



## Pattern of Otorhinolaryngologic Diseases in Geriatric Population

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Article History	Abstract
Received: 06 June 2023 Revised: 05 Sept 2023 Accepted: 01 Nov 2023	<p><b>Objective-</b> To determine the pattern of otorhinolaryngological disorders in geriatric population and to establish a correlation with socioeconomic factors. <b>Methods-</b> A total of 1020 geriatric patients who attended the otorhinolaryngology department were included in the study. They were subjected to brief history, examination and the socioeconomic status. Results were analyzed by using appropriate statistical tests analyzing percentage and proportion. BG. Prasad's classification was used to categories patients into classes based on the socioeconomic status of an individual. Investigations pertaining to the system involved were carried out and the diagnosis was made according ly. <b>Results-</b> The most common affected organ was ear (33%) and the most common disease diagnosed among geriatric patient assessed was presbycusis (25.2%). Although epistaxis, chronic pharyngitis and malignancy larynx were also commonly diagnosed. Among all patients' males was on the lead and the middle-class patients mostly attended the otorhinolaryngology department. <b>Conclusion-</b> In present study the male patients formed the major bulk of geriatric patients. The majority of geriatric patients belonged to age group between 60 to 70years and most of them belonged to middle socioeconomic class. The aim of our study was to find out the pattern of otorhinolaryngological diseases in which we observed that most common affected organs among the geriatric patients was ear. Presbycusis out of all disorder was the most common ear disease among geriatric patients.</p>
CC License CC-BY-NC-SA 4.0	<b>Keywords:</b> Geriatric, Presbycusis, Malignancy, Epistaxis, Chronic pharyngitis, BG Prasad Classification

### 1. Introduction

Getting older is related to degeneration in different parts of the body. Ear, nose and throat disorders are among the common disabling factors in old age. As most of these ailments aren't life threatening, very little attention is paid to them. There is a scarcity of information about the pattern of otorhinolaryngologic diseases in geriatric people (1).

The statistics of age form an important component of population analysis because it gives an idea of the basic structure of the population. According to population census 2011 there are nearly 104 million elderly persons in India comprising of 53 million female and 51 million male (2).

A study was conducted on morbidity pattern among the geriatric population by Purty et al., in which high prevalence of otological morbidities in the elderly population was reported (3). Age-related hearing loss was found in most of the cases, with an audiogram revealing higher hearing loss is at higher frequencies.

Age related changes occur at various organ levels (4). In present study most common organ associated with geriatrics was ear and age-related hearing loss came out to be most common disorder which is in accordance with previous studies.

### 2. Materials And Methods

To study the pattern of diseases related to otorhinolaryngology this study was carried out over a period of 12 months in the Department of Otorhinolaryngology at Himalayan Institute of Medical Sciences. It is a prospective observational study in which a total number of 1020 patients of age more than 60 years were observed.

All patients were subjected to thorough examination and investigations pertaining to the system involved were carried out. examination of the ear was done by otoscope and microscope.

### **Procedure**

Hearing assessment was done with tuning forks and by audiometry. examination of larynx was done by indirect laryngoscopy. Direct laryngoscopy was carried out under general anesthesia in operation theatre whenever required. Rhinoscopy and nasal endoscopy were done for the examination of nose and nasopharynx whenever required. Various imaging modalities such as computed tomography scan or magnetic resonance imaging were used wherever required to arrive at a diagnosis or confirmation.

### **Evaluation of Data**

Data was collected and classified as per age, gender, presenting illness and diagnosis. Computer generated tools were used to store, group and analyze data so collected. Data was used to derive a statistical correlation between the prevalence of otolaryngology disease in the population as per the age, sex, socioeconomic and educational strata of the population among the patients visiting our centre.

### **3. Results and Discussion**

In our study a total of 1020 of geriatric patient were studied. Out of them 688 (67.45%) comprised of male patients and the rest 332 (32.54%) were female patients, from 60 to 70 years there were 711 (69.7%) patients; in which males were 460 (65%) while females were 251 (35%).

