

Clinicopathological profile of patients with benign laryngeal lesions

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Abstract

Background: Benign lesion of the larynx are fairly common in ENT clinics. A clinical-histological correlation is not always easy, but an accurate diagnosis is of the utmost importance. The aim of the present study was to study the clinical profile and histopathological patterns of benign lesions of the larynx. **Material and Methods:** A total of 50 patients clinically diagnosed as cases of benign lesion of larynx were examined with indirect laryngoscopy or video laryngoscopy. The direct laryngoscopy was done under local or general anaesthesia. The biopsy from the lesion was sent for histopathological examination. **Results:** Most of the patients i.e., 19 (38%) were between 21-30 years of age. Males 31 (62%) were more commonly affected than females. Hoarseness or change in voice was the chief complaint in 42 (84%) of cases. Vocal abuse was found to be predisposing factor in 28 (56%) cases. Vocal cord nodule was the commonest clinical diagnosis in 17 (34%) of cases followed by vocal cord polyp in 11 (22%) cases. **Conclusion:** The vocal cord nodules are the commonest benign laryngeal lesions producing hoarseness in voice as the chief complaint. There was a high correlation between the ENT diagnosis and pathological diagnosis of benign lesions of larynx.

Key Words: Larynx, benign lesions, hoarseness of voice, nodules and polyps, histopathology.

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INTRODUCTION

The vital function of larynx is to produce the voice and facilitate communication. Voice disorders can have a significant influence on vocational, social and the emotional adjustment of patients. Larynx can be involved with benign lesions of various causes such as infective, inflammatory, traumatic, neurogenic, congenital, functional and benign neoplasms. A benign organic lesion of the larynx includes non-infective and non-traumatic laryngeal disorders¹. Smoking, infection, allergy along with voice abuse seem to be the most common causative

factors of laryngeal disorders². A benign lesion of the larynx is defined as 'an abnormal mass of tissue in the larynx, the growth of which exceeds and is uncoordinated with that of normal tissue and persists in the same excessive manner after cessation of stimuli which evoked the change³'. Non-infective lesions include mainly chronic laryngitis, vocal cord polyp or nodule. Acute laryngitis and tubercular laryngitis are mainly the infective lesions of the larynx. Diagnosis is the key for the management of the disorder. Laryngologist needs to distinguish them from malignant lesions as some cases of benign lesions also present with features like that of malignant lesion. So, it's timely diagnosis is very important for effective management. Small lesions can be excised endoscopically by CO₂ laser or by microlaryngeal instruments. Larger lesions extending beyond laryngeal framework often require pharyngotomy or laryngo fissure. A clinical-histological correlation is not always easy, but an accurate diagnosis is of the utmost importance. The aim of the present study was to study the clinical profile and histopathological patterns of benign lesions of the larynx.

MATERIAL AND METHODS

A total of 50 patients clinically diagnosed as cases of benign lesion of larynx were included in the study. The study was conducted in the department of Ear, Nose and Throat (ENT) department of a tertiary care hospital. A complete clinical history of each patient was taken and they were thoroughly examined and investigated after written informed consent.

Inclusion Criteria: Patients with hoarseness or change in voice, foreign body sensation in the throat, pain on speaking and fatigue of voice, difficulty in breathing and with the findings correlated with indirect laryngoscopy.

Exclusion Criteria: Patients with clinical diagnosis of malignancy of larynx, inflammatory lesions, speech defect due to central nervous system (CNS) lesions, known patients with oral and nasal or nasopharyngeal pathology. Detailed routine ear, nose and throat examination of the patient with indirect laryngoscopy or video laryngoscopy with angled scope in difficult cases was done. The provisional diagnosis was made and these 50 patients were made to undergo direct laryngoscopy which was done under local or general anaesthesia. General anaesthesia was used in the cases of apprehensive patients and in children. The patient was kept fasting overnight. An injection of for twin and atropine and viscous spray was given 30–45 min before laryngoscopy as pre-medication for local anaesthesia. The findings of indirect laryngoscopy were confirmed, the details regarding extent and type of growth were examined. The biopsy taken from the growth in the larynx was taken and sent to the department of pathology for histopathological examination.

RESULTS

In present study, most of the patients i.e., 19 (38%) were between 21-30 years of age with the youngest patient of 7 years old and oldest of 64 years. Males 31 (62%) were more commonly affected than females. Hoarseness or change in voice was the chief complaint in 42 (84%) of cases followed by inability to raise voice or vocal fatigue in 28 (56%) of cases (Table 1).

