



## A Clinical Study of Benign Lesions of Larynx and its Management in A Series of 20 Cases and Review of Literature

### KEYWORDS

Benign laryngeal lesions, Cavernous Haemangioma, Juvenile Laryngeal Papilloma, Vocal Nodule, voice disorders

### \* DR. R.BHANU MURTHY

MS; DLO: ASSOCIATE PROFESSOR OF ENT AND HEAD & NECK SURGERY, KURNOOL MEDICAL COLLEGE, KURNOOL  
\* Corresponding Author

### DR. P.FAZULU RAHIMAN KHAN

M.S ENT: ASSISTANT PROFESSOR OF ENT AND HEAD & NECK SURGERY, KURNOOL MEDICAL COLLEGE, KURNOOL.

### DR.S.RAVEENDRA DEEPAK

(MS ENT): POST GRADUATE OF ENT AND HEAD & NECK SURGERY, KURNOOL MEDICAL COLLEGE, KURNOOL

**ABSTRACT** Definition of 'voice' is the acoustic outputs from the vocal tract that are characterized by their dependence on vocal fold vibratory inputs. Benign laryngeal lesions are significant because 29.9% of general population suffer at least one voice disorder in their lifetime. We present a series of 20 cases illustrating the variable presentation of benign lesions of larynx. Study conducted in cases admitted in the Department of ENT and Govt General Hospital Kurnool from June 2015 To December 2015 and cases referred from Paediatric and Medical ward, with hoarseness of voice and respiratory distress. All the Cases were thoroughly investigated With CBP, Screening Tests, X-ray Chest and CT SCAN of Larynx as needed. Clinical study in our cases shows Benign Non-neoplastic Lesions of Larynx are more common than Juvenile Papilloma, Solitary Nodule and with more voice problems than True Neoplastic Lesions. In the management of benign lesions, Vocal Nodules and Polyps were considered for surgery only if initial conservative methods fail. Avoidance of Voice Abuse and Proper Speech Training play a major role in the prevention of these lesions. In many of our cases Tracheostomy was avoided by careful Endo Tracheal intubation during surgical excision of lesion.

### INTRODUCTION:

Definition of 'voice' is the acoustic outputs from the vocal tract that are characterized by their dependence on vocal fold vibratory inputs. Voice quality, pitch range and pattern provide a wide range of information about person's gender, age, personality and physical health. Benign laryngeal lesions are significant because 29.9% of general population suffer at least one voice disorder in their lifetime and 7.2% miss one or more working days

### Material and Methods:

Study conducted in cases admitted in the Department of ENT and Govt General Hospital Kurnool from June 2015 to December 2015 and cases referred from Paediatric and Medical ward, with hoarseness of voice and respiratory distress and Stridor. We present a series of 20 cases illustrating the variable presentation, diagnosis and management of benign lesions of larynx. All the cases were treated by Endoscopic Assisted Micro Laryngeal Excision with HPE. Voice Follow up done pre and post operatively with advice of voice rest for 6 weeks.

INCLUSION CRITERIA	EXCLUSION CRITERIA
All age groups of both the sexes.	Malignant tumours excluded.
Patients with positive clinical findings on Indirect Laryngoscopy	Patients who do not come for follow up were excluded.
Iatrogenic lesions of larynx Recurrent cases are included.	Vocal cord palsy and trauma cases were excluded.

