



CLINICAL PROFILE AND MANAGEMENT OF BENIGN LESIONS OF VOCAL CORD AT A TERTIARY CARE CENTRE IN SOUTHERN INDIA

Otorhinolaryngology

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ABSTRACT

Aim: To analyze age, sex distribution, occupation, habitual correlation, site of involvement and management of benign lesions of vocal cord. **Materials and Methods:** This is a prospective study conducted for a period of 10 months. Consecutive 50 patients between age 15-75 years were selected based on symptoms of change in voice, weakness of voice, difficulty in breathing, cough and foreign body sensation with positive clinical findings on Video Laryngoscopy. **Results:** Majority of the patients were in the age group of 36-45 years. More commonly presented in male patients (62%) than females (38%), out of which the most common lesions were vocal polyp (40%), followed by vocal nodule (36%), vocal cord cyst (12%). The most commonly affected patients were daily wage workers (24%). The predisposing factors were voice abuse in 26 patients (52%), smoking in 11 patients (22%). The most common symptom was change of voice and voice fatigue in 25 patients (50%). Among 20 cases of vocal polyp 12 cases (24%) underwent excision by micro laryngeal surgery, and all 18 cases of vocal nodule were treated conservatively with voice rest and voice therapy. All 6 vocal cord cysts underwent micro laryngeal surgery followed by voice therapy. **Conclusion:** Early diagnosis of benign lesions can lead to effective management. The treatment of choice is surgical excision, although initial stages are conservative medications, voice rest and voice rehabilitation.

KEYWORDS

Benign lesions, vocal cord, voice abuse, voice therapy, micro laryngeal surgery

INTRODUCTION

Benign vocal lesions are non-malignant growths of abnormal tissue on the vocal cords. The common benign lesions of vocal cord are singer's nodule, polyps, Reinke's edema, cysts and papilloma. Several factors can be responsible for the development of the benign vocal lesions such as vocal abuse, overuse or misuse of voice, chronic infections of upper airway, allergy, smoking and gastroesophageal reflux. Frequently coughing and throat clearing also contribute to the mucosal irritation which worsens the voice.^[1-3]

Excessive mechanical trauma and stress in the vocal cord leads to wound formation. Several studies have demonstrated that the pathologic changes in vocal cord polyps, nodules, and cysts occur within the superficial layer of the lamina propria.^[4] The significance of benign lesions of the larynx lies in the importance of its function in speech and the contribution of the voice to one's identity. Since these lesions are not malignant, they are usually not life threatening. A clinical diagnosis of nodules, polyps or cysts does not rule out a malignancy unless the lesion resolves with treatment or is benign on histopathological examination.^[1,2] In this study we analyze the most common presentation and management of benign lesions of vocal cords.

AIM:

To analyze age, sex distribution, occupation, habitual correlation, site of involvement and management of benign lesions of vocal cord.

MATERIALS AND METHODS:

This is a prospective study conducted by Department of ENT, Sree Mookambika Institute of Medical Sciences, Kanyakumari over a period of 10 months from April 2022 to Jan 2023. Consecutive 50 patients between age 15-75 years were selected based on symptoms of change in voice, weakness of voice, difficulty in breathing, cough and foreign body sensation with positive clinical findings on Video Laryngoscopy. Age, sex, occupation and habitual history of voice abuse, smoking, tobacco use and alcohol were taken. Treatment given were either conservative with voice therapy and/or surgery with voice therapy. All malignant lesions were excluded.

RESULTS AND OBSERVATIONS:

Majority of the patients were in the age group of 36-45 years. There were more cases of male patients (62%) than females (38%). The most common lesions were vocal polyp of 20 cases (40%), followed by vocal nodule of 18 cases (36%), vocal cord cyst 7 cases (12%), 2 cases of Reinke's edema (4%) and 1 case of Intubation granuloma, papilloma and sulcus vocalis. The most commonly affected occupations of patients were daily wage workers of 12 cases (24%), followed by shopkeepers of 8 cases (16%), Teachers of 7 cases (14%), salesman of 6 cases (12%), 6 Homemakers (12%), 4 drivers (8%), 4 Religious priests (8%) and 3 professional singers (6%). The predisposing factors were voice abuse in 26 patients (52%), smoking in 11 patients (22%), voice abuse with smoking in 7 cases (14%) and other factors like alcohol, tobacco chewing, recurrent respiratory infections and prolonged endotracheal intubation in 6 cases. The most common symptom was change of voice and voice fatigue in 25 patients (50%), followed by change in voice alone in 16 cases (32%), foreign body sensation in 5 cases (10%), throat pain in 3 cases (6%) and dyspnea in 1 case (2%). Among 20 cases of vocal polyp 12 cases (24%) underwent excision by micro laryngeal surgery (Fig.1), and all 18 cases of vocal nodule were treated conservatively with voice rest and voice therapy. All 6 vocal cord cysts underwent micro laryngeal surgery followed by voice therapy (Fig.2). 2 cases of Reinke's edema underwent conservative management (Fig.3), smoking cessation and voice therapy. 1 case of Intubation granuloma which had a history of prolonged intubation underwent micro laryngeal surgery with excision and biopsy, followed by inhaled steroids post-operatively. 1 case of papilloma in a 16-year-old male, surgery was done and biopsy showed features of papilloma which virology study of HPV type 6. 1 case of sulcus vocalis was advised with voice therapy and symptomatically improved.