Table 1: Distribution of cases according to symptoms

Symptoms	No. of cases (%)
Hoarseness/change in voice	42(84%)
Inability to raise voice	28(56%)
Cough	21(42%)
Foreign body	11 (22%)
Sensation Dyspnea/stridor	03(6%)

Vocal abuse was found to be commonest habit 28 (56%) present both in males and females as a predisposing factor followed by smoking and alcohol habits in 24 (48%) males. Poor oral hygiene was seen in 14 (28%) cases. No predisposing factor could be ascertained in 4 (8%) cases.

Table 2: Incidence of benign laryngeal lesions

Sr.	Clinical diagnosis	No. of Cases (%)
1	Vocal Cord Nodule	17 (34%)
2	Vocal Cord Polyp	11 (22%)
3	Chronic Laryngitis	09 (18%)
4	Vocal Cord Cyst	07 (14%)
5	Laryngeal Papillomatosis	03 (6%)
6	Reinke's Oedema	01 (2%)
7	Vocal Cord Keratosis	01 (2%)
8	Rhinoscleroma (Scleroma of Larynx)	01 (2%)

Vocal cord nodule was the commonest clinical diagnosis in 17 (34%) of cases followed by vocal cord polyp in 11 cases (22%) and chronic laryngitis in 9 (18%) cases (Table 2).

Table 3: Histopathological diagnosis of cases

Sr.	Histopathological diagnosis	No. of cases (%)
1	Vocal cord nodule- epithelial type hyperplasia	15 (30%)
2	Chronic inflammatory tissue with hyperplasia and mild dysplasia s/o inflammatory polyp	13 (26%)
3	Epithelial hyperplasia with dilated vessels and mononuclear cell infiltration s/o chronic laryngitis	09 (18%)
4	Cyst	07 (14%)
5	Laryngeal Squamous cell papilloma	03 (6%)
6	Edema of subepithelial space s/o Reinke's edema	01 (2%)
7	Vocal cord keratosis	01 (2%)
8	Rhinosccleroma (Scleroma of larynx)	01 (2%)

On comparing the clinical and histopathological findings, there was agreement in 48 (96%) lesions from the 50 lesions analyzed. Two of the vocal cord nodules diagnosed clinically were turned out to be polyps on histopathological diagnosis.

DISCUSSION

Benign lesions of the vocal folds can cause imbalances in normal laryngeal functions. Benign lesions represent a common problem that otolaryngologist encounter in clinic. In our study, most of the patients i.e., 19 (38%) were between 21-30 years of age with the youngest patient of 7 years old and oldest of 64 years. These findings are comparable to other similar studies done by Singhal *et al*⁴, Ghosh *et al*⁵ and Baitha *et al*⁶. Benign lesions of larynx were found to be more common in male (i.e. 31 cases; 62%). These results were comparable with the other study by Wani *et al*⁷. The male preponderance could be attributed to vocal overuse, occupation and smoking and drinking alcohol habits in the males. In present study, vocal abuse was found to be commonest habit 28 (56%) present both in males and females as a predisposing factor followed by smoking and alcohol habits in 24 (48%) males. In a study by Ghosh *et al*⁵, 72% patient had vocal abuse/overuse as predisposing factor. Wani *et al*⁷ and Parikh NP⁸ also quoted 45% and 56% cases with vocal abuse. Hoarseness or change in voice

was the chief complaint in 42 (84%) of cases followed by inability to raise voice or vocal fatigue in 28 (56%) of cases. Parikh NP noted that 100% cases in their study were presented with hoarseness⁸. Singhal *et al*⁴, Baitha *et al*⁶ and Hegade *et al*⁹ in their study found that hoarseness was the most common complaint. Vocal cord nodule was the commonest clinical diagnosis in 17 (34%) of cases followed by vocal cord polyp in 11 cases (22%) and chronic laryngitis in 9 (18%) cases in our study. Singhal *et al*⁴, Baitha *et al*⁶ and Hegade *et al*⁹ also observed similar clinical diagnosis in their studies. In our study we found a high correlation i.e., 96% between the ENT clinical and pathological diagnoses. Nunes RB *et al*¹⁰ found 93.18% correlation whereas Wallis L *et al*¹¹ found 91.5% correlation when compared their clinical diagnoses with histopathological diagnoses. Two of the cases diagnosed as vocal cord nodules were turned out to be polyps in our study. The differentiation between nodules and polyps is the most difficult to perform in laryngeal biopsies and therefore must be made by means of an interactive relationship between the clinician and the pathologist. In conclusion, the vocal cord nodules are the commonest benign laryngeal lesions producing hoarseness in voice as the chief complaint. There was a high correlation between the ENT diagnosis and pathological diagnosis of benign lesions of larynx.

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