**History of Illness: Case Reports; Case 1** Male patient aged 45 years presented with chief complaint of hoarseness of voice, easy fatigue on phonation, low voice quality for past two months. Discomfort and pain in the throat were present. Video Laryngoscopy examination showed **pedunculated polyp with wide base at the junction of ant 1/3 with posterior 2/3 of right cord**. Endoscopic Micro Laryngeal Excision done. **Histopathology confirmed Vocal Polyp**

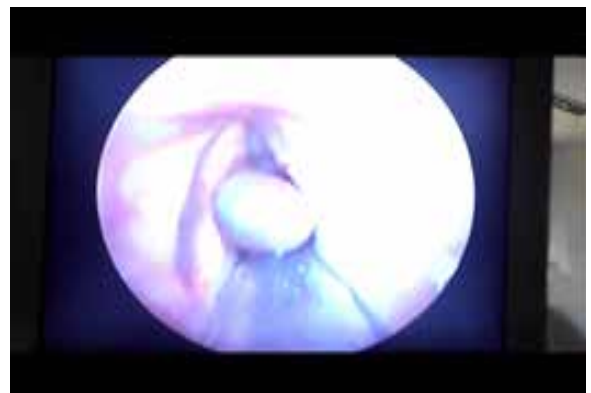


Figure 1 right vocal polyp

**Case 2:** A female patient aged 40 years presented with chief complaint of hoarseness of voice, discomfort in throat and voice fatigue for the past four months. History of voice abuse was present. **Video Laryngoscopy showed nodule at the junction of anterior 1/3 with posterior 2/3 of both vocal cord**. Endoscopic Micro Laryngeal Excision done and **HPE confirmed vocal nodule**.



Figure 2 vocal nodule on right vocal cord

**Case 3:** A female patient aged 35 years presented with chief complaint of change of voice, breathlessness since three months. Video Laryngoscopy showed **polypoidal mass with smooth surface over anterior commissure and on right cord**. Endoscopic Micro Laryngeal Excision of mass done and sent for Histo pathological examination, suggestive of **Fibroangioma vocal cord**. Tracheostomy was not done. Careful Endo Tracheal Intubation planned during anaesthesia.



Figure 3 Fibroangioma of anterior commissure

**Case 4:** A male patient aged 45 years presented with change of voice and discomfort in throat for the past three months. Video laryngoscopy showed **warty papillary mass over anterior 1/3 of left vocal cord**. Endoscopic Micro Laryngeal Excision of mass done and sent for HPE, suggestive of **Solitary Papilloma of Vocal Cord**. Tracheostomy was not done, case followed carefully with post operative voice rest and there was good voice recovery and no recurrence



Figure 4 Procedure of Micro laryngeal excision

**Case 5:** A male patient aged 55 years presented with change of voice and breathlessness on exertion for four months duration. Video Laryngoscopy Examination showed **smooth swelling pink in colour at the anterior 1/3 of left vocal cord and anterior commissure and glottis**. Endoscopic Micro Laryngeal Excision of mass done and sent for HPE, suggestive of **Cavernous Haemangioma of Vocal Cord**. It is a very rare case reported in the Literature



Figure 5 cavernous haemangioma of larynx

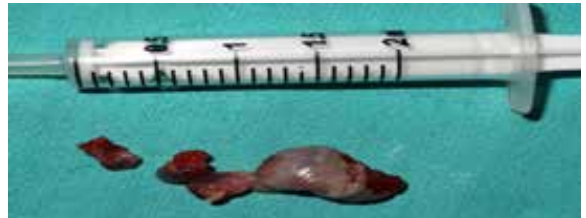


Figure 6 excised specimen of cavernous haemangioma

Tracheostomy was not done. Careful Endo Tracheal Intubation was planned during anaesthesia. Immediate post operative follow-up with absolute voice rest, voice recovery was good and there was no recurrence



Figure 7 Juvenile Papilloma of vocal cords

**Case 7:** A female child aged five years presented with change of voice four months duration and came to the hospital with Stridor, case planned for Emergency Tracheostomy and Video Laryngoscopy examination of larynx showed **warty glistening white mass over anterior commissure and anterior 2/3 of both vocal cords**. Endoscopic Micro Laryngeal Excision of mass done and sent for HPE, suggestive of **Juvenile Papilloma of Larynx**, **Mitomycin** applied to the lesions during MLS. Child followed up for six months with Tracheostomy as Juvenile Papilloma is known for recurrence **and there was no recurrence in our case**



