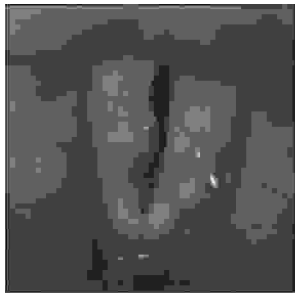
ORIGINAL PROF-1009

HOARSENESS OF VOICE



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ABSTRACT... Objectives: To evaluate the etiology of hoarseness of voice. **Design:** Prospective **Setting:** Department of ENT Allied Hospital Faisalabad. **Period:** From Jan 2001 to Dec 2004. **Material and Methods:** The majority of patients were admitted through ENT out patient department. The data was collected on the basis of history physical examination, investigations, management and follow up. **Results:** Total 200 patients suffering from hoarseness of voice l50 males (75%) and 50 females (25%) between 10 to 70 years of age. The highest incidence was seen during fourth and fifth decade of life (65%). The majority of patients were belonging to poor class (75%). The most common etiological factor was infection (30%). **Conclusion:** Hoarseness is the commonest symptom of laryngeal disorders and it should not be ignored if it persists for more than three weeks and does not respond to conventional treatment, this will prevent delay in diagnosis and proper management.

Key words: Hoarseness, Larynx .

INTRODUCTION

Hoarseness is vague term that patient often uses to describe a change in quality of voice ranging from voice harshness to voice weakness[1]. The hoarseness refers to laryngeal dysfunction caused by abnormal vocal cord vibrations[2].

There are three phases in speech. The pulmonary phase creates the energy flow with inflation and expulsion of air. This activity provides the larynx with a column of air for the laryngeal phase in which vocal cords vibrate at certain frequencies to create sound that is unique to the individual. The oral phase occurs in the oral cavity where sound is modified words are formed by the action of the pharynx, tongue, lips and teeth. Dysfunction in any of these can lead to voice changes, which may be interpreted as hoarseness by the patient. Disorders originating in either the lung or oral cavity are not considered to be true hoarseness. True hoarseness from a laryngeal origin usually results in rough raspy voice[1].

Hoarseness can be divided into acute and chronic onset[3]. Acute onset is more common and is often caused by local inflammation of the larynx such a seen with acute laryngitis. It may be secondary to viral infection, voice abuse, smoking, or trauma[4] to larynx, thyroid surgery. Chronic onset may be caused by polyp, vocal cord nodules, laryngeal papillomatosis, tumors of vocal cord, functional dysphonia, smoking, voice abuse, gastroesophageal reflux[5], postnasal drip, malignant

neoplasms of thyroid, oesophagus, lung, neurological involvement by systemic diseases such as diabetes mellitus[6] and chronic granulomatous diseases such as tuberculosis[7].

While evaluating a patient with hoarseness the duration of symptoms and progression is important. This determines whether the process is acute or chronic. If the history and examination fail to provide a clear picture visual examination of larynx with laryngoscope is necessary. The valuable information can be obtained by examination with flexible laryngoscope which is performed under local anesthesia but the limitation is that it is not possible to perform surgical manipulations like dilatation, vocal cord injection and biopsy can not be performed. Other endoscopic procedures used to evaluate the larynx prior to direct laryngoscopy are videolaryngoscopy and videolaryngostroboscopy. These are best ways to assess the dynamic functions of the larynx as observations during quite breathing and during a variety of tasks are possible. Direct laryngoscopy is required for additional evaluation of suspected or actual pathology within the larynx, therapy within the larynx like removal of vocal cord poyps, diagnostic purpose like taking biopsy or as a preliminary step to intubation[2].

MATERIAL AND METHODS

It was a prospective study conducted upon 200 patients suffering from hoarseness of voice in the department of ENT Allied hospital Faisalabad from Jan 2001 to Dec 2004.The detailed history, clinical examination, routine investigations and special investigations were carried out to find the etiology. Standard performa was prepared duly filled for each patient. All the patients of hoarseness of voice in the study were selected randomly. The follow up of cases was carried out from 6 months to 36 months. The data was compiled and conclusions were made. The etiological factors were classified as infections, neoplasms, trauma, chronic infections, metabolic and drugs.