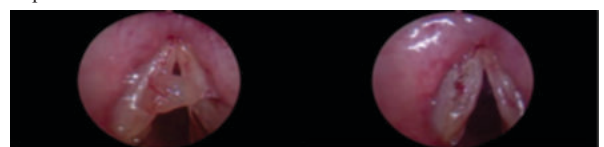


Figure 1: Pre-Op and Post-Op results of vocal cord polyp excision.

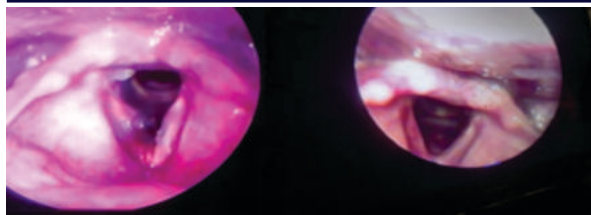


Figure 2: Pre-Op and Post-Op results of vocal cord cyst excision.

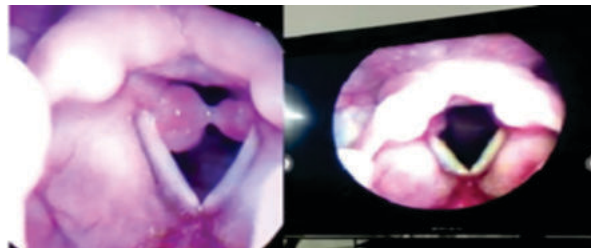


Figure 3: Pre-Op and Post Op results of intubation granuloma excision.

DISCUSSION:

In 1938, New and Erich published the Mayo Clinic experience of 722 patients presenting with benign laryngeal pathology. They proposed that as true proliferative neoplasms were often clinically indistinguishable from non-proliferative inflammatory or hyperplastic growths, the term benign tumor should be used to encompass all abnormal growth of tissue in the larynx that lacked malignant or metastatic properties. Since then, some authors have revised the concept, classifying vocal fold nodules, polyps, cyst and nonspecific granulomas to be mucosal reactive inflammatory disorders and therefore non-neoplastic in nature⁵.

The first line of treatment for lesions caused by phono trauma is voice therapy/ the goal is to maximize efficiency of phonation and to eliminate maladaptive vocal behaviors that exacerbate these masses and patient should also be treated for concomitant problems that contribute to mucosal friability such as poor vocal hygiene.

While studying 32 patients were subjected for direct laryngoscopy and 14 for video laryngoscopy. In a study by Parikh et al, 60% of the patients underwent micro laryngoscopy and in another study by Baitha et al DL/MLS was done in 36.36% of the patients⁶⁻⁷. Most common site in our study was true vocal cord (85%) which is similar to the different studies by Hegde et al (2005) and Singhal et al (2009) respectively⁸.

CONCLUSION:

Early diagnosis of benign lesions can lead to effective management and good recovery from the disease. The treatment of choice is surgical excision, although initial stages are conservative medication, cessation of smoking, voice rest and voice rehabilitation

REFERENCES:

1. McGlashen J (2008) Disorders of the voice. In: Hibbert J (ed) Scott-Brown otolaryngology, head and neck surgery, 7th edn. Edward Arnold, London, pp 2192–2210
2. Altman KW (2007) Vocal cord masses. Otolaryngol Clin North Am 40:1091–1108
3. Yadav S, Sahni J, Raj B, Chawla R, Yadav J, Singh B (1986) Laryngeal cyst-causing haemoptysis. An unusual presentation. Indian J Chest Dis All Sci 28:50–51
4. Johns MM (2003) Update on the etiology, diagnosis and treatment of vocal cord nodules, polyps and cysts. Curr Opin Otolaryngol Head Neck Surg 11:456–461
5. Doloi PK, Khanna S. A study of management of benign lesions of the larynx. International Journal of Phonosurgery & Laryngology. 2014 Dec 1;1(2):61-4.
6. Parikh NP. Aetiological study of 100 cases of hoarseness of voice. Indian Journal of Otolaryngology. 1991 Jun;43:71-3.
7. Baitha S, Raizada RM, Singh AK, Puttevar MP, Chaturvedi VN. Clinical profile of hoarseness of voice. Indian journal of otolaryngology and head and neck surgery. 2002 Jan;54:14-8.
8. Hegde MC, Kamath MP, Bhojwani K, Peter R, Babu PR. Benign lesions of larynx—A clinical study. Indian Journal of Otolaryngology and Head and Neck Surgery. 2005 Jan;57:35-8.