

Retrospective Analysis of Benign Vocal Cord Lesions in a Rural Tertiary Care Hospital

Harshavardhan M Annigeri(ORCID ID: 0000-0002-9795-0269), Yogesh
BandiahanapalyaNarasappa(ORCID ID: 0000-0002-5572-6795)
Department of ENT, Bangalore Medical College & Research Institute, Bangalore, India
Corresponding author: Harshavardhan M Annigeri
Senior Resident, Department of ENT, Bangalore Medical College & Research Institute
Bangalore, India

Abstract

Background: Benign Vocal Cord lesions are a commonly seen clinical entity. The most common presenting complaint is change in voice, patients seek attention early for their problems which helps in early diagnosis and intervention.

Aim: To determine the clinical profile, factors associated with benign vocal cord lesions and describe the various modalities of management of benign vocal cord lesions.

Methodology: Retrospective record-based study was conducted in Department of Otorhinolaryngology, from period of January 2017 to December 2019 after getting approval from institutional ethics committee. All patients' records with benign vocal cord lesions undergoing micro laryngeal surgery and those patients who are managed conservatively are considered for the study with following inclusion and exclusion criteria.

Results: This study consisted of 48 cases. Benign vocal cord lesion was predominantly seen in male patient (70.8%) than in female patient (29.2%). The lesions were more common in 31 to 40 years (35.4%) of life. Vocal nodules contributed to 52.1% of cases with change of voice (83.3%) as the most common presenting complaint and vocal abuse as most commonly associated with vocal cord lesion. Out of 48 cases, 8 cases (16.7%) were managed conservatively and 40 cases (83.3%) underwent microlaryngeal surgery and biopsy.

Conclusion: When patients present in the early stages of disease, conservative management can be tried. Standard treatment of choice should be microlaryngeal surgery with voice rest and speech rehabilitation.

Key words: Benign lesions, vocal cords, management

Date of Submission: 15-06-2021

Date of Acceptance: 30-06-2021

I. Introduction

Benign vocal cord lesions are non-malignant abnormal tissue on vocal cords. The common benign lesions of vocal cord include singer's nodule, polypoidal, polyps, papilloma, cysts, and Reinke's edema.¹

The incidence of these lesions is found to be 0.15% with a higher prevalence in 3rd, 4th, and 5th decades of life.²

The development of these lesions is associated with several factors including smoking, allergy, gastroesophageal reflux, vocal abuse, chronic infections of airway etc.³

These lesions are not malignant; hence, usually not life-threatening. The present study retrospectively analyzed benign vocal cord lesions in a rural tertiary care hospital.

II. Patients and Methods

All patients diagnosed clinically with benign vocal cord lesions during January 2017 to December 2019 in Department of Otorhinolaryngology were included in this study. The study was approved by Institutional Ethics Committee. All the patients if they or their guardians agreed to provide informed consent.

The patients were included if they had complaints of hoarseness/change in voice, and true vocal cord lesions on laryngeal endoscopy. The patients with clinical diagnosis of malignancy of larynx, and those who refused to participate were excluded from the study.

Data were recorded into Microsoft® Excel work book 2019, and presented as frequency and percentages.

III. Results

General characteristics

A total of 48 patients were included in the study. Majority of the patients (35.4%) aged between 31-40 years. Male to female ratio was 2.4:1. The most common symptom on presentation was change of voice (n=40) followed by foreign body sensation in throat (n=23) (Table 1).

Risk factors

Smoking as well alcohol abuse was the most common risk factor (n=29) identified in our patients. Other factors included voice abuse (n=24), alcohol consumption (n=20), and professional voice use (n=17). A detailed presentation has been shown in figure 1.

Type of lesions

The most common type of lesion was vocal nodule (n=25) followed by vocal polyp (n=15), and keratosis (n=4) (Table 2).

Management

Eight patients underwent conservative treatment while remaining 40 patients underwent micro-laryngeal surgery. All of keratosis were managed by micro-laryngeal surgery (Figure 2).

