

Research Article

Otorhinolaryngological diseases of Geriatric visiting Tertiary Care Hospital in Nepal: An Overview of neglected and underrated field

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ABSTRACT

Background and Objectives: In Nepal, person aged 60 years and above is considered elderly. The population of Nepal is approximately 30 million, and people aged 60 years and above makes about one tenth of the total population. This study aims to report the main complaints and prevalence of otorhinolaryngological diseases in patients aged 60 years and above, who visited outpatient otolaryngology department of Manmohan Memorial College and Teaching Hospital, Kathmandu, Nepal during study period.

Material and Methods: It is a prospective descriptive cross-sectional study done in Manmohan Memorial College and Teaching Hospital, Kathmandu, Nepal for the duration of a year. All patients aged 60 years and above attending to Ear, Nose and throat (ENT) Outpatient Department were included in the study. The information including demographic data, ENT Complaints and physical examination were noted. Analysis of data was done and report was prepared.

Results: Total of six hundred and ninety three patients were enrolled over the period of one year for the study. Number of Male and female patients in the study were almost equal. The otological problems had the highest prevalence constituting 51.7% of the study population. More than Twenty eight (28.3 %) percent had oral and oropharyngeal pathologies. Nasal complaints constituted 10.8% of the study population and 9.2% had pathologies related to neck and others.

Conclusion: Hearing loss is the most common diagnosis among all the otological pathologies and epistaxis the most common nasal problem. Head and Neck malignancy is also increasing among the geriatric population.

Keywords: Geriatric; Otorhinolaryngology; ENT; Hearing loss

INTRODUCTION

Nepal is one of the developing countries in the South-East Asia. Total population of Nepal is approximately 30 million. In context of Nepal, person aged 60 years and above is considered to be elderly [1]. The population of Nepal is

approximately 30 million, and people aged 60 years and above makes about one tenth of the total population [2-4]. World- wide there is improvement in public health interventions, decline in fertility and mortality leading to increase in ageing population [5]. In Nepal, there is increase in percentage of elderly population in

the country from 5.0% in 1951 to 8.1% in 2001 [6-8]. This increasing pattern with demographic changes alerts us for substantial challenges for the social and health care services for the ageing world with elderly people rise among the population [9].

As the life expectancy increases the problems also increases proportionately. Ageing is a natural and inevitable process with degeneration and atrophy of various organs and parts of the body leading to different health issues [9]. Our domain includes diseases and conditions that have high prevalence in late life, especially hearing loss, balance disorders, nasal bleedings related to the chronic diseases and head and neck malignancies. Most of the ENT diseases are usually not life threatening but can interfere with social interaction of geriatric patient and may lead to worsening of the co-existent other health problems.

In Nepal, traditionally elderly are looked after by the son and daughter in the joint family. However due to modernization, migration of young people for better opportunities have significantly threatened the tradition, leading to high levels of impoverishment, homelessness and ill health among the elderly population.

Government of Nepal has formulated National policies on ageing and problems of elderly addressed at various levels in acts, code and conducts and regulations like Senior Citizen act 2063, Old Age Allowance, Senior citizens treatment Guidelines 2061 and many more [5]. Due to inadequate trained human resources and fund, effective and efficient implementation of the development plans and policies of government has been very limited.

As geriatric population is on increasing trend, ENT specialist expects to see more geriatric patient seeking treatment over the next few decades. So, knowledge of the prevalence of

different ENT diseases and basic principles of geriatric medicine will become must for practicing in our domain as well. The fact that most of the otorhinolarygology diseases of this age group are not life threatening, little or no attention is paid. Hence, the scarcity of research about otorhinolarygology diseases in geriatric Nepalese population.

This study was done to assess the prevalence of otorhinolarygology disease among the elderly population and their socio-demographic status among the patients who presented in our outpatient Department. This study can be used to define important areas for future studies of elderly population to make their quality of life better.

MATERIALS AND METHODS

This study was conducted Total of 11,861 patients were registered in the outpatient dept in a year. Patient aged less than 60 years of age and not willing to give consent were excluded.