RESULTS

Total 200 patients suffering from hoarseness of voice 150 males (75%) and 50 females (25%) between 10 to 70 years of age. The highest incidence was seen in males during third, fourth and fifth decade of life (65%).The incidence of hoarseness of voice was 50 cases per year. The majority of cases were admitted through out patient Department (75%).

Table-I. Sex distribution of patients n= 200

Sex	No of patients	%age
Male	150	75%
Female	50	25%
Total	200	100%

Table-II. Distribution of patients according to age (n =200)

Age (years)	No of patients	%age
10 to 30 years	30	15%
31 to 50 years	130	65%
51 to 70 years	40	20%

Table-III. Distribution of patients according to the etiology (n=200)

Etiology	No of pts	%age
Non specific acute and chronic laryngitis	40	20%
Blunt neck trauma	30	15%
Thyroid surgery	25	12.5%
Profession (Vocal abuse)	25	12.5%
Laryngeal carcinoma	22	11%
Tuberculous laryngitis	20	10%
Endotracheal tube trauma	15	7.5%
Bronchogenic carcinoma	6	3%
Thoracic surgery	5	2.5%
Inhaled steroids	5	2.5%
Naspharyngeal carcinoma	4	2%
Hypothyroidism	3	1.5%

The majority of patients were belonging to poor class (75%).The majority of cases were due to infections 60(30%) . In case of trauma surgical trauma was more common 45(22.2%). In case of neoplasms majority of cases were due to malignant growths 32(22%). Hoarseness of voice was the commonest symptom 200(100%).

DISCUSSION

The infections topped the list of etiological factors (30%) causing hoarseness of voice. These were more common among adults. Among acute infections acute viral laryngitis was the commonest cause of hoarseness where as chronic non- specific laryngitis was the commonest chronic infectious cause. In all acute infective cases duration of hoarseness varied from five to seven days. On indirect laryngoscope the vocal cords were found to be swollen and hyperemic with loss of their whitish color. In chronic non specific laryngitis symptoms included hoarseness, foreign body sensation in the throat and constant desire to clear the throat. These symptoms were more in smokers and those belonging to the polluted and bad hygienic environment.

The incidence of non specific laryngitis in the study of Muhammad Aslam was 18% as compare to 20% of our study[8].

The incidence of laryngeal tuberculosis in our study was 10% as compare to the study of Iqbal K et al in which it was 47%[9].

In the category of trauma the blunt neck trauma was the first important cause of hoarseness the neck trauma was caused by road traffic accidents, strangulation, assault and fall. The incidence of hoarseness due to blunt neck trauma in our study was 15% where as it was 44.44% in the study[10].

The thyroid surgery was second etiological factor which causes hoarseness due to injury to the recurrent laryngeal nerves and its incidence was 12.5% as compare to the studies of Maqbool Ahmed et al[11] and M Arif et al[12] in which it was 3.5% and 9.4% respectively.

The endotracheal tube intubation was third in the category of trauma which causes hoarseness due to injury to the vocal cords and its incidence in our study was 7.5% as compare to 55%, 15%, 32%, 53% of studies respectively[13-16].

Thoracic surgery was last factor in trauma and its incidence was 2.5% as compare to 32% and 5.5% in the study[17,18]. The different professions in which there is vocal abuse leading to vocal cord nodules such as teachers, singers, drill instructors or young boys memorizing quran etc accounts 12.5% in contrast with 17.7% in the study[19].

Among the neoplastic causes majority of cases were malignant due to squamous cell carcinoma of larynx, lung and nasopharynx. The contribution of carcinoma of larynx was 11% in contrast to the study of Muhammad Aslam[1] in which it was 69% , the share by bronchogenic carcinoma was 3% as compare to study of Zafar Hussain Iqbal[20] in which it was 21.5% and nasopharyngeal carcinoma contributed 2% in front of 44% in the study[21].

The inhaled steroids are now emerging as a new entity in the etiology of hoarseness of voice because of their use over longer periods in cases of bronchial asthma and its incidence in our study was 2.5% in contrast with 14.1% the study[22]. Finally the contribution by hypothyroidism was 1 .5% in contrast to 83.3%[23].

CONCLUSION

The etiology ranges from trivial infections to life threatening malignancies. A sequential history, physical examination and appropriate investigations can lead to appropriate diagnosis.

The hoarseness should not be ignored if it persists for more than three weeks and does not respond to conventional therapy.

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