

# Review of 300 Cases of Hoarseness of Voice and its Management in ENT Department Unit I, Allied Hospital Faisalabad

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## ABSTRACT

**Objective:** Aim of the study was to determine the prevalence and various management options of Hoarseness. **Place and Duration of Study:** 300 patients were selected from ENT OPD and casualty department of Allied Hospital, Faisalabad during January, 2013 to June, 2014. **Materials & Methods:** 300 patients were selected for study. The patients were assessed and a treatment plan formulated. Treatments were given depending on patients symptoms, vocal requirements and clinical findings.

**Results:** In our study, majority of the cases, 116 patients (38.66%) were found to be suffering from Acute and Chronic Laryngitis, as the leading cause of Hoarseness. Acute Laryngitis was found in two peaks of age groups, one below 10 years of age, then the 2<sup>nd</sup> peak was found in age group between 10 to 20 years. In our study 46 patients of Tumors (15.33%) were the 2<sup>nd</sup> highest cause of Hoarseness. Tumors were found to be maximum in age group of 50 to 60 years. 49 patients were found to be suffering from Vocal Nodules (16.33%).

Vocal Nodules were found to be maximum in the age group between the 30 to 40 years. Vocal Cord Paralysis was found in 33 patients (11%). Trauma, Blunt or Iatrogenic (injury to Recurrent Laryngeal Nerve following Thyroidectomy) was found in 27 patients (9%) as a cause of Hoarseness. Trauma was common in the age group between 10 to 20 years. 18 patients (6%) were found to have Vocal Polyps and the maximum age group was found to be between 30 to 40 years. Diphtheria was found in 8 patients (2.67%) and the maximum age group was below 10 years. All improved by timely ADS, Antibiotics and tracheostomy. Laryngeal Web was found in only 3 patients (01%) and the age group was again below 10 years. **Conclusion:** Our study concludes that acute & chronic laryngitis is the leading cause of hoarseness (42% of cases) and management plan varies according to its etiological cause from conservative voice rest and speech therapy to surgical intervention. **Key Words:** Etiology, Management, Hoarseness.

## INTRODUCTION

Hoarseness is a perceived rough, harsh or breathy to the voice. Voice disorders, such as hoarseness are often multifactorial in aetiology but the main causes are: congenital, inflammatory, structural or neoplastic, neuromuscular, muscle tension

imbalance or may sometimes be due to GERD<sup>1</sup> or just a sequel of Autoimmune<sup>2</sup> diseases.

For production of normal voice, vocal cords should:

1. Be able to approximate properly with each other.
2. Have a proper size and stiffness.
3. Have an ability to vibrate regularly in response to air column.

Any condition that interferes with the above functions causes of hoarseness.

Patients assessment should include a detailed history<sup>3</sup>, general examination, Stroboscopy<sup>4</sup>,

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Videolaryngoscopy, Flexible or Rigid Endoscopy or D/L biopsy to establish the diagnosis.

## MATERIALS AND METHODS

300 patients were selected from ENT OPD and casualty department of Allied Hospital Faisalabad during January 2013 to June 2014. The patients were assessed and an agreed treatment plan<sup>5 6</sup> formed. Not all patients presenting with hoarseness wanted treatment and some were happy being given a diagnosis, an explanation of their voice problem and were reassured, and were asked to come for Follow Ups. Treatments were given depending on patients symptoms, vocal requirements and clinical findings.

## RESULTS

In our study majority of the cases 116 patients (38.66%) were found to be suffering from Acute and Chronic Laryngitis, as the leading cause of Hoarseness. Acute Laryngitis was found in two peaks of age groups, one below 10 years of age, then the 2nd peak was found in age group between 10 to 20 years.

In our study 46 patients of Tumors (15.33%) were the 2nd highest cause of Hoarseness. Tumors were found to be maximum in age group of 50 to 60 years. 49 patients were found to be suffering from Vocal Nodules (16.33%). Vocal Nodules were found to be maximum in the age group between the 30 to 40 years. Vocal Cord Paralysis was found in 33 patients (11%). Trauma, Blunt or Iatrogenic (injury to Recurrent Laryngeal Nerve following Thyroidectomy) was found in 27 patients (9%) as a cause of Hoarseness. Trauma was common in the age group between 10 to 20 years. 18 patients (6%) were found to have Vocal Polyps and the maximum age group was found to be between 30 to 40 years. Diphtheria was found in 8 patients (2.67%) and the maximum age group was below 10 years. All improved by timely ADS, Antibiotics and tracheostomy. Laryngeal Web was found in only 3 patients (01%) and the age group was again below 10 years. The results are presented in the Table-1.

