

Geriatric Otorhinolaryngology, Head and Neck Emergency in a Nigerian Teaching Hospital, Ado Ekiti

Waheed Atilade Adegbiiji¹, Shuaib Kayode Aremu^{2*}, Abdul-Akeem A. Aluko³

¹ENT Department, Ekiti State University Teaching Hospital, Ado Ekiti, Nigeria

²ENT Department, Federal Teaching Hospital Ido-Ekiti, Afe-Babalola University, Ado-Ekiti, Nigeria

³ENT Department, Aminu Kano Teaching Hospital, Bayero University, Kano, Nigeria

Email: *shuaib.aremu@gmail.com

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Abstract

Background: Issues of geriatric otolaryngologic emergency have not been widely applied despite an increase in the geriatric population. This study aimed at determining the prevalence, sociodemographic features, etiology, clinical features, complications and sources of referral of geriatric otorhinolaryngological, head and neck emergency in our center. **Materials and Methods:** This was a prospective hospital-based study of geriatric otorhinolaryngology emergency in the Ear, Nose and Throat Department of Ekiti State University Teaching Hospital. The study was carried out between October 2016 and September 2018. Data were obtained by using a pretested interviewers questionnaire. All data were collated and analyzed using SPSS version 18.0. The data were expressed by frequency table, percentage, bar charts, and pie charts. **Results:** Geriatric otorhinolaryngology, head and neck emergency accounted for 5.3%. Major prevalence age group was 43.9% in the age group (60 - 64). There were 38.6% of males with a male to female ratio of 1:1.5. The main etiology of geriatric otorhinolaryngology emergency was 29.5% trauma/road traffic accident/foreign body impaction and 25.8% tumor. Main anatomical distribution of geriatric otorhinolaryngology emergency was 38.6% throat diseases and 31.1% ear diseases. The most frequent clinical features were the pain in 27.3%, hearing loss in 21.2%, tinnitus in 15.9%, bleeding in 14.4%, difficulty breathing in 12.9% and discharge in 11.4%. Common diagnosis in this study was 15.9% sinonasal tumor, 14.4% upper aerodigestive foreign body impaction, 10.6% earwax impaction and 19.8% otitis externa. Acute presentation (<13 weeks) occurred in 1 week in 74.2% and 2 - 13 weeks in 19.7%. Commonest time of presentation was daytime in 65.9%. Major sources of referral were 43.2% general practitioner and 31.1% casualty offic-

ers. Presentation of geriatric otorhinolaryngology emergency was mainly ear, nose and throat clinic in 59.8% with accident and emergency in 28.8%. Commonest associated comorbid illnesses among the geriatric patients were 18.2% hypertension, 14.4% arthritis, and 9.8% diabetes mellitus. **Conclusion:** Geriatric otorhinolaryngological emergency is a common pathology associated with comorbid illnesses. Detailed clinical assessment is mandatory for effective management outcome.

Keywords

Emergency, Geriatric, Head, Neck, Otorhinolaryngology

1. Introduction

Geriatric otorhinolaryngology is a relatively new emerging ear, nose and throat subspecialty which developed in response to the health challenges from a rise in life expectancy worldwide [1] [2]. The rise in life expectancy is more rapid in developed countries than in developing countries and this is associated with increased health challenges to the health workers and government [3] [4] [5]. This is due to the advancement of medical knowledge and its application through health services [6] [7] [8].

Geriatric Otorhinolaryngologic emergency health care is an integral part of any discipline of ear, nose and throat health practice and it is considered as an indicator of quality health care system. There is a need for every specialist hospital to have specialized emergency services to manage all forms of emergencies in ear, nose, throat, head, and neck round the clock.

Geriatric otorhinolaryngologic illnesses and injuries are common clinical disorders which are encountered in general otolaryngologic emergencies practices. In the elderly due to the aging phenomenon, cognitive impairment and associated comorbid diseases there may be alteration of these diseases presentation. All these may make it difficult for geriatric patients to provide an accurate history with difficulty in arriving at accurate diagnosis and management. The challenges of the elderly ear, nose and throat patients for the otorhinolaryngologist, head and neck surgeon in the emergency room have been a perennial discussion [9] [10] [11] [12].

There is a paucity of the study on geriatric otorhinolaryngologic, head and neck emergencies in developing countries and Nigeria in particular. This study aimed at determining the prevalence, sociodemographic features, etiology, clinical features, complications and sources of referral of geriatric otorhinolaryngological, head and neck emergency in our center.