It is a prospective descriptive cross-sectional study determining demographic data, socio-economic data and prevalence rate of otorhinolarygology disease among the elderly population aged 60 years and above who visited outpatient department of Otorhinolaryngology. Informed consent was taken for the study. Data were collected from the patient directly during the outpatient visit. Those who had difficulty communicating were assisted by the patient party for the data collection. Data were collected and entered in Microsoft Excel and analysis of the data was done using SPSS version 16.

RESULTS

During the study period of one year, 11,861 patients registered in the outpatient Department of Otorhinolarygology, Manmohan Memorial College Teaching Hospital, Swoyambhu,

Kathmandu, Nepal. About 84% (n=693) of the total patients were aged 60 years and above and were consider as study subjects. In our study, we had almost equal number of elderly male and female patients as shown in Table 1. Table 2 shows that most of the elderly stayed in joint family. It is evident from table 3 that most of the elderly among our study subject were not engaged in any form of occupation.

Table 1: Distribution of Age and Sex of study subjects

Sex	Age (In Years)	Patient Number	Total
Male	60-64	114	346 (49.9%)
	65-69	79	
	>70	153	
Female	60-64	127	347 (50.1%)
	65-69	86	
	>=70	347	
Total			693

Table 2: Distribution of Family type of study subjects

Family Type	Frequency (percent)
Joint	585(84.4%)
Nuclear	108(15.6%)
Total	693(100%)

Table 3: Distribution of study subjects according to their engagement in any occupation

Occupation	Frequency	Percent
Engaged	248	35.8
Not Engaged	445	64.2
Total	693	100.0

Table 4: Chief complaints of study subjects

Chief complains	Frequency (%)
Ear	358 (51.7%)
Nose	75 (10.8%)
Oral cavity and Oropharynx	196 (28.3%)
Neck and others	64 (9.2%)
Total	693 (100 %)

Sensoneurinal hearing loss accounted the predominant ear pathology followed by Otitis externa and ear wax. Vertigo was another common complaint seen in the study, with 5.5% among the elderly population (Table 5). Among the study subjects, most patients presented with

ear complaint accounting for 51.7% and patient presenting with neck pathologies were least as shown in table 4.

Table 5: Distribution of Ear Complaint of study subjects

S. N	Disorders of Ear	Frequency	Otological (%)	Percent in total
1	Sensoneurinal hearing loss (SNHL)	126	35.2 %	18.2 %
2	Otitis Externa	59	16.5 %	8.5 %
3	Wax	47	13.1 %	6.8 %
4	Vertigo	38	10.6 %	5.5 %
5	Chronic otitis media (COM)	24	6.7 %	3.5 %
6	Otomycosis	13	3.6 %	1.9 %
7	Tinnitus	8	2.2 %	1.2 %
8	Myringitis	8	2.2 %	1.2 %
9	Acute otitis Media (AOM)	8	2.2 %	1.2 %
10	Referred Otalgia	10	2.8 %	1.4 %
11	Traumatic Perforation	4	1.1 %	0.5 %
12	Eustachian tube disorder (ETD)	5	1.4 %	0.7 %
13	Foreign body ear	4	1.1 %	0.6 %
14	Basal cell carcinoma ear	1	0.3 %	0.1 %
15	Split ear	1	0.3 %	0.1 %
16	Perichondritis	2	0.6 %	0.3 %
	Total	358	100%	51.7%

Table 6: Distribution of Nose Complaint of study subjects

Disorders of nose	Frequency	Nasal %	Percent of total
ALL. RHINITIS	18	24%	2.6%
ANOSMIA	2	2.7%	0.3%
ARS	6	8%	0.9%
DNS	11	14.7%	1.6%
EPISTAXIS	27	36%	3.9%
NASAL MASS	2	2.7%	0.3%
RHINITIS	2	2.7%	0.3%
STI NOSE	1	1.3%	0.1%
VESTIBULITIS	6	8%	0.9%
Total	75	100	10.9%

Table 6 showed that 10.9 % of the studied patients has nasal problem and among disorder of nose the most common nasal presentation is epistaxis. STI nose is the least common nasal problem (table 6).