In present study, the socioeconomic status was also determined and data was analyzed. These subjects were divided as per modified BG Prasad Classification revised for the year 2016 into groups such as upper class, upper middle class, middle class, lower middle class, lower class based on the per capita income of the family (5). In present study it was observed that most of the patients belonged to middle class who amounts to 460 (45.1%) (Table 1).

**Table 1:** Distribution of geriatric patients according to their socioeconomic status

Socioeconomic status	Number of patients		
	Male (n=688)	Female (n=332)	Total (n=1020)
Lower	62 (9.0%)	31 (9.3%)	93 (9.1%)
Lower Middle	109 (15.8%)	67 (20.2%)	176 (17.3%)
Middle	311 (45.2%)	149 (44.9%)	460 (45.1%)
Upper Middle	166 (24.1%)	73 (22%)	239 (23.4%)
Upper	40 (5.8%)	12 (3.6%)	52 (5.1%)

On the basis of data collected in our study we observed that the most common presenting symptom in the population studied was decreased hearing in 295 (29%) patients and the most common affected organs among the patients presenting in the otorhinolaryngology clinic was ear 336 (33%) (Table 2).

**Table 2:** Distribution of various organs affected by otorhinolaryngology disease among geriatric patients

Organ Affected	Number of patients		
	Male (n=688)	Female (n=332)	Total (n=1020)
Ear Disorders	218 (31.7%)	118 (35.5%)	336 (33%)
Head and neck Disorders	90 (13%)	77 (23.2%)	167 (16.4%)
Nose Disorders	110 (16%)	38 (11.4%)	148 (14.5%)
Larynx Disorders	106 (15.4%)	37 (11.1%)	143 (14%)
Pharynx Disorders	110 (16%)	31 (9.3%)	141 (13.8%)
Oral cavity Disorders	54 (7.8%)	31 (9.3%)	85 (8.3%)

In today's world ageing among the population is the most significant demographic paradigm. It involves a shift in the population demographics arising due to reduction in mortality rates. Consequently, it has led to an increase in proportion of elderly people in the total population. India is one of the several developing nations where the geriatric population is increasing at a faster rate as compared to population as a whole (6).

In our study the male patients formed the major bulk of geriatric patients who visited the hospital for otorhinolaryngological services in comparison to female patients. The majority of geriatric patients belonged to age group between 60 to 70 years and most of them belonged to middle socioeconomic class (7).

The aim of our study was to find out the pattern of otorhinolaryngological diseases in which we observed that most common affected organs among the patients presenting complaints was ear which was followed by head and neck, nose and paranasal sinus, larynx, pharynx and oral cavity (8,9). Presbycusis out of all otological disorder was the most common ear disease among geriatric patients (10).

Among disorders of nose and paranasal sinuses, epistaxis secondary to hypertension was found to be the most common nasal disorder in geriatric patients. Malignancy of larynx was found to be the most common disease among the patients with laryngeal pathology in which glottic malignancy was found to be the most common, chronic pharyngitis in pharynx and in oral cavity malignancy tongue was the most common (10-12).

#### 4. Conclusion

It Hearing impairment has been identified to be the most common otorhinolaryngology problems in geriatric population, which is second to visual impairment. The data collected in our study is in accordance to the previous studies done in reference to the presentation of complaints by elderly patients in department of otolaryngology. In current study a detailed analysis of the diseases of elderly patients was made. Data was collected and classified in to groups based on diseases. The data collected suggests that presbycusis was certainly the most common otological disease among geriatric patients. It was seen in 262 (77.9%) subjects of total of 336 patients who have otological complaints. It forms the major bulk of patients seeking attention of an otorhinolaryngologist i.e., 26% of total patients visiting otolaryngology clinic at our centre.

#### Conflict of interest

The authors declare that they have no conflict of interest.

#### Informed Consent

An informed consent was taken from the patients participating in this study.

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