

Etiological spectrum of the hoarseness of voice

Sura Abbas M.Ridha

Department of Community and Family Medicine, College of Medicine,
University of Al-Qadisiyah,

Abstract

Objective: To recognize the causes of hoarseness among patients presented to the ENT department. Evaluate the multiple causes of hoarseness across gender, age, residence, duration, and occupation.

Patients and method: In the ENT department, in Al-Diwaniyah Teaching Hospital evaluated each patient complaining of hoarseness prospectively and 125 cases were collected from 2-4-2018 to 2-7-2018.

Results: 125 patients presented with hoarseness, (56.8 %) of them are males, and (43.2 %) are females, a common cause of hoarseness in the male is acute laryngitis in (15.5%) of them, a common cause of hoarseness in the female is chronic laryngitis; in (22.2 %) of them. Patients presented with acute hoarseness are (31.2 %), and the acute laryngitis is the most common cause of their presentation, (68.6%) presented with chronic hoarseness, the chronic laryngitis is the most common cause of their performance. The common cause of hoarseness among smokers is laryngeal cancer (19%), While in nonsmokers, the vocal strain is a common cause of their hoarseness (19.4 %), the vocal pressure is also a common cause of hoarseness in patients with a history of voice abuse (22.9%). Both Chronic laryngitis and laryngeal papillomatosis are a common cause of hoarseness in patients between 1-10 years' age. Both Chronic laryngitis and laryngeal cancer are a common cause of hoarseness in patients > 60 years' age.

Conclusion: The Peak incidence of hoarseness in the age group 31-40 years - the most common cause of hoarseness was chronic laryngitis, which predominantly affects the patients from the urban areas. The males are affected more than females by a laryngeal disease that may present with hoarseness of the voice. Laryngeal cancer more common in man, elderly, and smokers. The most common occupational group present with hoarseness are workers.

Keywords: hoarseness of voices; laryngitis; laryngeal cancer; laryngeal papillomatosis

INTRODUCTION

Hoarseness is defined as a change in the quality of voice perceived as, rough, harsh, or breathy sound, which is caused by abnormal vocal cord movement [1]. It is a symptom, not a diagnosis and therefore warrants a careful determination of the underlying cause in every case [2]. The roots of hoarseness range from viral infection to a severe pathology like malignancy [3]. According to the onset, Hoarseness can be divided into acute, and chronic [4]. Acute onset hoarseness is commonly seen, which is usually associated with upper respiratory tract infection such as laryngitis, vocal abuse, smoking, laryngeal trauma and thyroid surgery [5].

Acute laryngitis is the most common cause of hoarseness [6]. Most cases of severe hoarseness improve with conservative therapy such as vocal hygiene, voice rest and medication. All of these patients may not require laryngoscopic examination as these cases usually do not progress. However, hoarseness that lasts for longer than three weeks should be evaluated thoroughly [6]

Chronic or persistent hoarseness can be caused by a vocal nodule, vocal cord polyp, vocal abuse, functional dysphonia, laryngeal neoplasms, respiratory papilloma, laryngopharyngeal reflux disease, post nasal drip, a tumor of thyroid, esophagus and lung granulomatous diseases like tuberculosis and systemic diseases such as hypothyroidism and diabetes mellitus [7,8]. Also, voice disorders can be divided into two major categories: organic and functional [9]. Hoarseness is more common in certain professions such as teachers, singers, salespeople, leaders, and preachers who have excessive use and misuse of voice. Young children who have a habit of excessive talking or screaming are frequently suffered from this problem [10].

PATIENTS AND METHODS

In the ENT department, in Al-Diwaniyah Teaching Hospital, evaluated each patient complaining of hoarseness prospectively and 125 cases were collected from 2-4-2018 to 2-7-2018. Full history and examination are done for each patient.

1-Regarding the account, data of age, name, sex, occupation, address

2-Duration; acute or chronic

3- Constant or intermittent, other associated symptoms such as:

A sore throat and irritation, the sensation of foreign body, frequent throat clearance, neck swelling and pain, fever, cough and dyspnea, painful vocalization, heartburn, and vomiting, weight loss

4-Habits and behavior: Smoking, Alcohol. The habit of shouting, and voice abuse Eating habit (fat meal)

5-Past medical history: Psychological problem, GERD, a Neurological condition such as Parkinson disease, or stroke, a Pulmonary condition such as TB. Radiation exposure, diabetes, and Allergy.

6-Past surgical history: History of intubation in general anesthesia, thyroid surgery, another neck- heart pulmonary surgery

7-Family history of laryngeal cancer

Physical examination: General examination: Pallor, body built (weight loss), Neck mass, other sign and symptom of a disease such as fever, a sign of hypothyroidism, and neurological disorder.

Full ENT examination

Patient presented with acute hoarseness (less than 3 weeks) examine by indirect laryngoscopy, and if it was difficult due to strong gag reflex or difficult anatomy then the patient will be considered by direct laryngoscopy, if there is a sign of acute laryngitis and vocal strain, no feature of severe pathology, no further investigation needed. The patient presented with chronic hoarseness (more than 3weeks) examine by indirect and direct laryngoscopy to visualize the lesion.