Table 7: Distribution of Oral cavity and Oropharyngeal complaint of study subjects

S. N	Diseases of oral cavity and oropharynx	Frequency	Oropharyngeal percent (%)	Percent in total (%)
1	Laryngopharyngeal reflux diseases (LPRD)	40	20.4	5.8
2	Pharyngitis	46	23.5	6.6
3	Non-neoplastic oral lesions	25	12.7	3.6
4	Apthous ulcer	20	10.2	2.9
5	Carcinoma larynx	11	5.6	1.6
6	Carcinoma esophagus	6	3.1	0.9
7	Laryngitis	9	4.6	1.3
8	Globus	7	3.6	1.0
9	Upper resp. tract infections (URTI)	12	6.1	1.8
10	Carcinoma oral cavity and oropharynx	4	2.0	0.6
11	Vocal cord pathologies	9	4.5	1.3
12	Foreign bodies	5	2.5	0.7
13	Peritonsillitis	1	0.5	0.1
14	Soft tissue injuries	1	0.5	0.1
	Total	196		28.3%

More than twenty-eight percent, more precisely, 28.3% of the total studied population had complaint related to oral cavity and oropharynx. Pharyngitis was the most common manifestation among the patients with problem of oral cavity or oropharyngeal with other pathologies being common is laryngopharyngeal reflux disease, non-malignant oral lesions, apthous ulcer and true vocal cord pathologies. Carcinoma of larynx

was seen in 5.6%, carcinoma esophagus in 3.1% and carcinoma involving oral cavity was seen in 2% of all the oropharyngeal cases (Table 7).

Apart from those mentioned above 9.2% of the patients had problems related to neck swellings and other pathologies like neuralgia, Bell's palsy and other. Acute inflammatory conditions of the submandibular gland (14.1%) and parotid gland (9.4%) were common presentations. One percent of the total patients presented with neuralgic pain. More than six percent (6.3%) of the cases had reactive nodes and 6.3% had metastatic nodes. Goiter (6.3%), neck abscess (4.7%), facial injuries (4.7%), Bell's palsy (3.1%) were other manifestations in neck among the patients presenting to our outpatient department.

More than sixty-three percent (63.6%) of the studied population had known chronic disease co-morbidities.

DISCUSSION

Ageing is the process of becoming older. It represents all the changes accumulated in human being over the period of time [10]. Increase in older population in low- and middle-income countries, is mostly due to reductions in mortality at younger ages, particularly during childhood and childbirth, and from infectious diseases [11]. In high-income countries, decline in mortality among older causing increase in life expectancy has a significant impact [12].

Nepal is one of the developing countries in the South-East Asia Region. Here, a quarter of the total population has living standard below the international poverty line [13]. Percentage of elderly in Nepal is not as high as in high-income countries. Due to declining infant mortality and the crude birth rates, there is trend of increasing proportion of elderly within our community [3].

In our study over a period of one year, 693 patients accounting 5.84% of the total patients (11,861) visited Otorhinolaryngology outpatient department who were aged 60 years and above. The male to female ratio found in this study is 1:1. In a study done by Nepali R et al the ratio was 1:0.9, which is almost similar to our study. [14] The study done by Giri PA observed 1.61:1 M: F ratio [15]. Another study done by Mohanta GS et al showed M: F ratio of 1.75:1 [16]. As the study done by us and Nepali R et al are in the urban setting, it shows no discrepancy in gender [14]. On the contrary, the two study, one by Giri and next study by Mohanta et al in the rural setting giving the different result [15, 16]. This may be the result of typical social trends relating to gender bias, ignorance and negligence towards the female member in the family.

The studied showed 41.41% of the total patients were more than 70 years of age, 34.77% were in the age group from 60 to 64 years and 23.80 % were in the age group of 60 to 64 years. Other studies have showed most of the older patients in the range 60-69 years [14-16]. In our context most of the patients were aged more than 70 years, which can be the result of the facility of geriatric medicine with geriatric OPD and day care rehabilitation center in our hospital, where this study was conducted.

