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Otorhinolaryngological, Head and Neck Morbidity Profile of Geriatric Patients in a Tertiary Health Institution in a Developing Country

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Abstract
Background*: There is need to increase otorhinolaryngological services for geriatric patients in developing countries.*
This study aimed at determining the prevalence, sociodemographic features, types, comorbid illnesses and Management of otorhinolaryngological diseases in geriatric patients in a developing country.
Materials and Methods*: This was a retrospective study involving all geriatric patients who presented to the Ear, Nose and Throat Department of our center. This study was carried out using the medical records of patients who presented over a period of 2 years.*
The medical case records of the patients were retrieved.
The data was analysed using Statistical Package for Social Sciences (SPSS) version 18.
Results*: Prevalence of geriatric otorhinolaryngology, head and neck diseases was 13.8%. There were 42.9% males with a male to female ratio of 1:1.5. Urban dwellers in 52.8% were predominant over rural dwellers in 47.2%.*
Common geriatric otorhinolaryngological diseases were presbyacusis,cerumen auris, rhinosinusitis and pharyngolaryngitis in 30.7%, 21.7%, 10.8% and 7.2% respectively.
The anatomical location of otorhinolaryngologic diseases in geriatric were66.9% ear diseases, 18.7% nasal diseases and 12.7% throat diseases.
The most frequent geriatric otorhinolaryngologic morbidity were hearing impairment in 54.8%, pain in 31.3%, discharge in 29.5%, tinnitus in 20.5%, snoring in 16.3% and itching in 15.7%.
Common comorbid illnesses in the geriatric patients were hypertension, arthritis and diabetes mellitus in 22.3%, 19.9% and 14.5%.
Common effect of otorhinolaryngologicdiseases on quality of life in these geriatric patients were 29.5%isolation, 28.9% embarrassment, 25.9% and 22.9% depression.
Various forms of pre-hospital treatment occurred in 67.5% of thepatients. 62.7% of the patients had conservative/medical treatment. Otorhinolaryngological surgery/procedure were done in 44.0% patients while 3.6% patients were referred to other center for further treatment.
Conclusion*: Otorhinolaryngological diseases among geriatric patients were enormous. There are associated comorbid illnesses and affectation of quality of life at presentation. Majority of the patients practice prehospital self medication.*

Keywords*: Otorhinolaryngological, Morbidity, Geriatric, Developing Country*

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I. Introduction

The number of elderly people is continuously on the increase worldwide. This increase is due to advancement in the field of medical science and better medical facilities and services. In developing countries, the percentage of elderly to the total population is lower in comparison with the developed countries [1,2]. There is associated increase in elderly otorhinolaryngological disorders. Age related otorhinolaryngological disorders is defined aslate adult onset diseases, where every underlyingcauses have been excluded[3,4].

Age 65 years was taken as the dividing line between middle age and the elderly by World Health Organization while the United Nations adopted 60 years. This age group makes up about 5% of these people are in Nigeria [5,6]. The elderly people are more prone to infection, injuries, neoplasm and various chronic

noncommunicable and degenerative diseases (hypertension, diabetes mellitus and arthritis) [1]. All these are associated with or causes ear, nose, throat, head and neck diseases [7-10].

The otorhinolaryngological functional disability is more alarming feature on the health status of the elderly. The associated physical, mental and social impairment may also contribute to the physiology and biological aging process. Old age diseases and their treatment are usually associated with complications [11,12].

Research on geriatric otorhinolaryngological, head and neck diseases is limited in developing countries. There are available meagre data on prevalence of ear, nose, throat, head and neck diseases among elderly. This study aimed at determining the prevalence, sociodemographic features, types, comorbid illnesses and Management of otorhinolaryngological diseases in geriatric patients in a developing country.

II. Materials and Methods

This was a retrospective study involving all geriatric patients who presented to the Ear, Nose and Throat Department of Ekiti State University Teaching Hospital, Ado Ekiti, Nigeria. The study was carried out using a proforma to extract relevant information from the medical records of elderly patients aged 60 years and above who presented at the ENT department between January 2016 and December 2017.