**Table 1: Patients of Hoarseness**

Age Group (years)	Acute Laryngitis	Chronic Laryngitis	Tumors	Trauma	Vocal Nodules	Diphtheria	Laryngeal Web	Vocal Cord Paralysis	Vocal Polyps
<10	35	0				05	03	04	0
10-20	25	0		12		03		07	0
20-30	08	0		11	15			03	06
30-40	03	14	05	04	17			10	09
40-50		21	18		15			05	03
50-60		10	23		02			04	0
60 & >		0						0	0
<b>Total</b>	<b>71</b>	<b>45</b>	<b>46</b>	<b>27</b>	<b>49</b>	<b>8</b>	<b>3</b>	<b>33</b>	<b>18</b>
%	23.66	15	15.33	9.00	16.33	2.67	1.00	11.00	6.00

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## DISCUSSION & CONCLUSION

Hoarseness should ideally be assessed in a voice clinic, where a voice therapist and a laryngologist are present. A laryngologist's role to formulate a diagnosis or differential diagnosis; exclude serious underlying causes, determine the impact of the condition on the quality of life and provide information about treatment options and prognosis. Voice Therapist plays a vital role in its management.

In our study, Acute & Chronic laryngitis are the leading ones. Patients of Acute Laryngitis ranged from Acute Epiglottitis, Laryngo Trachea Bronchitis; to Diphtheria. Most cases of Acute Laryngitis resolved completely over one to two weeks and investigation was unnecessary. Basic therapy included vocal rest, avoidance of irritants (and steam. Antibodies, were researched for more reserved forms of bacterial laryngitis, and specially patients who relied on their voice professionally<sup>7</sup>. In younger<sup>8</sup> group of patients special care should be exercised; so, as not to cause acute laryngeal obstruction. In Acute Epiglottitis and Laryngo Trachea Bronchitis or Croup; because of risk of rapid deterioration, tracheostomy should be performed. Mortality rates in both are similar at 0.92% and 0.85% respectively. Extubation in active Epiglottitis may take a day or two, but Acute Laryngo Trachea Bronchitis may take a week. Pertussis, should be confirmed by serum serology and PCR assay. Erythromycin, a 7 – 14 day course is recommended. Diphtheria, if suspected, throat swab and sample of grey membrane, should be sent for screening. Broad spectrum antibodies and ADS should be given to the patients even if the culture & sensitivity reports are not available.

Chronic Laryngitis, is invariably associated with dysphonia; which has a significant effect on quality of life. Reinke's Oedema<sup>9</sup>, once diagnosed should be treated by combined modality treatment of surgery, voice therapy, and smoking cessation. Vocal Cord Polyps are treated by Microlaryngosurgery under G/A using cold instrumentation techniques and Vocal Fold Steroid Injections<sup>10 11</sup>. Voice rest is advocated for at least 48 hours, post-surgically and then, voice therapy advised.

Invariably, Tuberculosis (T.B larynx), occurs with the pulmonary version of the disease. Diagnosis is made by biopsy of laryngeal tissues. Histopathological Examination reveals Langhans-type giant cells and Acid Fast Bacilli. Predominantly affects the posterior 1/3<sup>rd</sup> of glottis. In laryngeal trauma, by low velocity or high velocity injuries, the main treatment principles are first & foremost airway protection and, secondarily, successful management of the phonatory function of the larynx. In acute trauma setting, Stents are used. In chronic laryngeal Stenosis, many patients have an indwelling tracheostomy. Goal of surgery is to establish a "satisfactory airway" and allow decannulation.

In recurrent laryngeal nerve paralysis<sup>12 13</sup> long course of left nerve makes it more vulnerable towards damage viz, CA esophagus, bronchogenic carcinoma or nodal metastasis at the hilum of the lungs. Various treatment options were adopted to treat such patients.

Vocal nodules are bilateral, small swellings (less than 3mm in diameter) that develop on the free Edge of the vocal fold at approximately the mid membranous portion. Most would agree that a significant number of nodules recur if surgery is performed without voice therapy either pre or post operatively. If surgery is performed, the aim must be precise excision of the nodule alone with no exposure or damage to the underlying ligament.

HPV a recent advent of promising vaccine for infection of uterine cervix, raises the possibility of a similar approach to Benign Respiratory Papillomatosis.

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