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CLINICO-PATHOLOGICAL CHARACTERISTICS OF BENIGN LARYNGEAL LESIONS OF PATIENTS FROM CENTRAL INDIA

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Abstract

Background: In ENT clinics, benign lesions of the larynx are fairly normal. It is not always simple to have a clinical-histological link, but a correct diagnosis is of the utmost importance. The purpose of the present study was to study the clinical profile of benign lesions of the larynx and histopathological trends.

Material and Methods: With indirect laryngoscopy or video laryngoscopy, a total of 100 patients clinically diagnosed as cases of benign laryngeal lesion were examined. Under local or general anaesthesia, direct laryngoscopy was performed. The lesion biopsy was sent for histopathological research.

Results: Most of the patients were between 21-30 years old, i.e. 38%. Males were more generally affected (62 percent) than females. The principal concern in (84 percent) of cases was hoarseness or change of speech. In 56 per cent of cases, verbal abuse has been shown to be a predisposing factor. The most common clinical diagnosis was vocal cord nodule in 34 percent of cases, followed by vocal cord polyp in 22 percent of cases.

Conclusion: The nodules of the vocal cord are the most common benign laryngeal lesions, causing speech hoarseness as the main complaint. The ENT diagnosis and the pathological diagnosis of benign laryngeal lesions were strongly associated.

Keywords: Larynx, benign lesions, hoarseness of voice, histopathology.

Introduction

The larynx 's essential function is to generate and promote contact with the speech. Voice problems may have a major effect on patients' vocational, social and emotional transition. Benign lesions of different causes, such as infectious, inflammatory, traumatic, neurogenic, congenital, functional and benign neoplasms, may include the larynx. Non-infective and non-traumatic laryngeal conditions have a benign organic lesion of the larynx. The most common causative factors of laryngeal disorders appear to be smoking, illness, allergies, along with voice abuse[1,2.] A benign larynx lesion is defined as' an abnormal tissue mass in the larynx, whose growth exceeds and is uncoordinated with that of normal tissue and persists in the same excessive manner after the stimuli that evoked the change have ceased. Non-infective lesions are primarily chronic laryngitis, polyp or nodule of the vocal cord. Infective lesions of the larynx are usually acute laryngitis and tubercular laryngitis. The secret to the treatment of the condition is diagnosis[3,4]. As certain cases of benign lesions often display characteristics such as those of malignant lesions, laryngologists need to differentiate them from malignant lesions. Therefore, for successful management, their timely diagnosis is very important[5]. Small lesions can be removed endoscopically by a CO2 laser or by microlaryngeal tools. Larger lesions that reach beyond the laryngeal structure also involve pharyngotomy or fissure of the larynx. It is not always simple to have a clinical & histological link, but a correct diagnosis is of the utmost importance. The purpose of the present study was to study the clinical profile of benign lesions of the larynx and histopathological trends[6,7].

Material and Methods

The research involved a total of 100 patients clinically diagnosed as having a benign laryngeal lesion. The research was performed in a tertiary care hospital's Ear , Nose and Throat (ENT) department. After written informed consent, a full clinical history of each patient was taken and they were carefully assessed and investigated.

Inclusion Criteria: Patients with hoarseness or change of voice, feeling of the foreign body in the throat, speech discomfort and voice tiredness, trouble breathing, and outcomes associated with indirect laryngoscopy.

Exclusion Criteria: Patients with a clinical diagnosis of larynx malignancy, inflammatory lesions, central nervous system (CNS) speech defect, known oral and nasal or nasopharyngeal pathology. A thorough regular inspection of the patient's ear , nose and throat with indirect laryngoscopy or angled scope video laryngoscopy was performed in difficult cases. The intermediate diagnosis was made and direct laryngoscopy was performed under local or general anaesthesia in these 100 patients. In cases of apprehensive patients and in infants, general anaesthesia was used. The patient started fasting overnight. As pre-medication for local anaesthesia, an injection of fortwin and atropine and viscous oral spray was given 30-45 min prior to laryngoscopy. The effects of

indirect laryngoscopy have been verified and specifics of the degree and form of growth have been studied. The biopsy taken from the growth in the larynx was taken and sent for histopathological analysis to the pathology department.

Results

In the current research, the majority of patients were between 21-30 years of age, i.e. 38 (38%), with the youngest patient being 7 years of age and the oldest being 64 years of age. Males were 62 (62%) more often affected than females. In 84 (84 percent) of cases, hoarseness or shift in voice was the key concern, accompanied in 56 (56 percent) of cases by inability to improve voice or vocal exhaustion (Table 1).