Investigations:

General investigations according to presentation such as:CBP, ESR, Lateral neck X-ray, and chest X-ray. CT and MRI required for patients that have features of the malignant diseases, such as mass discovered during an examination by laryngoscopy, then send for taking a biopsy. About 91 patients were examined by indirect laryngoscopy, and then by direct laryngoscopy respectively, 5 of them didn't complete the examination due to un-cooperation. 20 patients were examined by indirect laryngoscopy only; 9 patients were examined by direct laryngoscopy only.

RESULTS

Causes of hoarseness and duration

Patients were classified into those with acute presentation accounting for 39 out of 125 (31.2%) and those with chronic introduction accounting for 86 (68.8%). Acute laryngitis was seen in 19 (15.2%) patients the performance of whom was acute in all (100%). The vocal strain was observed in 16 (12.8%) the performance of whom was sharp in 7 (43.8%) and chronic in 9 (56.3%). Trauma was seen in 4 (3.2%) the presentation of whom was acute in 3 (75.0%) and severe in 1 (25.0%). Vocal cord nodule was seen in 10 (8.0%) the presentation of whom was sharp in 2 (20.0%) and chronic in 8 (80.0%). Laryngeal cancer was seen in 11 (8.8%) the presentation of whom was acute in 1 (9.1%) and chronic in 10 (90.9%). Laryngeal papillomatosis was seen in 3 (2.4%) the presentation of whom was acute in 1 (33.3%) and chronic in 2 (66.7%). Neck mass was seen in 2 (1.6%) the presentation of whom was acute in 1 (50.0%) and chronic 1 (50.0%). Vocal cord cyst was seen in 5 (4.0%) the presentation of whom was acute in 1 (20.0%) and chronic in 4 (80.0%). Chronic laryngitis was seen in 22 (17.6%) the presentation of whom was constant in all (100.0%). Hypothyroidism was observed in 2 (1.6%) the performance of whom was constant in all (100.0%). Post-operative was found in 3 (2.4%) the performance of whom was constant in all (100.0%). Presbyphonia was seen in 1 (0.8%) 1 the performance of whom was constant. Psychogenic was seen in 1 (0.8%) the introduction of whom was constant. Reinke's edema was observed in 6 (4.8%) the performance of whom was constant in all (100.0%). Spasmodic dysphonia was observed in 6 (4.8) the performance of whom was chronic in all (100.0%). Vocal cord paralysis was observed in 2 (1.6%) the presentation of whom was chronic in all (100.0%). Vocal cord polyp was seen in 12 (9.6%) the presentation of whom was chronic in all (100.0%), as shown in table 1.

Table 1: Causes and duration of hoarseness of voice

Causes	Total n=125	Acute n = 39	Chronic n = 86
Acute laryngitis	19 (15.2)	19 (100.0)	0 (0.0)
Vocal strain	16 (12.8)	7 (43.8)	9 (56.3)
Trauma	4 (3.2)	3 (75.0)	1 (25.0)
Vocal cord nodule	10 (8.0)	2 (20.0)	8 (80.0)
laryngeal cancer	11 (8.8)	1 (9.1)	10 (90.9)
laryngeal papillomatosis	3 (2.4)	1 (33.3)	2 (66.7)
Neck mass	2 (1.6)	1 (50.0)	1 (50.0)
Vocal cord cyst	5 (4.0)	1 (20.0)	4 (80.0)
Chronic laryngitis	22 (17.6)	0 (0.0)	22 (100.0)
Hypothyroidism	2 (1.6)	0 (0.0)	2 (100.0)
Post operation	3 (2.4)	0 (0.0)	3 (100.0)
Presbyphonia	1 (0.8)	0 (0.0)	1 (100.0)
Psychogenic	1 (0.8)	0 (0.0)	1 (100.0)
Reinke's oedema	6 (4.8)	0 (0.0)	6 (100.0)
Spasmodic dysphonia	6 (4.8)	0 (0.0)	6 (100.0)
Vocal cord paralysis	2 (1.6)	0 (0.0)	2 (100.0)
Vocal cord polyp	12 (9.6)	0 (0.0)	12 (100.0)

DISCUSSION

The current study showed that hoarseness of voice in patients seeking medical advice was most frequently due to chronic laryngitis (17.6%) followed by acute laryngitis (15.2%) then vocal strain (12.8%) then vocal cord nodule (8%), while the rest of the causes included in the long list presented in the chapter of results

accounted for less frequent proportions. These findings are by most published articles; hoarseness can be caused by acute (42.1%) and chronic laryngitis (9.7%) [11]. The most common cause of hoarseness is acute laryngitis from short-term vocal abuse or an upper respiratory tract infection [12,13]. In recent studies, chronic laryngitis, whether specific or not, accounted for the majority of cases (approximately 40%) to be followed by cases of acute laryngitis (approximately 24%) and these findings are similar to that of the present study [14-16]

CONCLUSION

The Peak incidence of hoarseness in the age group 31-40 years - the most common cause of hoarseness was chronic laryngitis, which predominantly affects the patients from the urban areas. The males are affected more than females by a laryngeal disease that may present with hoarseness of the voice. Laryngeal cancer is more common in male, elderly, and smokers. The most common occupational group present with hoarseness are workers.

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