

Assessment of Role of Lifestyle on Laryngeal Dysfunction AetiologyVijaya Bala Murmu¹, M. Junaid Alam²¹Senior Resident, Dept. of ENT, SNMMCH, Dhanbad, Jharkhand, India²Senior Resident, Dept. of ENT, SNMMCH, Dhanbad, Jharkhand, India

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Conflict of interest: Nil

Abstract:

Introduction: The larynx is one of the most highly innervated organs in humans and serves a number of vitally important, complex and highly evolved biological functions. Although symptoms of laryngopharyngeal reflux are commonly seen in ENT clinics, their aetiology and prevalence in the population remains unknown. The aim of this review is to overview types of laryngeal dysfunction related to our daily lifestyle mostly encountered by Otorhinolaryngologists.

Method: This observational study was conducted in RIMS Ranchi in the selected group of patients {n+ 160} who presented in ENT OPD with complaint of globus sensation, sudden choking sensation, throat irritation, dysphagia, chronic cough, ear problem (otitis media, eustachian tube dysfunction), hoarse voice, post nasal drip, heartburn, voice change, and frequent throat clearing.

Results: Majority of the patients with laryngeal dysfunction were males of middle socioeconomic strata addicted to smoking and alcohol, had a high BMI, frequently had spicy, fermented food or tea/coffee or aerated drinks. Majority also had improper dinner habits and sleeping patterns post dinner.

Keywords: Laryngeal dysfunction, BMI, smoking, alcohol.

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Introduction

The larynx is one of the most highly innervated organs in humans and serves a number of vitally important, complex and highly evolved biological functions [1]. On day to day basis, the larynx functions autonomously and without requirement for excessive cortical regulation, adapting to address a set of complex functional demands and competing interest of optimizing airflow, while protecting airway and facilitating phonation and swallowing [2]. Dysfunction of larynx accounts for number of respiratory symptoms which otherwise appear incongruous with clinical disease like asthma, which contribute to development of symptoms that appear refractory to treatment. These are associated with inappropriate glottic closure and chronic cough. Loss of normal function associated with voice or swallowing disturbance, vigorous exercise [3], mass irritant exposure, stress [4]. It was first reported in 18th century by Dunglison [5] in hysteric females. It was first visualized by laryngoscope by Mackenzie [6]. Over time, conditions causing transient laryngeal obstruction have attracted many labels, sometimes descriptive (e.g, paradoxical vocal fold motion) and sometimes pejorative implication (e.g, Munchausen stridor, emotional croup, factitious asthma [7,8]). Vocal cord dysfunction (VCD) is described as

inappropriate adduction of vocal cords during inhalation and sometimes exhalation. Women experience vocal cord dysfunction more often than men. It can happen to anyone, including kids as young as eight years old, but it is most common in women [2] aging 20 to 40. The diagnostic gold standard for VCD is laryngoscopy during an attack [9]. Laryngopharyngeal reflux (LPR) is a condition when gastric content passes through upper oesophageal sphincter to enter the laryngopharynx. It is a global health concern and is associated with huge economic burden and decreased quality of life [10,11]. Recent studies indicate the prevalence of LPR is 31% and GERD in India ranges from 8- 20% which is comparable to west [12]. Although symptoms of laryngopharyngeal reflux are commonly seen in ENT clinics, their aetiology and prevalence in the population remains unknown. The aim of this review is to overview types of laryngeal dysfunction related to our daily lifestyle mostly encountered by Otorhinolaryngologists.

Materials and Methods

This observational study was conducted in RIMS Ranchi in the selected group of patients {n+ 160} who presented in ENT OPD with laryngeal dysfunction and was approved by the Institutional

