

A Few Unusual Cases of Benign Laryngeal Lesions - Our Experience

Sebananda Haldar,¹ Debangshu Ghosh,¹ Jayanta Saha,¹ Sumit Kumar Basu¹

ABSTRACT

Introduction

Benign laryngeal lesions may have some uncommon presentations.

Aim of the Study

The aim was to identify unusual benign vocal cord lesions and review their management and follow up.

Materials And Methods

The records of the patients presenting with different benign vocal cord lesions were reviewed retrospectively. Confirmed cases of vocal cord paralysis and malignancy were excluded from the study. Nine cases were included in this study. Clinical findings, investigation reports, treatment and outcome were analysed.

Results

Most of the patients were from 18 years to 52 years (66%). Most common presenting feature was hoarseness of voice (89%) followed by respiratory distress (33%). Microlaryngeal surgeries were done in 7 patients (78%) and 2 patients (22%) were managed conservatively.

Conclusion

Diagnosis of benign vocal cord lesions may sometimes be difficult. Careful history, attention to the anatomy and the probable variations in presentation of the benign lesions of larynx, thorough clinical examination and different diagnostic tools are essential for satisfactory management.

Keywords:

Vocal Cords, Laryngeal diseases, Voice Disorders, Candidiasis, Nerve Sheath Neoplasm, Papilloma, Polyps, Keratosis, Treatment Outcome.

Voice is a very important part of our personal and professional life. Voice disorders in different professionals like teachers, management groups, salesmen, tele-marketers, singers, orators, politicians, artists etc. and also of general population need to be meticulously assessed as people are becoming more exacting in their expectations of the treatment outcome. Data on the prevalence of voice disorders is scarce. Voice disorders not only impair communication but have important effects on public health, especially for professional voice users whose voice is very important

for their work. It is reported that 29.9% of the general population suffers at least one voice disorder in their lifetime, 6% has a current voice disorder, and 7.2% misses one or more work days due to such diseases.¹ In addition to health care costs related to the treatment and loss of work/ productivity, benign voice disorders impair patients' quality of life.² There has been an ideological shift in healthcare from 'curing' disease to 'minimizing the impact of illness on everyday activities.'³

Aims and objectives

To identify and study unusual benign vocal cord lesions and their management and to review relevant available literature.

1 - Department of ENT, RG Kar Medical College, Kolkata

Corresponding author:

Dr Debangshu Ghosh
email: ghoshdr.d777@gmail.com

Materials and methods

The records of all patients presenting to the Department of E.N.T. with different types of benign vocal cord lesions from 01/06/2013 to 30/11/2014 were reviewed retrospectively. Confirmed cases of vocal cord paralysis and malignancy were excluded from the study. History and findings of clinical examination were assessed including the findings of indirect laryngoscopy, fibreoptic laryngoscopy, direct laryngoscopy, microlaryngoscopy and video stroboscopy. Preoperative and postoperative voice recordings had been done in all cases. All surgically resected tissues had been subjected to histopathological examination. Patients had been followed up after one week, two weeks and eight weeks following surgery.

Results

Out of nine patients four were male and five were female. Age ranged from 8 years to 69 years. Hoarseness was observed in eight patients, alteration of voice in one. Acute stridor was seen in three patients for which emergency tracheostomy had to be done. Decannulation was done in all three patients in follow up. Microlaryngeal surgeries were done in seven patients and two patients were managed conservatively. Improvement of voice quality was noticed in all patients.

Most of the patients were from 18 years to 45 years (66%) (Table 1). Four patients (44%) were in the age group of 30 years to 45 years and 2 patients (22%) were in the age group of 15 years to 30 years. Out of 9 patients 4 patients (44%) were male, 5 patients (56%) were female, the male:female ratio being 4:5. Most common presenting feature was hoarseness of voice (89%) followed by respiratory distress (33%) (Table II). Microlaryngeal surgery was done in 7 patients (78%), among which 3 patients required emergency tracheostomy (33%) to relieve the stridor at presentation. 2 patients (22%) were managed conservatively (Table III). Four of the patients in this series were housewives, one student, one clerk, one tutor, one civil supervisor

and one hawkker. On histological examination, one case each of vocal cord candidiasis (Figs. 1 and 2), vocal cord nerve sheath tumor (schwannoma) (Figs. 3 and 4), recurrent laryngeal papillomatosis, vocal cord polyp with haemorrhage, bilateral vocal cord keratosis, haemangiomas polyp of vocal cord and anterior commissure vocal polyp were seen (Table IV).