Table 1: Distribution of cases according to symptoms

Symptoms	No. of cases (%)
Hoarseness/change in voice	84 (84%)
Inability to raise voice	56 (56%)
Cough	42 (42%)
Foreign body	22 (22%)
Sensation Dyspnea/stridor	06 (6%)

Vocal violence was found to be the most prevalent habit (56%) in males and females as a predisposing factor, accompanied in 48 (48%) males by smoking and alcohol behaviours. In 28 (28 percent) cases, bad oral hygiene was seen. In 08 (8 percent) cases, no predisposing factor could be determined.

Table 2: Incidence of benign laryngeal lesions

Sr	Clinical diagnosis	No. of Cases (%)
1	Vocal Cord Nodule	34 (34%)
2	Vocal Cord Polyp	22 (22%)
3	Chronic Laryngitis	18 (18%)
4	Vocal Cord Cyst	14 (14%)
5	Laryngeal Papillomatosis	06 (6%)
6	Reinke's Oedema	02 (2%)
7	Vocal Cord Keratosis	02 (2%)
8	Rhinoscleroma (Scleroma of Larynx)	02 (2%)

In 34 (34 percent) of cases, the vocal cord nodule was the most common clinical diagnosis, followed by vocal cord polyp in 22 cases (22 percent) and chronic laryngitis in 18 (18 percent) cases (Table 2).

Table 3: Histopathological diagnosis of cases

Sr	Histopathological diagnosis	No. of cases (%)
1	Vocal cord nodule- epithelial type hyperplasia	30 (30%)
2	Chronic inflammatory tissue with hyperplasia and mild dysplasia s/o inflammatory polyp	26 (26%)
3	Epithelial hyperplasia with dilated vessels and mononuclear cell infiltration s/o chronic laryngitis	18 (18%)
4	Cyst	14 (14%)
5	Laryngeal Squamous cell papilloma	06 (6%)
6	Edema of subepithelial space s/o Rienke's edema	02 (2%)
7	Vocal cord keratosis	02 (2%)
8	Rhinoscleroma (Scleroma of larynx)	02 (2%)

There was consensus on the contrast of clinical and histopathological results in 96 (96%) lesions of the 100 lesions examined. Four of the clinically identified vocal cord nodules appeared to be polyps for histopathological diagnosis.

Discussion

Benign vocal fold scan lesions induce imbalances in ordinary laryngeal functions. A common issue that otolaryngologists experience in the clinic is benign lesions. Most of the patients in our study, i.e. 38 (38 percent), were between the ages of 21-30 years, with the youngest patient being 7 years old and the oldest being 64 years old. These results are similar to other comparable studies performed by Singhal et al, Ghosh et al, and Baitha et al. Benign larynx lesions were found to be more frequent (i.e. 62 cases; 62%) in males. These findings were comparable to the other research performed by Wani et al. The male preponderance in males may be due to vocal overuse, occupation, and alcohol consumption and smoking habits[8,9]. In the current report, 56 (56 percent) of vocal abuse was found to be the most prevalent habit in males and females as a predisposing factor in 48 (48 percent) males, followed by smoking and alcohol habits. 72 percent of patients in a study by Ghosh et al had vocal abuse / overuse as a predisposing factor. Wani et al and Parikh NP have cited voice harassment cases of 45% and 56%, respectively. In 84 (84 percent) of cases, hoarseness or shift in voice was the key concern, accompanied in 56 (56 percent) of cases by failure to improve voice or vocal exhaustion. Parikh NP noted that hoarseness was identified in 100 per cent of cases in their study. In their study, Singhal et al, Baitha et al, and Hegade et al found that hoarseness was the most common complaint. In 34 (34 percent) of cases, the vocal cord nodule was the most common clinical diagnosis, followed by vocal cord polyp in 22 cases (22 percent) and chronic laryngitis in 18 (18 percent) cases in our study. In their research, Singhal et al, Baitha et al and Hegade et al have found a similar clinical diagnosis. We found a high correlation in our study, i.e. 96 percent, between clinical and pathological ENT diagnosis. Nunes RB et al found a correlation of 93.18 percent, while Wallis L et al found a correlation of 91.5 percent relative to their clinical diagnoses with histopathological diagnoses. In our research, four of the cases diagnosed as vocal cord nodules turned out to be polyps. In laryngeal biopsies, the distinction between nodules and polyps is the most difficult to carry out and must therefore be achieved by an engaging partnership between the clinician and the pathologist[10,11].

Conclusion:

In conclusion, as the main complaint, vocal cord nodules are the most common benign laryngeal lesions that cause hoarseness in the voice. The ENT diagnosis and the

pathological diagnosis of benign laryngeal lesions were strongly associated.

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