The medical case records of the patients were retrieved. Data extracted included bio data, sociodemographic features, presenting complaints, past medical/surgical history, family with social history, examination findings, diagnosis and treatment outcome were collated and documented.

The data was analyzed using Statistical Package for Social Sciences (SPSS) version 18. Frequency distribution tables, percentage, pie and bar charts were generated to express the data.

III. Results

A total of 1203 patients were seen in ear, nose and throat department during the study period, 166 (13.8%) of whom were aged 60 years and above.

The highest proportion of the subjects were in the age range of 65-69 (38.6%) while those in the 95-99 years accounted for the lowest proportion (1.2%).

On the sociodemographic features there were 72 (42.9%) males and 94 (57.1%) females with a male to female ratio of 1:1.5. Urban dwellers in 79 (47.2%) were predominant over rural dwellers in 87 (52.8%). Christian faith in 153 (91.8%) were commoner than Muslim faith in 13 (8.2%). Commonest form of education among the patients were primary, no formal and secondary education in 66 (40.5%), 61(35.6%) and 32 (19.5%) respectively. Majority of the patients occupation were 67 (39.7%) civil servants, 45 (28.3%) artisans and 36 (21.6%) farming. Minority of the patients occupation were business in 18 (10.5%). Commonest marital status was widow in 63 (37.6%). Others were49 (28.6%) married, 41 (24.2%) and 13 (9.6%) widower. Table 2 illustrated sociodemographic features of geriatric patients.

In this study, common geriatric otorhinolaryngological diseases were presbyacusis,cerumen auris, rhinosinusitis and pharyngolaryngitis in 51 (30.7%), 36 (21.7%), 18 (10.8%) and 12 (7.2%) respectively. These were followed bysinonasal tumour in 9 (5.4%), otitis externa in 8 (4.8%) and foreign body in ear in 5 (3.0%). Table 3 demonstrated otorhinolaryngologic diseases among geriatric patients.

The anatomical location of otorhinolaryngologic diseases in geriatric were 111 (66.9%) cases of ear diseases, 31 (18.7%) cases of nasal diseases and 21 (12.7%) cases of throat diseases. Head and Neck diseases among geriatric were in 3 (1.8%). Figure 1 showed anatomical distribution of the otorhinolaryngologic diseases among geriatric patients.

The most frequent clinical features of geriatric otorhinolaryngologic diseases in this study were hearing impairment in 91 (54.8%), pain in 52 (31.3%), discharge in 49 (29.5%), tinnitus in 34 (20.5%), snoring in 27 (16.3%) and itching in 26 (15.7%). Additional clinical features were 22 (13.3%) headache, 13 (7.8%) nasal blockage and 13 (7.8%) odysphagia/odynophagia. Table 4 demonstrated clinical features among geriatric patients.

Common comorbid illnesses in the geriatric patients were hypertension, arthritis and diabetes mellitus in 37 (22.3%), 33 (19.9%) and 24 (14.5%). These were followed by 14 (8.4%) cardiopulmonary diseases and13 (7.8%) visual disorder. Table 5 demonstrated comorbid illnesses among geriatric patients.

Common effect of otorhinolaryngologicdiseases on quality of life in these geriatric patients were 49 (29.5%)isolation, 48 (28.9%) embarrassment, 89 (25.9%) and 38 (22.9%) depression. Others were aggressiveness in 32 (19.3%)social dysfunction in 31 (18.7%)and anxiety in 27 (16.3%). Figure 2 demonstrated quality of life among geriatric patients.

In the management of otorhinolaryngologic diseases among geriatric patients in this study, pre-hospital treatment occurred in 112 (67.5%) of thepatients. 104 (62.7%) of the patients had conservative/medical treatment. Various forms of otorhinolaryngological surgery/procedure were done in 73 (44.0%) patients while 6 (3.6%) patients were referred to other center for further treatment. Table 6 illustrated management of the otorhinolaryngologic diseases among geriatric patients.