2. Materials and Methods

This was a prospective hospital-based study of geriatric patients who presented with history and clinical features of otorhinolaryngology emergency in the Ear,

Nose and Throat Department of Ekiti State University Teaching Hospital, Ado Ekiti, Nigeria. The study was carried out between October 2016 and September 2018.

Consent was obtained from the patients. All the consented geriatric patients with ear, nose, and throat emergency were enrolled in the study. A pretested semi-structured self-administered questionnaire was designed and used to collect data.

Data were obtained by using a pretested interviewers questionnaire. Data obtained from each patient during the study included Sociodemographic data, presenting symptoms, duration of symptoms and pre-hospital and hospital management. $P \leq 0.05$ was taken as significant. These were followed by detailed ear, nose and throat examination. All findings on history and examinations were documented.

Treatment interventions for emergency cares were noted. Associated complications from the emergency or its pre-hospital and hospital treatments were also documented.

All data were collated and analyzed using SPSS version 18.0. The data were expressed by the frequency table, percentage, bar charts, and pie charts.

Ethical clearance for this study was sought for and obtained from the ethical committee of the institution.

3. Results

Geriatric otorhinolaryngology, head and neck emergency accounted for 132 (5.3%) of the 2473 patients seen in our ear, nose and throat department during the study period.

The major prevalence age group of the geriatric otorhinolaryngology, head, and neck emergency was 58 (43.9%) in the age group (60 - 64). Followed by 22 (16.7%), 19 (14.4%) and 16 (12.1%) in the age group (65 - 69), (70 - 74) and (75 - 79) years respectively. Age group distribution of the patients is shown in **Table 1**.

There were 51 (38.6%) males and 81 (61.4%) females with a male to female ratio of 1:1.5. Urban dwellers in 74 (56.1%) were predominant over rural dwellers in 58 (43.9%). The common form of education among the patients was posted secondary, no formal and secondary education in 38 (28.8%), 34 (25.8%) and 32 (24.2%) respectively. Majority of the patient's occupation was 31 (23.5%) civil servants, 27 (20.5%) industrial workers, and 25 (18.9%) farming. **Table 2** illustrated the sociodemographic features of the patients.

The main aetiology of geriatric otorhinolaryngology, head and neck emergency was 39 (29.5%) trauma/road traffic accident/foreign body impaction, 34 (25.8%) tumour, 23 (17.4%) infection/inflammation and 21 (15.9%) ageing (degenerative). **Table 3** demonstrated the aetiology among the patients.

Anatomical distribution of geriatric otorhinolaryngology, head, and neck emergency were 51 (38.6%) throat diseases, 41 (31.1%) ear diseases and 28 (21.2%)

nose diseases. **Figure 1** showed the anatomical distribution of the emergency among patients.

The most frequent clinical features of the geriatric otorhinolaryngology, head and neck emergency in this study were pain in 36 (27.3%), hearing loss in 28 (21.2%), tinnitus in 21 (15.9%), bleeding in 19 (14.4%), difficulty breathing in 17 (12.9%) and discharge in 15 (11.4%). **Table 4** demonstrated clinical features of emergency among the patients. Common diagnosis of geriatric otorhinolaryngology, head and neck emergency among the patients were 21 (15.9%) sinonasal tumour, 19 (14.4%) upper aerodigestive foreign body impaction, 14 (10.6%) earwax impaction, 13 (9.8%) otitis externa, 12 (9.1%) pharyngotonsillitis and 11 (8.3%) pharyngeal tumour. **Table 5** showed a diagnosis of emergency among geriatric patients.

There was an acute presentation (<13 weeks) otorhinolaryngology emergency of both 1 week in 98 (74.2%) and 2 - 13 weeks. In 26 (19.7%) and were commoner than chronic otorhinolaryngology emergency (\geq 13 weeks) in 29 (7.5%). Duration of emergency prior to presentation is illustrated in **Figure 2**.

In this study, commonest time of presentation of geriatric otorhinolaryngology, head, and neck emergency was daytime in 87 (65.9%). The other presentation was at night and late night in 24 (18.2%) and 21 (15.9%) respectively. **Figure 3** demonstrated time of presentation among the patients. Major sources of referral were from 57 (43.2%) general practitioner, 41 (31.1%) casualty officers, and 22 (16.7%) self-reporting. **Table 6** sources of referral among the patients.

Presentation of geriatric otorhinolaryngology, head, and neck emergency were ear, nose and throat outpatient clinic in 79 (59.8%), accident and emergency in 38 (28.8%) and hospital ward in 15 (11.4%). **Figure 4** illustrated pattern of presentation among the patients.