Table I: Age distribution of patients (n=9)

AGE GROUP	NO. OF PATIENTS	PERCENTAGE
Upto 15 yrs	1	11
>15 yrs - 30 yrs	2	22
>30 yrs - 45 yrs	4	44
>45 yrs - 60 yrs	1	11
>60 yrs	1	11

Table II: Clinical presentation of patients (n=9)

PRESENTING FEATURES	PRESENT	ABSENT	%AGE
Hoarseness of voice	8	1	89
Respiratory distress	3	6	33
Foreign body sensation	1	8	11
Alteration of voice	1	8	11
Itchy throat	1	8	11
Haemoptysis (occasional)	1	8	11

Discussion

In our study, female predominance was observed with male:female ratio being 4:5, which is opposite

of the results of various other studies but may not be statistically significant due to small number of cases in our series.^{4,5} The majority of patients (66%) were found to fall into the age range of 15 years to 45 years at the time of presentation. It is known that individuals in younger age group are more ambitious, active and use their vocal skills maximally. This is in accordance with various other studies which show a higher incidence of benign lesions of the larynx younger patients.^{4,5,6}

Table III: Age distribution of patients (n=9)

MANAGEMENT PROCEDURE	NUMBER	PERCENTAGE
Microlaryngeal surgery	4	44.44
Tracheostomy followed by Microlaryngeal surgery	3	33.33
Conservative	2	22.22



Fig. 1 Candidiasis of vocal cord looking like keratosis

A very interesting observation was that housewives formed 44 % of the study population. The system of joint families and the large number of children in each family probably accounts for such common occurrence in females due to voice strain. This observation is similar to those of Baitha et al.⁷

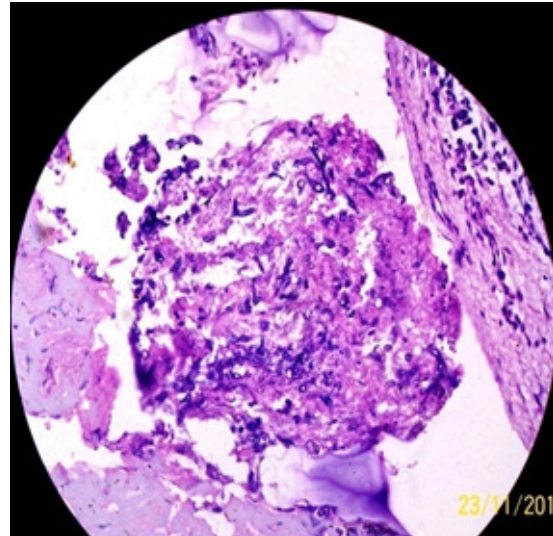


Fig. 2 HP photograph (H&E,40X) showing multiple spores and yeast-like organisms with slender pseudohyphae suggestive of mucosal laryngeal candidiasis.

Histologically proved fungal infections of the larynx are rare and nearly 40 such cases have been reported in literature so far. Isolated laryngeal candidiasis in an immunocompetent patient is infrequently recognised and is poorly documented.⁸ Incidence of neurogenic laryngeal tumors is also rare, all of which are histologically proved schwannomas and account for approximately 0.1% of all benign tumors of the larynx.⁹ The true vocal cord is usually involved with fewer than 10 such reported cases in literature.¹⁰

The incidence of recurrent respiratory papillomatosis is 4.3 per 100,000 people in the United States, 3.4 per 100,000 in India.¹¹ Prevalence of microvascular benign vocal cord lesions in professional voice users is 3.5%.¹²

Table IV: Histopathology reports of biopsy specimen (n=7)

DIAGNOSIS	NO. OF PATIENTS
Vocal cord candidiasis	1
Vocal cord schwannoma	1
Recurrent laryngeal papillomatosis	1
Vocal cord polyp with haemorrhage	1
Vocal cord keratosis(B/L)	1
Haemangiomatous polyp of vocal cord	1
Vocal cord polyp (near anterior commissure)	1

Bilateral vocal cord keratosis cases are not very rare but the necessity for emergency tracheostomy required for relief of stridor in such cases is rare in literature.¹³

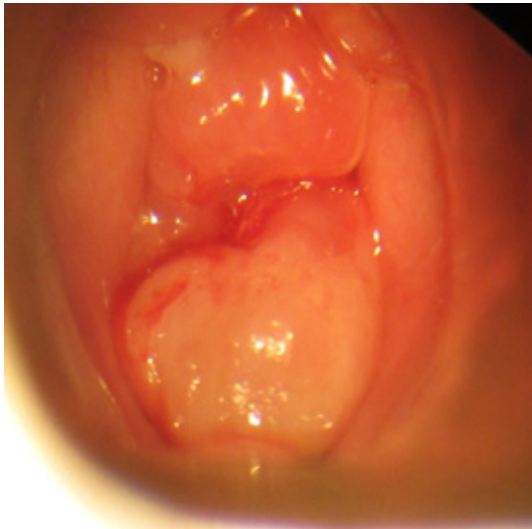


Fig. 3 Globular swelling of vocal cord

Incidence of vocal cord haemangioma is 1–2 % of benign vocal cord lesions in different literature.¹⁴ Incidence of bilateral Reinke's oedema is 3–4 % cases