At a biological level, ageing is associated with gradual lifelong accumulation of wide variety of molecular and cellular damage that leads to generalized impairment in many body functions, and an increased vulnerability to environmental challenges and a growing risk of disease and death [17].

Ageing is related to degeneration and atrophy of various organs of the body leading to different health problems. Ageing is related with decline in both vision and hearing as well, although there is marked diversity in how the person experiences

it at an individual level. Age related hearing loss is known as presbycusis. It is usually bilateral and mostly marked at higher frequencies of hearing level. It is the result of cochlear ageing, environmental exposures, genetic predispositions and increased vulnerability from physiological stressors and modifiable lifestyle behaviors [18].

In our study, among the elderly patient, ear problem was the most common presenting symptom in the outpatient department of Otorhinolaryngology. Sensorineural hearing loss is the leading ear problem among the studied population accounting 35.2% of all the otological manifestations and 18.2% of the total cases studied. Many studies done worldwide has shown more than 180 million people older than 65 years have hearing loss that interferes with understanding normal conversational speech [19-22]. The high incidence of sensorineural hearing loss corresponds to the results obtained elsewhere in the same study population [14-16]. Hearing loss has a direct impact on the quality of life of the patient especially with low socioeconomic status causing deprivation in health care facilities due to various reasons. Untreated hearing loss can have important implication in everyday life leading to decrease in communication and leading to social isolation and loss of autonomy, with associated anxiety, depression and decline in cognitive function [23]. Other predominant ear pathologies seen in the study were otitis externa and ear wax. A person will perceive something in the canal blocking the sound as the reason for hearing loss and tends to scratch the ear leading to otitis externa. This must be the reason we observed more otitis externa among our studied population.

Ear wax is reversible, frequently overlooked cause of ear blockage causing conductive hearing loss among elderly people. Risk factors for cerumen impaction can be ear canal hair, hearing

aids and bony growths like osteoma [24]. Studies have shown incidence of cerumen impaction between 8% and 35% [25-27]. In our study, incidence of ear wax was 6.8% of the total cases studied.

More than one percent (1.2%) of the total cases had tinnitus as the presenting symptoms. Incidence of tinnitus was found to be very less in our study compared to the other studies showing incidence from 6.54% in the study done by Mohanta GS et al to 12.9% in the study done by Nepali et al. [16, 14] However tinnitus is one of the most difficult symptoms to treat in otology, especially with the idiopathic origin and refractory to any treatment. This symptom has to be taken seriously as it can be troublesome to the patient leading to suicidal tendency in extreme cases.

The vestibular apparatus is also affected by degenerative changes with ageing. The incidence of vertigo in our study was 5.5% of the total studied patients. The incidence found was 5% in the study done by Okhakhu et al [28]. Study done by Nepali R et al observed the incidence to be 13.8% and another study done by Singh and Chaturvedi found 9.77% vertigo cases. [14, 29] Patients with vertigo are most likely to land in the emergency department than in the outpatient department. Moreover, it might be due to the fact that vertigo is the symptoms of multifactorial origin, other disciplines like internal medicine, neurology etc manages the patients with vertigo leading to decrease in incidence in our study.

About seven percent (6.7%) of the otological cases were chronic suppurative otitis media (CSOM). The study conducted by Nepali R et al showed 19.4 % and another study conducted by Mohanta GS et al showed 17.34% of CSOM among the aural cases [14, 16]. The prevalence of CSOM may have varied because of the demographic variable of the studied population.

28.3% of the population presented with the problems related to the oral cavity and oropharynx. Pharyngitis was the most common manifestation of oropharynx and oral cavity problem accounting for 23.5%, which is almost the same as in the study done by Ozler GS et al and Mohanta GS et al. [30, 16]. Age related degenerative and atrophic changes in the pharyngeal wall and muscles may be the cause for this presentation. Laryngopharyngeal reflux was the next common oropharyngeal manifestation with occurrence of 20.4 % of the oropharyngeal cases and 5.8% of all the studied population. Mohanta GS et al also observed 11.97% of examined patients to have laryngopharyngeal reflux [16].

