
ORIGINAL ARTICLE

Clinico-etiological Study of Hoarseness in 100 Patients

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ABSTRACT

Objective: To evaluate the role of FLEXIBLE FIBER OPTIC NASOPHARYNGOSCOPE /LARYNGOSCOPE in diagnosis of etiology of hoarseness.

Setting: ENT Unit-1 Mayo Hospital, King Edward Medical University (KEMU), and Lahore Period: From Sep 2012 to March 2013.

Material and Methods: Patients were admitted through ENT outpatient department. The data was collected on the basis of history, physical examination, investigations, flexible fiber optic nasopharyngoscopy /Laryngoscopy, findings, management and follow up through standard questionnaire.

Background: Hoarseness is a common symptom among patients who present to tertiary care hospitals . Patients with hoarseness are often referred for nasolaryngoscopy for evaluation to exclude serious conditions as laryngeal cancer.

Study Design: This study is a retrospective case series in which 100 outpatients who presented with hoarseness were reviewed. We examined patients through Flexible fiber optic nasopharyngoscope / Laryngoscope, evaluate demographics, procedure indications, findings, complications, and advise management.

Conclusion: Flexible fiber optic nasopharyngoscopy /Laryngoscopy is safe, noninvasive and the best procedure for diagnosis of dysphonia. We performed 100 cases with excellent diagnostic accuracy without leading to any serious complication. Flexible fiber optic nasopharyngoscopy /Laryngoscopy should be adopted in all out patient departments of tertiary care hospitals for accurate diagnosis and proper management of patients presented with hoarseness.

Hoarseness is significant presenting complaint of laryngeal disorders and should not be ignored if it lingers beyond 3 weeks, not does not respond to conventional treatment.

Key Words: Hoarseness, Larynx, Flexible fiber optic Nasopharyngoscope/Laryngoscope

INTRODUCTION

The study and use of laryngoscopy dates back to the 1800s. Before the 1800's physicians could only make assumptions of how the larynx functioned from examinations of autopsy specimens¹. Airway surgery was limited to tracheostomy which involved the incision of the "arteriaaspera" or "windpipe" . The main problem was that physicians could not visualize the larynx, and therefore limited the ability for physicians to perform efficient airway surgeries². Manuvel Gracia, a Spanish singing teacher in London, was the first to report the visualization of larynx with mirrors and reflected sun light³. His discovery, reported in 1855, was followed by the independent development in 1856 of direct laryngoscopy by Truk and Czermak in Vienna. The Berlin laryngologist Tobold was the first to directly visualize the larynx. He did so by

positioning his patient on her back while she pressed her tongue against her lower incisors and hyper extended her neck⁴. In 1868 Voltolini used a tongue depressor spatula (laryngoscope) to expose the larynx and was able to directly view the larynx. Following was the introduction of carrying light down the airway. This was achieved through reflection of a headlight, or by the placement of tiny light bulbs into the laryngoscope. Gustave Killian , in Freiburg, demonstrated the endoscopic feasibility of foreign bodies removed from trachea-bronchial tree in 1897. Cheivellier Jackson in Philadelphia introduced the distally lighted laryngoscopes, bronchoscopes as well as telescopes with incandescent bulbs at the turn of the century⁵. His contribution to the whole understanding of laryngo-broncho-esophagoscopy was enormous, and he developed the art of foreign

body removal from the air and food passages to the extent that there has not been any subsequent fundamental improvement. A thorough and detailed laryngeal examination is the key in evaluation when patients present with voice changes such as hoarseness⁶, vocal fatigue etc. Advances in technology and improved understanding of vocal fold physiology and sound production have resulted in a dramatic improvement in the ability to visualize the interior of the larynx. Indirect laryngoscopy has been used by otolaryngologist for years however this method of examination is limited in comparison to newer methods⁷ like FOL. A time limitation caused by large base of tongue, soft palate, over hanging epiglottis and exaggerated gag response limited this examination from being performed in 5-10 % of patients. Flexible fiber-optic naso laryngoscopy offers an extremely clear and magnified view of the nose, nasopharynx and larynx.