IV. Discussion

Our study identified potential risk factors of vocal cord lesions including concurrent abuse of smoking and alcohol, and voice abuse. Huang et al reported that persons with occupations with intensive voice-use are more vulnerable to developing such kind of disorders.⁴

In this study, the most common types of lesions were vocal nodule. Siddapur and Siddapur reported vocal nodules in 35% of their patients.⁵ Hegde et al. reported 28.57% vocal nodules and 40.47% vocal polyps in their study.⁶ Muniraju and Vidya reported 41.18% of patients with vocal cord nodules.⁷

In our study, the most common symptom on presentation was change of voice (83.3%) followed by foreign body sensation in throat (47.91%). In the study by Hegde et al, hoarseness of voice was present in all the patients, 23.81% had cough, 19.05% had foreign body sensation in throat.⁶

Vocal therapy is a major modality of treatment for almost all kinds of dysphonia. It may be only treatment of a few voice disorders, and may follow some pharmacological or surgical interventions.⁸ With regard to the management modalities, smaller nodules were managed conservatively by voice therapy. However, larger ones required surgical approach by means of microlaryngeal surgery. Post-operative voice therapy was advised and found to be beneficial. In our study, only eight patients underwent conservative treatment while remaining 40 patients underwent micro-laryngeal surgery.

In conclusion, the patients presenting with benign vocal cord lesions have a varied presentation with slight male preponderance. Most of the lesions were due to vocal abuse along with contributing factors like smoking, alcohol and GERD. Early diagnosis using laryngeal endoscopy can lead to effective management and good recovery from the disease. When patients present in the early stages of disease, conservative management can be tried. Standard treatment of choice should be microlaryngeal surgery with voice rest and speech rehabilitation.

References

- [1]. Altman KW. Vocal fold masses. *Otolaryngol Clin North Am.* 2007;40:1091–108, viii.
- [2]. Sharma M, Kumar S, Goel M, Angral S, Kapoor M. A Clinical Study of Benign Lesions of Larynx. 2015;2:7.
- [3]. Yadav SP, Sahni JK, Raj B, Chawla RK, Yadav J, Singh B. Laryngeal cyst-causing haemoptysis. An unusual presentation. *Indian J Chest Dis Allied Sci.* 1986;28:50–1.
- [4]. Huang D-Y, Yang W-Y, Yu P, He Y, Han D-Y. [Case-control survey on risk factors of benign vocal fold lesions]. *Zhonghua Er Bi Yan Hou Tou Jing Wai Ke Za Zhi.* 2008;43:120–4.
- [5]. Siddapur GK, Siddapur KR. Comparative study of benign vocal fold lesions in a tertiary health centre. *Int J Otorhinolaryngol Head Neck Surg.* 2015;1:65–8.
- [6]. Hegde MC, Kamath MP, Bhojwani K, Peter R, Babu PR. Benign lesions of larynx-A clinical study. *Indian J Otolaryngol Head Neck Surg Off Publ Assoc Otolaryngol India.* 2005;57:35–8.
- [7]. Muniraju M, Vidya H. Clinical study of benign lesions of larynx. *Int J Med Res Rev.* 2017;5:229–34.
- [8]. Casper JK, Murry T. Voice therapy methods in dysphonia. *Otolaryngol Clin North Am.* 2000;33:983–1002.

Table 1: General characteristics

	Frequency	Percentage
Age (Years)		
≤20	02	4.2
21-30	07	14.6
31-40	17	35.4
41-50	12	25
51-60	07	14.6
>60	03	6.2
Sex		
Male	34	70.8
Female	14	29.2
Symptoms		
Change of voice	40	
Foreign body sensation in throat	23	
Vocal fatigue	8	
Retching	7	
Cough	4	

Table 2: Type of lesions

	Frequency	Percentage
Vocal nodule	25	52.1
Vocal polyp	15	31.3
Vocal cyst	01	2.1
Keratosi	04	8.3
Granuloma	01	2.1
Reinke's edema	02	4.2

