphagae were also associated with hoarseness in some patients. 3(49.8%) had septic toci in the nose and paranasal sinuses, tonsils teeth and gums. 4(66.66 %) patients had bilateral vocal nodules and 2(33.33%) had bilateral lesion. All the patients were subjected to Microlaryngoscopic observation and endolaryngeal microsurgery. The study of angio-architecture of the vocal cords under the magnified view showed that 4(66.6%) had grade I changes (Capillaries fine and regular) and 2(33.3%) patients having large nodules showed grade II(Capillaries coarse and irregular) changes. In none of the cases grade III (Capillaries very coarse, irregular and coiled) changes were observed. According to the size of the vocal nodules observed under MLS view they were divided as small measuring approximately 2 mm size (small pin head), as medium those measuring (2-4) mm the medium pin head size and large (4-6) mm size the large pin head size. The majority of the vocal nodules were of medium size. 4(66.6%) patients had bilateral vocal nodules where as 2 (33.3%) showed unilateral nodules. None in the series had any difficulty in respiration or swallowing In all the cases the nodules were situated at the junction of anterior 1/3rd and middle 1/3rd.

CONCLUSION

In the present series all the 6 patients of vocal nodules were subjected to Microlaryngeal surgery. In 4(66.6%) patients excision of the well formed nodule was done, in 2(33.3%) patients with small nodule decortications was done. In few patients post-operative speech therapy was given where the post-operative improvement in voice was not satisfactory. The cure rate of (84%) had been very rewarding; one case who did not show improvement was due to irregular follow- up for speech therapy. No post-operative complication' was observed. The etiological data varies in different geographical location, so every case should be carefully and thoroughly evaluated to know in early diagnosis of underlying pathology for prevention and accurate management.

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