Figure 8 Tracheostomy for Stridor in a child



Figure 9 juvenile papilloma of larynx excision

**Case 8:** A male patient aged 70 years presented with change of voice and dysphagia for solids and lump in throat for four months duration. Video laryngoscopy showed **smooth swelling over the lingual surface of epiglottis obscuring the view of glottis**. Endoscopic Micro Laryngeal Excision of the lesion during surgery showed putty like material from the mass. **HPE suggestive of Epidermoid cyst of epiglottis and extending on to valleculae**



Figure 10 Epidermoid cyst of epiglottis



Figure 11 Epiglottis after excision of Cyst

**Case 9 and 10:** A male patient aged 56 years presented with change of voice three months duration. Examination with Video Laryngoscopy showed **warty pale irregular white plaque over anterior 2/3 of right vocal cord**. Endoscopic Micro Laryngeal Excision of lesion was done and sent for HPE, **suggestive of Leukoplakia of right vocal cord** and case ten was cyst of epiglottis



Figure 12 Leukoplakia of right vocal cord



Figure 13 Epidermoid cyst of epiglottis

**Investigation of cases:** Hb-10.8 gm/dl BT-1min45 sec CT-4min10 sec TC-7800 cells/cmm DC-P-64, L-30, E-3, M-3, B-0 Platelet count-2.3 lakhs/cmm RBS-102mg/dlS.CREATININE-0.6mg/dl B.UREA-32mg/dl HIV-Non reactive HBSAG-Non reactive HCV-Non reactive Serum electrolytes Na+134 mEq/L K+3.9MeQ/L, Cl 102mEq/L. **All the Cases were Investigated with CBP, Screening Tests X-ray Chest and CT SCAN of Larynx in cases it is needed.**

**Discussion of Benign Lesions of Larynx**  
**Age Distribution of Patients:**

AGE GROUP	NO OF PATIENTS	PERCENTAGE
<15YEARS	2	10%
>15-30YEARS	3	15%
>30-45YEARS	9	45%
>45-60YEARS	5	25%
>60YEARS	1	5%

**Youngest case age is 5 years and oldest case of the series is 70 years.**

**SEX DISTRIBUTION:**

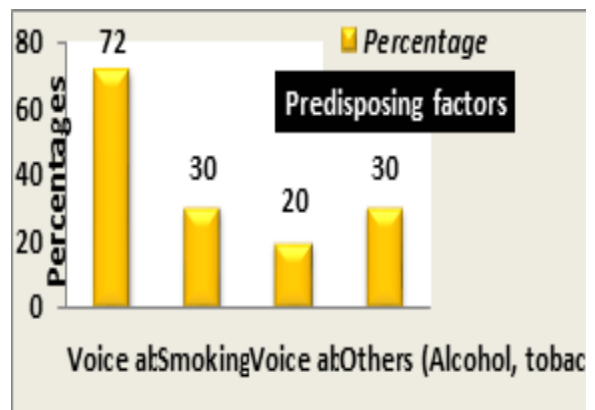
SEX	MALES	FEMALES
NUMBER	12	8
PERCENTAGE	60%	40%

**CLINICAL PRESENTATION OF CASES:**

COMPLAINT	PRESENT	ABSENT	PERCENTAGE
Hoarseness of Voice	12	8	60%
Respiratory Distress	4	16	20%
Foreign Body Sensation	2	18	10%
Pricking Sensation Throat	1	19	5%
Hemoptysis	1	19	5%

**Common symptom is change of voice (60%) next is respiratory distress (20%)**

**PREDISPOSING FACTORS:**



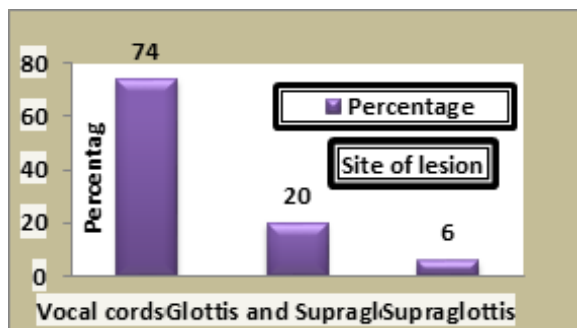
**Most common predisposing factor is voice abuse and next is smoking followed by others.**