MATERIAL AND METHODS

It was a retrospective study conducted upon 100 patients suffering from laryngeal pathologies mostly presented with hoarseness in the department of ENT-Unit-1, Mayo Hospital , King Edward Medical University (KEMU) Lahore , from Sep 2012 to March 2013. 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 patients in the study were selected randomly. The data was compiled and conclusions were made. The etiological factors were classified as infections, neoplasms, professions of over use of voice , trauma, neck or thoracic surgeries, emotional problems, radiotherapy, GERD, Neurological diseases, smoking , chronic infections, allergies and drugs. All the patients were advised to get HBsAg and Anti-HCV done before the procedure. I/V line were maintained and 10% lignocaine spray was applied to all patients. Emergency trolley was kept in procedure room to counteract any adverse event.

RESULTS

Total 100 patients suffering from Laryngeal pathologies with 70 (70%) males and 30 (30%) females between 10 to 80 years of age presented with complaint of hoarseness. The highest incidence was seen in males (70%). Majority of patients (24%) were from age, range from 31 to 40 years. 20% house wives and 19% Hafiz-e- Quran

presented with hoarseness. Most common etiological factor causing laryngeal pathologies were professions leading to vocal abuse (20%). Most common diagnosed case was acute and chronic nonspecific laryngitis (19%). Majority of the patients in our study reported from Lahore (63%). Most common management plans advised to the patients were Micro laryngeal excision and voice rest 16 % each.

Literature Review:

The incidence of acute and chronic nonspecific Laryngitis is 19 % in our study as compared to Muhammad Aslam, study⁸ which is 18 %. Smokers were 15 % as compared to 20 % in a study conducted by Ahmad Nasrat Al-juboori⁹ . The incidence of laryngeal tuberculosis in our study was 2.8 % as compared to the study of Farooq Ahmad Mian¹⁰ which was 10 %. Incidence of laryngeal pathologies due to trauma neck was 2.3% in our study as compared to Farooq Ahmad Mian¹⁰. The different professions in which there is vocal abuse leading to vocal cord nodules such as teachers, singers, lawyers or young boys memorizing the Holy Quran etc. accounts for 19.9 % in contrast with 17.7% in other study¹¹ . The contribution of carcinoma of larynx was 16 % in contrast to the study of Muhammad Aslam¹ in which it was 69%. Inhaled steroid leading to hoarseness in our study was 1.1 % contrast with 14.1% in another study¹² . Most common presenting complaint in our study due to laryngeal pathologies was hoarseness (100%) as compared to study of Noor Sahib khan¹³ which was also 100 %. Amongst the 100 patients suffering from laryngeal pathologies 70 (70 %) were males as compared to 65.4 % in a study¹⁴ . Vocal nodules were seen in 12 % cases as compared to 19.2 % in another study¹⁴ . Nasal pathologies were 4 % as compared to 18.6 % in a study by Jawad Zafar¹⁴. Vocal cord paralysis was found in 10 % as compared to 13 % in other study¹⁴ . 17 % patients were treated medically in our study as compared to 72 % in another study⁹ . Surgical intervention was done in 31 % of patients in our study as compared to 7.6 % in another study conducted by Ahmad Nasrat Al-juboori⁹. We referred 2 % patients for psychotherapy as compared to 3.8 % in other study⁹ . Reflux laryngitis was 6 % in our study as compare to 42.5% in a study¹⁵ . One patient was diagnosed with recurrent laryngeal nerve paralysis as compare to 3.22 % in other study by Ishtiaq Ahmed Chaudhary¹⁶ .