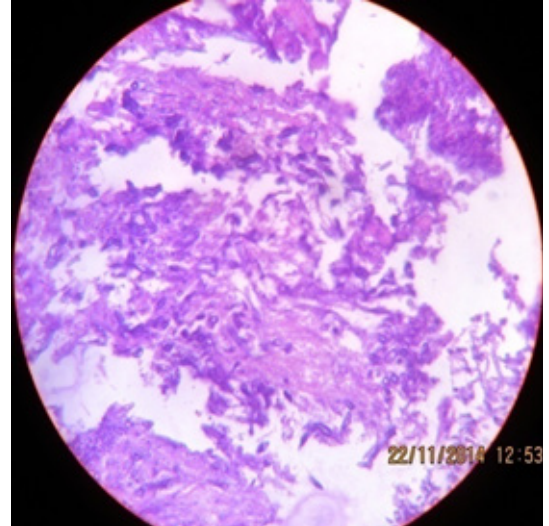


Fig. 4 Nerve sheath cells - Schwannoma of vocal cord (H&E,40X)

of all benign vocal cord lesions.¹⁵ Commonest site of origin of vocal polyps are in the free margin of vocal cords in 70% cases and anterior commissure only in 15% cases.¹⁶ In our series, we found it to originate near the anterior commissure.

Conclusion

Unusual benign laryngeal lesions still elude us in our day to day practice. The laryngologist needs to be vigilant to diagnose such a condition and treat it effectively. Benign vocal cord lesions sometimes mimic malignancy. They may even be large enough to occlude the laryngeal airway to such an extent that emergency tracheostomy may be necessary. Careful history, adequate anatomical knowledge about the larynx and the characteristics of benign lesions, thorough clinical examination and different diagnostic tools may help in adequate management of such cases for best results.

References

1. Roy N, Merrill RM, Gray SD, et al. Voice disorders in the

- general population: prevalence, risk factors, and occupational impact. *Laryngoscope* 2005; 115:1988–95.
2. Cohen SM, Dupont WD, Courey MS. Quality-of-life impact of nonneoplastic voice disorders: a meta-analysis. *Ann OtolRhinolLaryngol* 2006 Feb; 115:128–34.
 3. Miller E, Fleming D M, Ashworth LA, Mabbett DA, Vurdien J E , Elliott TS. Serological evidence of Pertussis in patients presenting with cough in general practice in Birmingham. *Communicable Disease and Public Health*.2000; 3: 132-4.
 4. Nwaorgu OG, Onakoya PA, Ibekwe TS, et al. Hoarseness in adult Nigerians: A University College Hospital Ibadan experience. *Niger J Med* 2004; 13(2):152-155.
 5. Batra K, Motwani G, Sagar PC. Functional voice disorders and their occurrence in 100 patients as seen on fiberoptic laryngoscopy. *Indian J Otolaryngol Head Neck Surg* 2004; 56 (2):91-95.
 6. Hegde MC, Kamath PM, Bhojwani K, Peter R, Babu PR. (2005) Benign lesions of the larynx - a clinical study, *IJLO* 57(1):35-38.
 7. Baitha S, Raizada RM, Singh AKK, Puttevar MP, Chaturvedi VN (2002) Clinical profile of hoarseness of voice. *Indian J Otolaryngol Head Neck Surg* 54(1):14-18.
 8. Vrabec DP. Fungal infections of the larynx. *OtolaryngolClin North Am.* 1993;26(6):1091–1114.
 9. Jaal MN. Schwannoma of the larynx: Case report, and review of the literature. *J LaryngolOtol* 1994;108:788-90.
 10. Taylor J, Stiefel M, Park SY (2006) Schwannoma of the true vocal fold: A rare diagnosis. *Ear, Nose Throat J* 85(1):52–53, 59.
 11. Brian J. Wiatrak: Overview of recurrent respiratory papillomatosis. *Current Opinion in Otolaryngology & Head and Neck Surgery* 2003, 11:433-441.
 12. Postma GN, Courey MS, Ossoff RH. Microvascular lesions of the true vocal fold. *Ann OtolRhinolLaryngol.* Jun 1998;107(6):472-6.
 13. Remacle M , Edmund Eckel H, Springer Heidelberg Dordrecht London New York (2010). *Surgery of Larynx and Trachea*, 1DOI: 10.1007/978-3-540-79136-2_1
 14. Mohamed El lackany,Ahmad M. RagabShalaby;The Frequency of Laryngeal Cancer Among Different Laryngeal Swellings in Adult Patients; *Journal of the Medical Research Institute* , 2005; Vol. 26 No. 4:) (350-355).
 15. Wani et al., *Otolaryngology* 2012, 2:3<http://dx.doi.org/10.4172/2161-119X.1000120> .
 16. Saudi Suliman, Benign Lesions of the Vocal Cords in different ages: prospective Study; *Middle East Journal of Age and Ageing*, January 2014 Volume 11, Issue 1.