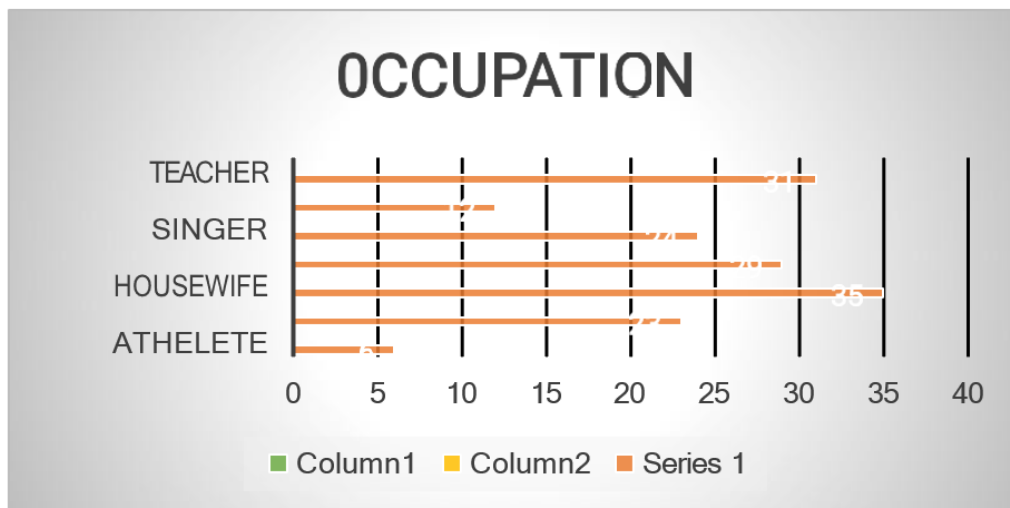
Ethics Committee, RIMS Ranchi vide memo no. 206 dated 21.12.2019. The inclusion criteria were age 10-60yr with complaint of globus sensation, sudden choking sensation, throat irritation, dysphagia, chronic cough, ear problem (otitis media, eustachian tube dysfunction), hoarse voice, post nasal drip, heartburn, voice change and frequent throat clearing and those who gave consent.

Exclusion criteria were age less than 10yr and >60yr, any case of RTA, Trauma, strangulation, throttling. All the data collected was entered on excel spread sheet after coding and further processed using SPSS version 20 (Statistical Package for Social Sciences). The data analysis was done by computing proportions, mean of standard deviation. Appropriate test of significance was used based on type of data. A p value < 0.05 was considered significant.

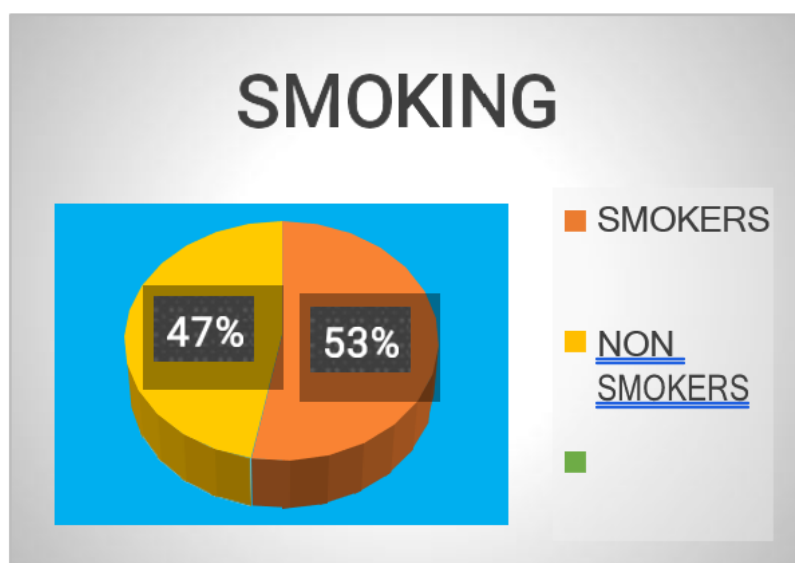
Results

Of the 160 cases, there were 49 (30%) number of patients in the age group of 31-40 years, comprising mainly of females 28 in number. Majority of males (27 in no.) had laryngeal dysfunction symptoms in age group of 21-30 years. only 6% of patients were between 10-20 year age group. Of the total number of patients ,41% were females and 59% were males.

