

## Benign vocal cord lesions - a study of 25 cases

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### Abstract

*This is a prospective study of benign vocal cord lesions carried out in the department of Otolaryngology and Head-Neck Surgery of Sir Salimullah Medical College & Mitford Hospital, Dhaka. The period of study was from 2004 to 2005. Benign vocal cord lesions are not uncommon. These include singer's nodule, polyps, papilloma, reinke's oedema and cyst. The lesions may affect voice quality and excessive growths may cause respiratory distress. A total of 25 symptomatic, clinically suspected patients having laryngeal lesions attending in the apartment of Otolaryngology and Head-neck surgery of SSMC & Mitford Hospital, Dhaka were included in this study. Age range of the patients was 05 to 40 years (Mean age 25.5+12.9). Almost all the patients ere presented with the complaints of change of voice. Most of the benign lesions of the vocal cord are curable by single surgical procedure.*

**Key words:** *Benign vocal cord lesion, indirect laryngoscopy, recurrent respiratory papillomatosis, vocal cord polyp.*

### Introduction

The most common benign lesions of vocal cord are singer's nodule, polyps, papilloma, polypoidal degeneration (Reinke's oedema) and cysts. The lesions may affect voice quality and excessive growths may cause respiratory distress. Vocal nodules, polyps or cysts do not rule out a malignancy unless lesion resolves with treatment or it is pathologically benign.

Recurrent respiratory papillomatosis (RRP) is a benign lesion of larynx and trachea. RRP is caused by Human Papilloma Virus (HPV), a small DNA virus which similarly causes warts often visible on the skin especially on hands, penis, valve, cervix and perineal region.<sup>1,2</sup> RRP is most commonly observed in children. (It can occur as a single papilloma in adults). Although the lesions histologically and pathologically

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Correspondence: Dr. Sabah Uddin Ahmed<sup>1</sup> Associated Professor, Department of Otolaryngology & Head-Neck Surgery, Sir Salimullah Medical College, Dhaka seen similar children and adults clinically they behave much differently. Children often require multiple surgical procedures. Adults with RRP usually require only a few surgical excision for cure. RRP can be devastating disease for a child occasionally necessitating upto 150 surgeries over the child's lifetime.<sup>2</sup> RRP is one of the most common causes of hoarseness of voice and airway obstruction in children.<sup>2</sup>

### **Material and Methods**

A total of 25 symptomatic, clinically suspected patients having laryngeal lesions attending in the department of Otolaryngology and Head-Neck Surgery of Sir Salimullah Medical College and Mitford Hospital, Dhaka were included in this study. The study was conducted in 02 yrs time from 2004 to 2005. Patients of different age group were included. After physical examination and investigations patients were categorized according to sex age group and site of involvement. On admission, thorough examination of ear, nose and throat was done. Indirect laryngoscopy and fiberoptic laryngoscopy (FOL) was performed in each case. Almost all the patients were presented with the complaints of change of voice and 05 (five) cases were presented with associated respiratory distress. The average range of age of the patients was 05-40 years. 07(seven) patients were between 05-06 years. 05 (five) patients were within the age group of 20-25 years, 06(six) were within 26-30 years, 02(two) patients were among the age group of 31-35 years and 05(five) were between 36-40 years. Among the 25 patients 18 were males and the rest were females. Among the male group between 20-40 years 04 patients were school teachers, 02 were Imam or Muazzin, 02 factory workers, 01 actor/singer, 02 were bus and truck helpers and 04 patients were UP chairmen or members. Among the adult female patients 01 was a school teacher and the rest were housewives.

The 02 factory workers were smoker and one of them used to drink alcohol occasionally. Both the bus and truck helpers were smokers and had addiction for cannabis.

### **Result**

After proper evaluation, direct laryngoscopy was performed under general anesthesia in each case. Polypoidal masses were seen in 12 cases which were unilateral<sup>3</sup> of which 06 were at the right vocal cord and 06 were at the left. 07 (seven) out of 12 polypoidal masses were seen at the junction of anterior third and posterior two third of either vocal cord near the free margin. In 03 cases the lesions were found at either vocal cord near the anterior commissure and 02 cases were at either vocal cord near the posterior commissure. 01 (one) single papillomatous lesion was observed at<sup>4</sup> the anterior third of R. Vocalcord near the anterior commissure.<sup>4</sup> Nodular lesions were found in 05 cases and all were at the junction of anterior third and middle third of the free edge of both vocal cords<sup>5,6</sup>. Multiple papillomatous lesions were found in both vocal cords in all the 07 children. 02 (two) of these extended upto the epiglottis<sup>1</sup>. 03 of the 07 children needed tracheotomy because of severe respiratory distress.

Table-I  
Showing age range of patients (N=25)

Age of presentation	Total No. (%)	Percentage + SD	Mean age percentage
05-06 years	07	28	25.5+12.9
20-25 years	05	20	
26-30 years	06	24	
31-36 years	02	08	
36-40 years	05	20	

The laryngeal lesions were excised by direct laryngoscopy under G/A. Histopathologically 12 cases were diagnosed as vocal cord polyps. 01 as papilloma, 04 cases vocal cord nodules and 07 papillomatosis.

Table II  
Showing distribution of sex (N=25)

Sex of patients	Total No.	Percentage (%)
Male	18	72
Female	07	28

Table III  
Showing the profession of the study group (N=25)

Profession (%)	Total No.	Percentage
School teacher	05	20
Imam/Moazzin	02	08
Factory worker	02	08
Actor/Singer	01	04
Bus/Truck helper	02	08
UP Chairman	04	16
Others	12	36

Table IV  
Showing the involvement of vocal cord (N=25)

Sites of involvement (%)	Total No.	Percentage
Right vocal cord	07	28
Left vocal cord	06	24
Both vocal cords	12	48

Table V  
Showing sites in the vocal cord (N=25)

Location in the vocal cord	Total No.	Percentage (%)
Anterior commissure	04	16
Posterior commissure	02	08
Free margin	17	68
Arising from vocal cord & extending to epiglottis	02	08

Table VI  
Showing types of lesions (N=25)

Types of lesion vocal cord	Total No.	Percentage (%)
Vocal cord polyp	12	48
Vocal cord nodule	05	20
Vocal cord papilloma	01	04
Multiple papillomatoseses	07	28

### Discussion

Each of the benign lesions of larynx has potentially different causes but there are common factors that contribute to their development. Generally benign vocal lesions occur in response to injury but are also known to have multiple causes such as chronic vocal use/misuse. For example excessive use of voice or singing loudly, trauma resulting from infection, trauma from gastric reflux (GERD) injury the laryngeal mucosa (protective cavity of the vocal cord), other factors that contribute to chronic irritation of the larynx with excessive throat clearing can include postnasal drip resulting from

allergic sinusitis, chronic sinusitis, exposure to chemical irritants such as that from tobacco use/abuse, pulmonary disease which may lead to for breath support during speech or conch radiant asthma, hypothyroidism that may lead to a low pitched voice, poor vocal habits, medications that affect the voice<sup>6</sup>.

In our study it was observed that the benign laryngeal lesions were common among those who were using their voice excessively e.g. Muazzin, Imam, actor or singer, truck helpers and school teachers. The lesions also have close association with cigarette smoking. There was also relationship between the laryngeal lesions and alcohol.

It may be mentioned here that most of the benign lesions of vocal cord are curable by single surgical procedure except RRP in children which may require several surgical interventions.

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