Table 1 Age group distribution of the geriatric patients

Age (years)	Number	Percentage (%)
60-64	51	30.7
65-69	64	38.6
70-74	21	12.7
75-79	12	7.2
80-89	7	4.2
90-94	3	1.8
95-99	2	1.2
≥ 100	6	3.6
	166	

Table 2 Sociodemographic features of the geriatric patients

Sociodemographic features	Number	Percentage (%)
Sex		
Male	72	42.9
Female	94	57.1
Dwelling		
Rural	79	47.2
Urban	87	52.8
Religion		
Christian	153	91.8
Muslim	13	8.2
Education level		
Nil	61	35.6
Primary	66	40.5
Secondary	32	19.5
Post secondary	7	4.4
Previous/present occupation		
Business	18	10.5
Artisan	45	28.3
Civil servant	67	39.7
Farming	36	21.6
Marital status		
Married	49	28.6
Divorced	41	24.2
Widow	76	47.2

Table 3 Otorhinolaryngologic diseases among geriatric patients

Otorhinolaryngologic diseases	Number	Percentage (%)
Presbyacusis	51	30.7
Cerumenauris	36	21.7
Chronic suppurative otitis media	2	1.2
Otitis externa	8	4.8
Vestibular disorder	4	2.4
Ototoxicity	2	1.2
Noise-Induced Hearing Loss	3	1.8
Foreign body ear	5	3.0
Rhinosinusitis	18	10.8
Sinonasal tumour	9	5.4
Nasopharyngeal carcinoma	2	1.2
Nasal polyps	2	1.2
Pharyngolaryngitis	12	7.2
Pharyngeal tumours	4	2.4
Laryngeal carcinoma	1	0.6
Foreign body throat	4	2.4
Parotid tumour Cervical adenitis	2	1.2

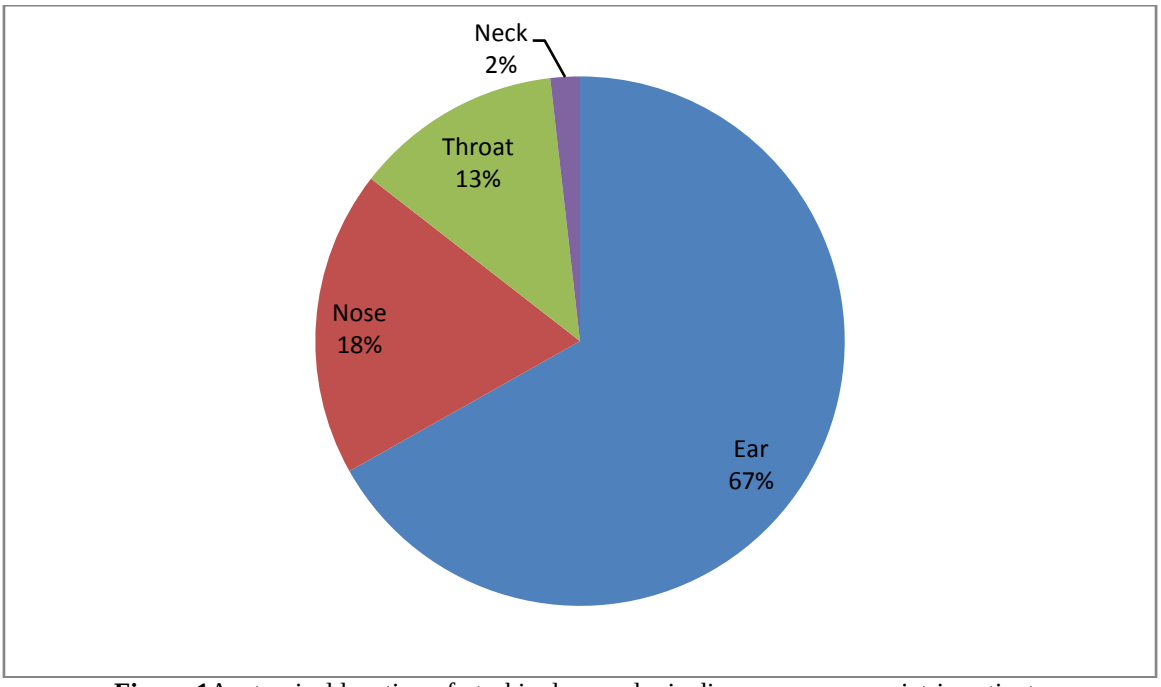

Figure 1 Anatomical location of otorhinolaryngologic diseases among geriatric patients