Laryngeal dysfunction symptoms were most prevalent in age group of 31-40 years and seen mostly in males. Maximum patients in our study group with laryngeal dysfunction belonged to upper middle (33%) and lower middle (28.7%) socio economic group. laryngeal dysfunction was mainly seen in housewife (21.9%), followed by teacher (19.4%), office workers (18.15) and in athletes (3.8%).

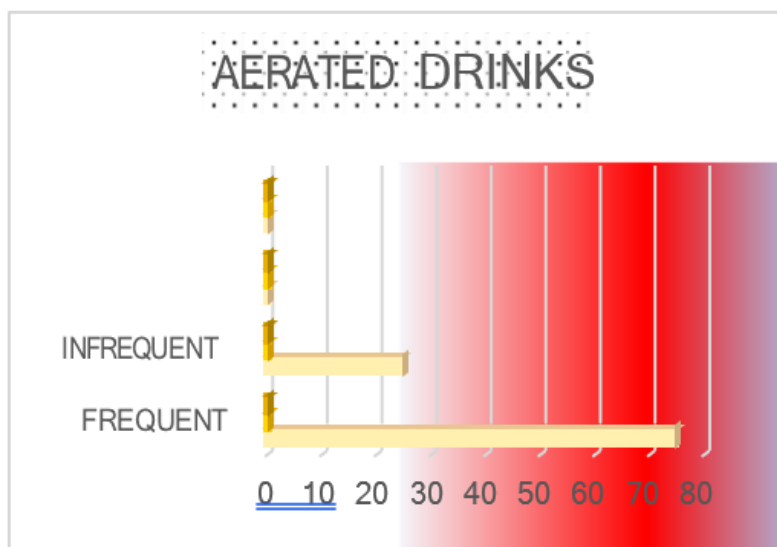
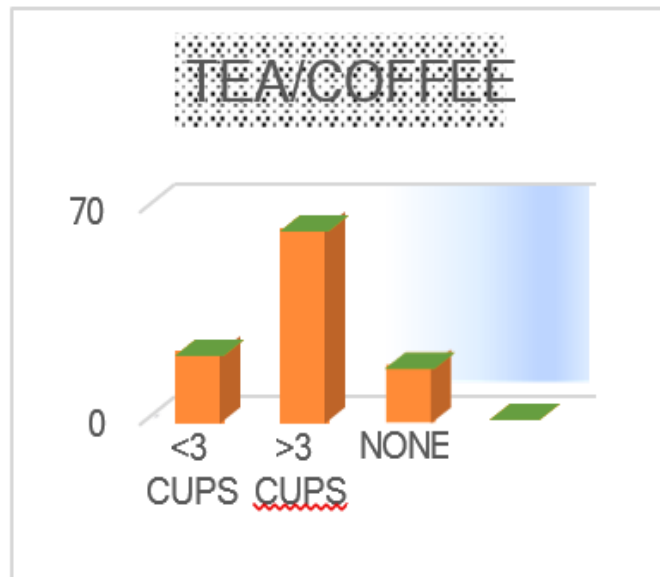
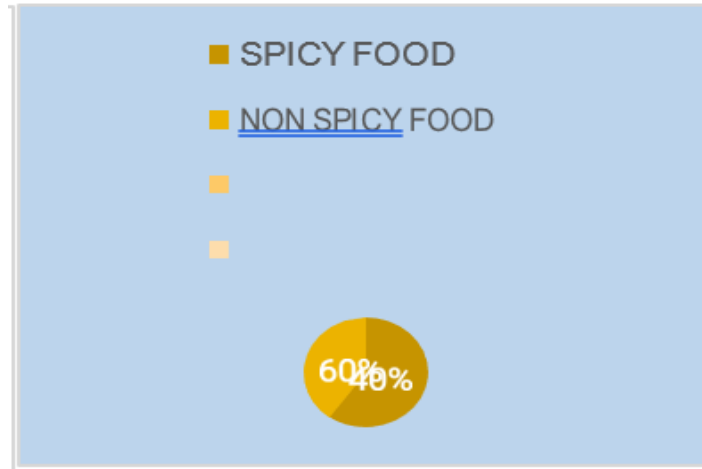


Most of the patients were smokers [52.5%] and also alcoholic [53.8%].