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Table 1: Prevalence among genders

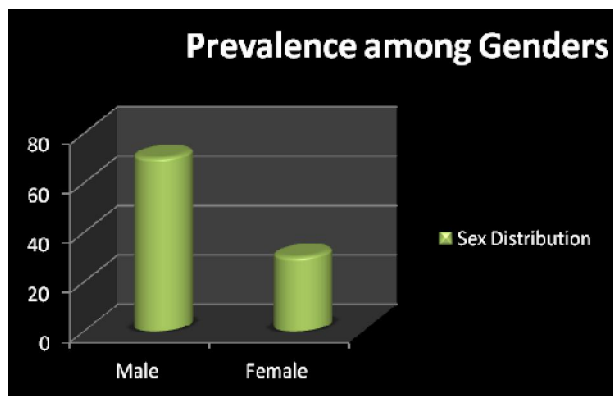


Table 2: Distribution of the patients according to Age

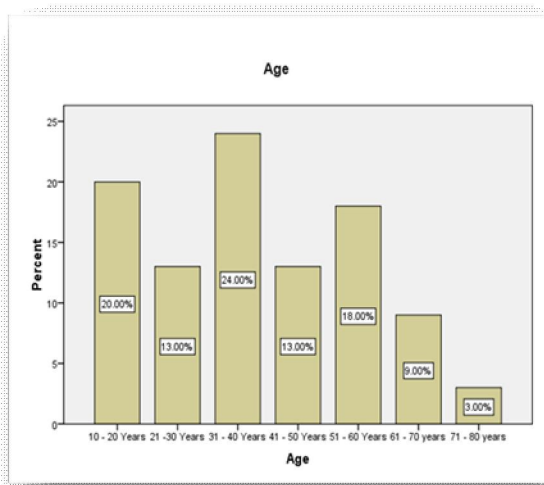


Table3: Distribution of patients according to the etiology

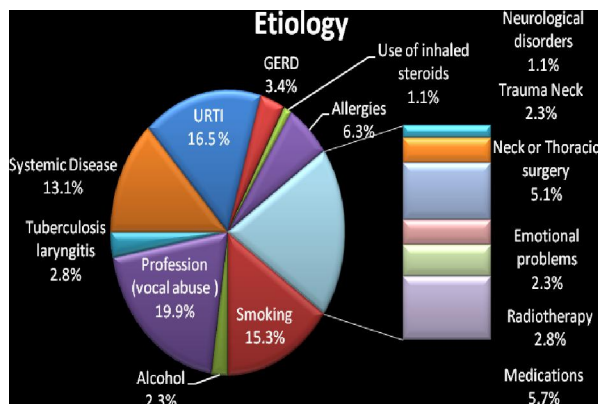
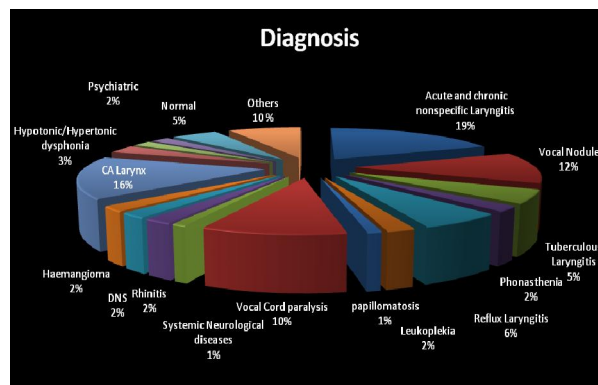


Table 5: Diagnosis of patients with Laryngeal pathologies (%age)



CONCLUSION

Flexible fiber optic nasopharyngoscopy /Laryngoscopy is safe, non-invasive and the best procedure for diagnosis of hoarseness. We performed 100 cases with excellent diagnostic accuracy without leading to any serious complication. Flexible fiber optic nasopharyngoscopy /Laryngoscopy should be adopted in all out patient departments of tertiary care hospitals for accurate diagnosis and proper management of patients with laryngeal pathologies presented with hoarseness. Flexible fiber optic nasopharyngoscopy is a very effective diagnostic tool in patients with upper airway symptoms. It takes less than 5 minutes, patient and surgeon can see the condition of nose, nasopharynx and larynx. The procedure offers flexibility in use and can be accomplished under local anesthesia in OPD setting.

Hoarseness is a significant presenting complaint of laryngeal disorders and should not be ignored. Flexible fiber optic nasopharyngoscopy /Laryngoscopy is the best diagnostic tool for diagnosis of hoarseness.

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