Table 4 Clinical features among geriatric patients

Clinical features	Number	Percentage (%)
Pain	52	31.3
Hearing impairment	91	54.8
Vertigo	8	4.8
Itching	26	15.7
Discharge	49	29.5
Tinnitus	34	20.5
Nasal blockage	13	7.8
Epistaxis	12	7.2
Catarrh	8	4.8
Headache	22	13.3
Sore throat	12	7.2
Dysphagia/odynophagia	13	7.8
Difficulty breathing	11	6.6
Snoring	27	16.3
Hoarseness	8	4.8

Table 5 Comorbid illnesses of among geriatric patients

Comorbid illnesses	Number	Percentage (%)
Diabetes mellitus	24	14.5
Hypertension	37	22.3
Arthritis	33	19.9
Visual disorder	13	7.8
Cardiopulmonary diseases	14	8.4

Figure 2 Effects of Otorhinolaryngologic morbidity on geriatric patients

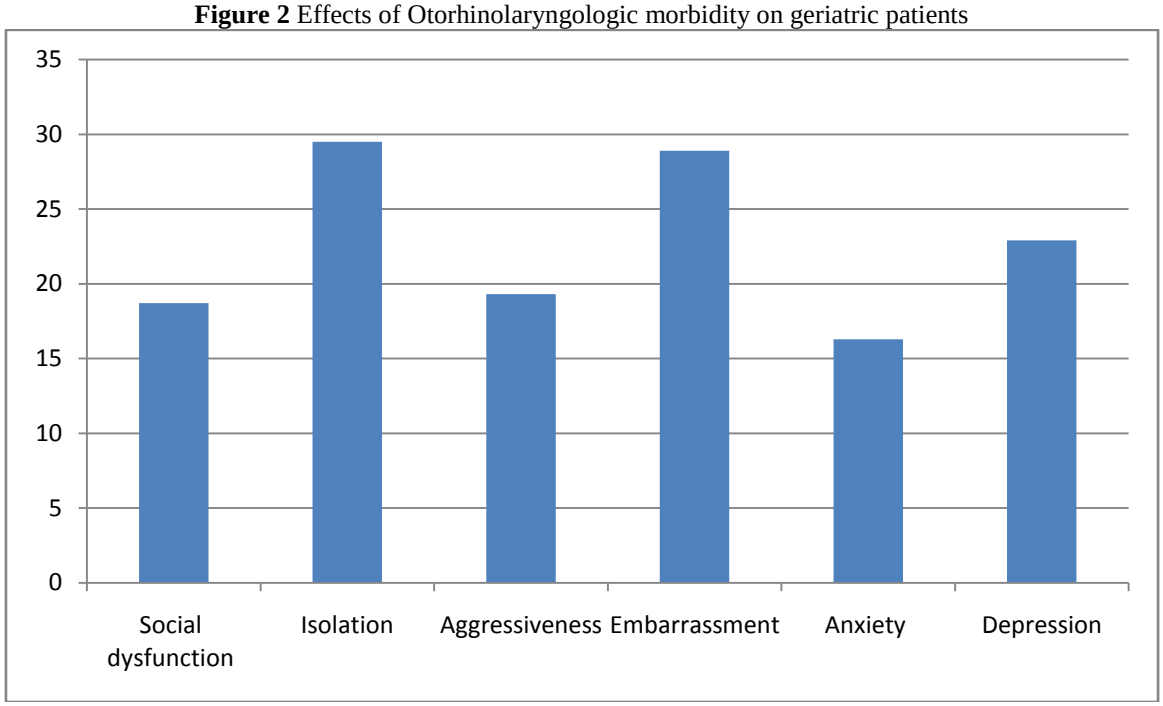

Table 6 Management of otorhinolaryngologic diseases among geriatric patients

Management	Number	Percentage (%)
Prehospital	112	67.5
Conservative/medical	104	62.7
Surgery/procedure	73	44.0
Referral	6	3.6

Table 7 Psychosocial effects of Otorhinolaryngologic morbidity on geriatric patients