Poor dental hygiene and dentures and deficiency in vitamins in old age may be related to the high incidence of aphthous ulcer among the population. More than ten percent (10.2%) of oropharyngeal pathology was aphthous ulcer. 12.7 % of the cases had non-malignant oral lesions which was almost similar to the study done by Nepali et al [14].

About two percent (1.6%) of the total patients were diagnosed as carcinoma of the larynx and 0.9% of the total cases were diagnosed to have esophageal carcinoma. In the study done by Miller et al average age of 405 patients with esophageal carcinoma was above 60 years of age [31].

Due to changes in mucous variations, airflow patterns, inflammatory and infectious stimuli there will be changes in nose both internally and externally. 10.8% of the studied population had nasal pathologies. Majority of the patients presented with epistaxis due to various causes accounting for 36% of the nasal pathologies and 3.9% of the total studied population. Our finding is similar to the other studies by Nepali R et al (32.9%) and Mohanta GS et al (37.60%) done in

the old age population [14,16]. Allergic rhinitis was present in 24% of the patients with nasal symptoms which was higher than in the study done by Mohanta GS et al (6.72%). This may be because of high level of air pollution in our set up compare to them [16].

Anosmia (2.7%) is also one of the common pathologies in the old age due to decrease in the number of olfactory receptor cells, thinning of olfactory epithelium and also decrease in the size of olfactory bulb due to environmental damage leading to decrease in smell sensitivity.

In our study, we observed that, 64.2% of the patients were not engaged in any work and were dependent on their family for the livelihood, whereas 35.8% of the population was engaged in some kind of activities for living. It has been noted that in the United states ,23% of the new entrepreneurs during the year 2011-2012 were aged 55-64 and many successful entrepreneurs were older than 50 years of age [32, 33]. But in low income countries like ours where people have limited educational opportunities in their youth, the life course may be less clearly demarcated.

Rapid globalization seen because of the advancement in transportation and communication has created opportunities for the older people with enviable knowledge and skills whereas for some this has cutoff the safety nets that might otherwise be available. Migration of the younger generation for their better growth, diversification in occupation from agricultural to non-agricultural, depleting socio-cultural values etc have been causing problems for the familial security among the elderly people of Nepal. In our study, we observed 84.4% of the elderly people are staying in joint family and 15.6% are staying as nuclear family. In European countries, more

than 40% of women aged more than 65 years and older live alone [34]. In our neighboring country India, it was observed only 20% of households include people living in joint family [35]. Nepal and India are few of the countries where strong family ties are assumed to be in continuation.

In our study 63.6% of the studied population has one or more concomitant chronic health issues. This figure shows good approach of the health facilities in our studied population. A study done in old age homes of Kathmandu, observed more than half of the residents had at least one chronic health problem [36].

With increasing age, multiple physiological changes occur and so does the risk factors for the chronic diseases. In an elderly individual it is important to consider not just the specific disease but how different co morbid conditions interact and impact, so as to know a better way of managing for a better outcome.

Global ageing is the new challenge worldwide. The results from this study are applicable to a handful of geriatric patients we encountered during our study period in our otorhinolaryngology outpatient department of Manmohan Memorial Medical College and Teaching Hospital, Kathmandu, Nepal. The number of elderly aged 60 years and above has been projected to double by 2050, with bigger increment expected in low and middle income countries [37]. Community based study of otorhinolaryngological problems among the elderly would reveal the true magnitude of the problem in Nepal.

CONCLUSION

Global ageing is the new challenge worldwide. Nepal can't be away from this. So, for country like Nepal, this possesses a serious challenge to overall available health services. Increase in Head

and Neck carcinomas, epistaxis among elderly, presbycusis leading to decrease in quality of life of the elderly, tinnitus leading to suicidal tendencies in extreme conditions, laryngopharyngeal reflux bothering the daily life of the patient are some of the concerns in the field of otorhinolaryngology. We need to have otolaryngologist, well versed in the needs of older patient requiring medical, social and psychological aspects. We need to improvise on improving the quality of living of our senior citizens and enhance the society in general.

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