**HISTOPATHOLOGICAL REPORTS:**

HPE REPORT	
Vocal Polyp	5
Vocal Nodule	4
Leukoplakia	2
Epidermoid Cyst Of Epiglottis	2
Cavernous Haemangioma	1
Juvenile Laryngeal Papilloma	2
Solitary Papilloma	1
Fibroangioma Of Vocal Cord	2
Erythroplakia	1

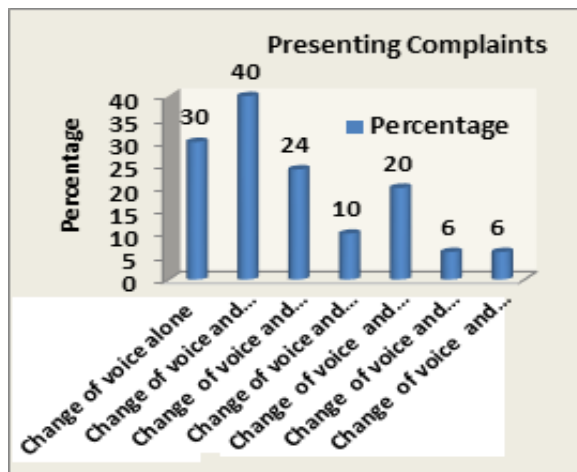
**Rare is Cavernous Haemangioma Most Common Is Vocal Nodule and Polyps.**

**SITE OF LESION:**



Vocal Card is common site with change of voice, Glottis and Subglottis with Stridor.

**PRESENTING COMPLAINTS:**



**Discussion on Vocal Nodule and Polyp:** Nodules appear as bilateral symmetrical pinkish, fusiform swellings at the junction of anterior and middle thirds of VC. Vocal polyps are usually isolated unilateral and either sessile (broad-based) or pedunculated (small stalk). They are thought to occur from breakage in capillaries (small blood vessel) in Reinke's space, with leakage of blood, localized edema (swelling), and eventual organization into a fibrotic polyp.



**Figure 14 vocal nodule**

**Discussion on Cavernous Haemangioma:** Adult haemangioma of larynx are very rare, cavernous type is common, sites are Supraglottic and glottis, often originate from free edges of vocal cord and with no spontaneous regression. First Laryngeal Haemangioma was described by Mackenzie In 1871 and states commonly due to vocal abuse, cigarette smoking and laryngeal trauma. Respiratory distress may require Tracheostomy, CO2 Laser, and Steroid for Voice change



**Figure 15 cavernous haemangioma**

**Discussion on Benign Lesions of Larynx: Juvenile Papilloma** is Warty growth, glistening white with irregular surface, pale pink in color fleshy and multiple, common in children and known for recurrence, often needs Tracheostomy and follow-up. **Solitary Papilloma** often malignant and common in adults. **Leukoplakia** is precancerous condition.



**CONCLUSION:** Benign Non-neoplastic Lesions of Larynx are more common than Juvenile Papilloma and Solitary Nodule and more common than True Neoplastic Lesions. Vocal Nodules and Polyps considered for surgery only if initial conservative methods fail. Avoidance of Voice Abuse

and Proper Speech Training particularly in professional voice users like teachers and singers will play a major role in the prevention of these lesions. Endoscopic Micro Laryngeal Excision of Lesions with proper care to vocal ligament will preserve good voice. Tracheostomy can be avoided by careful Endo Tracheal Intubation under guidance of Fibro Optic Laryngoscopy and is only needed in severe cases of Stridor.

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