Variable	Number	Percentage (%)
Social dysfunction	31	18.7
Isolation	49	29.5
Aggressiveness	32	19.3
Embarrassment	48	28.9
Anxiety	27	16.3
Depression	38	22.9

IV. Discussion

Research work on otorhinolaryngological, head and neck diseases among geriatric patients in a developing country is scarce, especially in Nigeria probably because researchers have not paid adequate attention to this growing segment of the population. Also most of the available otorhinolaryngologiist reside in the cities. This study shows a significantly high prevalence of geriatric otorhinolaryngological, head and neck diseases. Geriatrics population is on the rise and it is projected that this will increase in the near future in developing countries due to global human development report released by the United Nations Development Programme (UNDP). (Reference is needed here)

The sociodemographic features of geriatric patients in this study revealed high prevalence of age 65-69 years, female preponderance, predominant urban dwellers, mainly primary school education holder, majorly civil servants and commonest marital status was widow. These findings are contrary to findings in other studies [4,13]. This could be due to geographical difference in the study population. The finding is however similar to report from study done southern part of Nigeria [14] and this could be due to geographical similarity of the study population.

In this study, common ear, nose, throat, head and neck clinical presentation among geriatric patients were hearing impairment, pain in head and neck region, discharge, tinnitus, snoring and headache. These were results of the organ ageing and their associated degenerative changes. The degenerative changes includes temporomandibular osteoarthritis and cervical spondylosis. This findings was reported in other studies on degenerative diseases [15-17].

The major otorhinolarynlogy, head and neck diseases among the studied geriatric patients was ear diseases. This is followed by nasal and throat diseases. This findings is similar to report from other studies in the

southern and western part of Nigerian [7,9]. Similar report was noted in a study done in other west African country [13].

Commonest otologic diseases in this study was presbycusis followed by cerumen auris, otitis externa, foreign body impaction and vestibular disorder. Presbycusis is due to otologic degenerative changes. Hearing impairment and ear blockage leads to indiscriminate use of objects to clean the ear. This usually resulted into otitis externa and foreign body impaction in the ear. Srinivas and Manjubhashini also observed these common ear diseases among geriatric patients which is similar to this study

Rhinosinusitis and sinonasal tumour were the commonest geriatric nasal diseases in this study. Sinonasal infection were mainly chronic at presentation. Maxillary sinuses diseases is the commonest form of sinuses pathology in our study. Moreover, unilateral sinonasal tumour of maxillary origins predominate.

The commonest throat diseases in this study was pharyngolaryngitis among all the studied geriatric. This usually occurred from extension of sinonasal disorder. Others throat diseases were pharyngeal tumour and throat foreign body impaction in our findings.

Some of the studied geriatric patients with otorhinolaryngological diseases had associated medical conditions. This was also reported By other studies on geriatric patients [19-21]. Commoner ones in our study were hypertension, arthritis, diabetes mellitus and visual disorder. These are being comanaged with physicians and other specialties in our center. Detailed history, examination and investigations are required to rule out these comorbid illnesses. Appropriate medication management is required in patients with possible surgical intervention for successful outcome.

Common associated psychosocial disabilities among geriatric patients with otorhinolaryngological diseases in this study were isolation, embarrassment, depression and social dysfunction. These arises from the patients presenting symptoms such as hearing impairment, persistent tinnitus, nasal blockage, epistaxis, sore throat, hoarseness and difficulty breathing. Similar disabilities were noted in previous otorhinolarynlogy studies reported by the author [23-26]. Majority of the geriatric patients with otorhinolaryngological diseases had different forms of treatment prior to presentation to our clinic. The treatment ranges from over the counter drugs, spiritual interventions, herbal medication and concussions. These had resulted in delayed therapy, chronic diseases, wastage of money and avoidable complications. Patients and community education is required to limit these bad health habits.

V. Conclusion

Geriatric otorhinolaryngological diseases were enormous and arises from degenerative and infective pathology. These are associated with comorbid illnesses and disabilities at presentation. Majority of the patients practice prehospital self medication. Community and patients health education is strongly advised.

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Competing interests
All the authors declare that there was no competing interests.

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