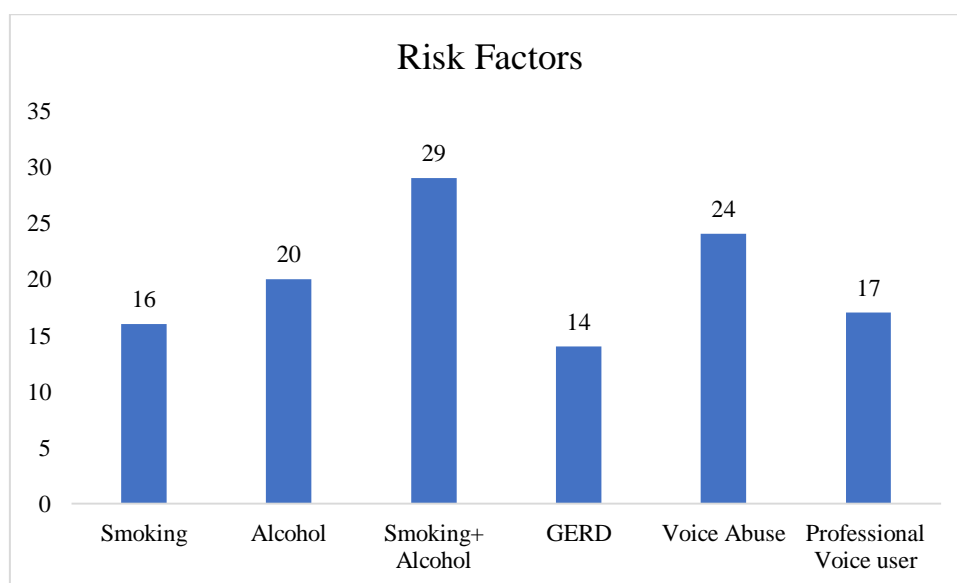


Figure 1: Risk factors

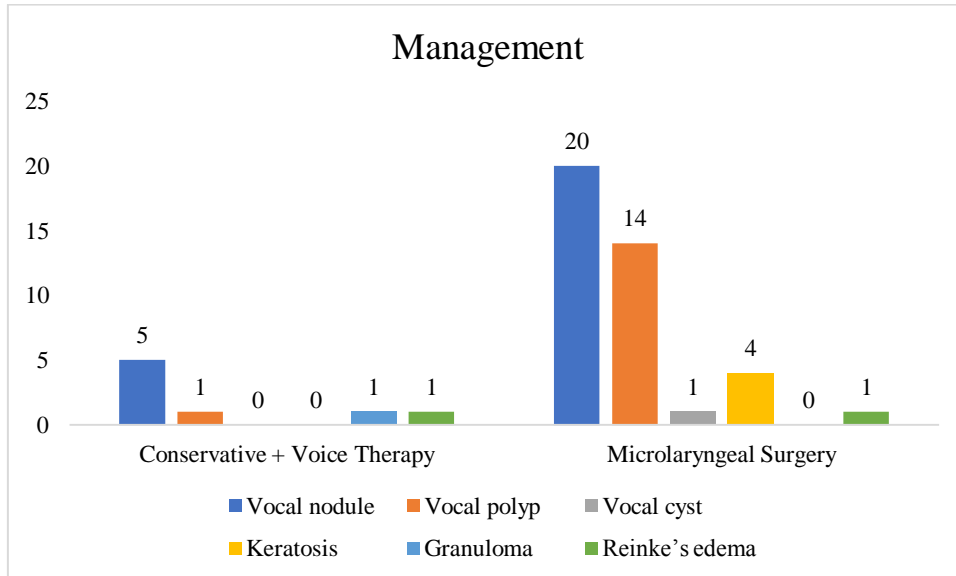


Figure 2: Management

Harshavardhan M Annigeri. et. al. "Retrospective Analysis of Benign Vocal Cord Lesions in a Rural Tertiary Care Hospital." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 20(06), 2021, pp. 29-32.