Most patients in my study were taking 3 meals/ day (63.1%), followed by people who took >3 meals/day

(26.3%). Among those maximum took spicy food in their diet and also had more cups of tea or coffee. Most of them had more intake of aerated drinks.

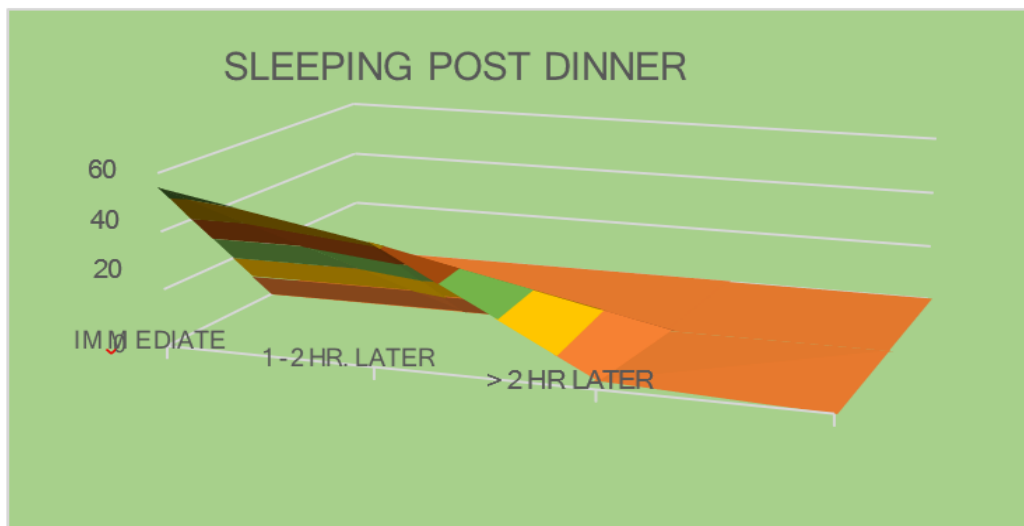


Most of the patients in my study with laryngeal dysfunction had weight above normal BMI i.e

overweight 41.3% +obese 16.3% (total = 57.6%). Also 76 % were frequently having fast food.

BMI	No. of Patients	%
Normal	68	42.5
Overweight	66	41.3
Obese	26	16.3

Most of patients used to take heavy amount of food at dinner time (59.4%) and used to sleep immediately after it. (55%)



Discussion

The present study was undertaken on 160 patients who had laryngeal dysfunction symptoms and visited ENT Department for the same. Sedentary lifestyle, addictions, neurological factors, dietary habits and weight gain have main role in causing laryngeal dysfunction in a person. This is not a life-threatening condition but it severely affects the quality of life for years and cause substantial distress. Jamie Koufman estimated the Laryngopharyngeal incidence at 10% of a general ENT outpatient clinic [13]. Based on geographical, diet and lifestyle habits variation, it is estimated that Laryngopharyngeal symptoms could be found in 5-30% of individuals [14] world over and 11% in Indian population [15]. In our study, most of the patients were males with mean age 37 (SD= ± 11.5) years. Body Mass Index (BMI) showed a positive association with laryngeal dysfunction which is similar to a study conducted by Nilsson et al. Immediate sleeping habit post dinner which is found to be statistically significant with p = 0.030.

Conclusion

From the above study we came to the final conclusion that sedentary lifestyle and dietary habits were the cause for laryngeal dysfunction. A large proportion of population belonging to upper middle and lower middle socioeconomic group are facing this problem. Consumption of spicy foods, fast

foods, >3 cup tea/coffee, fermented foods, aerated drinks, immediate sleeping post dinner and increase in BMI >25 were found to play a role in laryngeal dysfunction.

Abstinence from smoking and alcohol addiction has shown improvement in symptoms. Present day there have been increasing importance of laryngeal dysfunction being recognized in ENT practice. With ever increasing research in this field like the one we present herein, hopefully a clearer picture will emerge in future studies. We believe that ENT surgeons be fully aware of this condition as laryngeal dysfunction presents itself in many ways and is in itself a factor for many otolaryngological problems.

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