In this study, commonest associated comorbid illnesses among geriatric patients were hypertension in 24 (18.2%). Other associated comorbid illnesses were 19 (14.4%) arthritis, 13 (9.8%) diabetes mellitus and 11 (8.3%) cardiopulmonary diseases. **Table 7** illustrated comorbid illnesses among geriatric otorhinolaryngology, head and neck emergency.

Table 1. Age group distribution of the patients.

Age group (year)	Number	Percentage (%)
60 - 64	58	43.9
65 - 69	22	16.7
70 - 74	19	14.4
75 - 79	16	12.1
80 - 89	8	6.1
90 - 94	5	3.8
95 - 99	3	2.3
\geq 100	1	0.8
Total	132	100

Table 2. Sociodemographic features among the patients.

Sociodemographic features	Number	Percentage (%)
Sex		
Male	51	38.6
Female	81	61.4
Residential		
Urban	74	56.1
Rural	58	43.9
Education level		
No formal education	34	25.8
Primary	28	21.2
Secondary	32	24.2
Post-secondary	38	28.8
Patients/parents occupation		
Civil servants	31	23.5
Business	19	14.4
Driver	18	13.6
Industrial worker	27	20.5
Farming	25	18.9
Artisans	12	9.1

Table 3. Aetiology among patients.

Aetiology	Number	Percentage (%)
Trauma/RTA/Foreign body	39	29.5
Infection/inflammation	23	17.4
Tumour	34	25.8
Functional disorder	9	6.8
Idiopathic	6	4.5
Ageing (degenerative)	21	15.9

Table 4. Clinical features of the emergency among the patients.

Clinical features	Number	Percentage (%)
Foreign body impaction	12	9.1
Difficulty breathing	17	12.9
Pain	36	27.3
Discharge	15	11.4
Tinnitus	21	15.9
Hearing loss	28	21.2
Lacerations	12	9.1
Bleeding	19	14.4
Nasal blockage	13	9.8
Hoarseness	8	6.1
Odynophagia/dysphagia	9	6.8
Vertigo	11	8.3
Mass/swelling	12	9.1
Halitosis	7	5.3

Table 5. Diagnosis of emergency among the geriatric patients.

Diagnosis	Number	Percentage (%)
Otitis externa	13	9.8
Ear Foreign body impaction	5	3.8
Earwax impaction	14	10.6
Benign paroxysmal positional vertigo	7	5.3
Meniere’s disease	2	1.5
Nasal Septal abscess	2	1.5
Sinonasal tumor	21	15.9
Midfacial fracture	5	3.8
Pharyngotonsillitis	12	9.1
Pharyngeal tumor	11	8.3
Laryngeal tumor	9	6.8
Upper aerodigestive foreign body impaction	19	14.4
Neck space abscess	3	2.3
Cervical lymphadenopathy	4	3.0
Temporomandibular joint arthritis	5	3.8

Table 6. Sources of referral among the patients.

Sources of referral	Number	Percentage (%)
Self-reporting	22	16.7
General practitioner	57	43.2
Casualty officer	41	31.1
Others	12	9.1

Table 7. Comorbid illnesses among geriatric otorhinolaryngology, head and neck emergency.

Compilations	Number	Percentage (%)
Diabetes mellitus	13	9.8
Hypertension	24	18.2
Arthritis	19	14.4
Cardiopulmonary diseases	11	8.3
Neuropathy	4	3.0
Ocular diseases	5	3.8

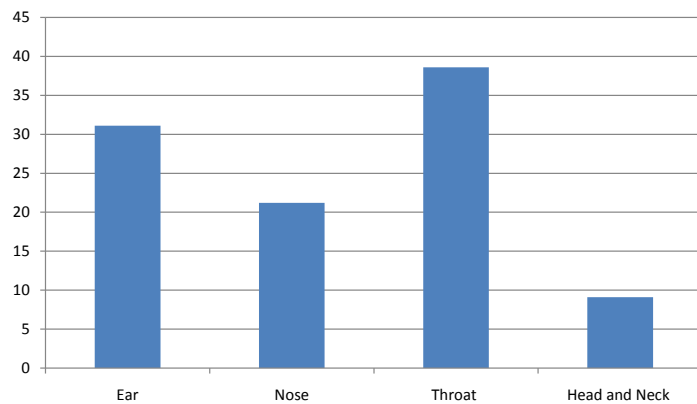


Figure 1. Anatomical distribution of the emergency among patients.

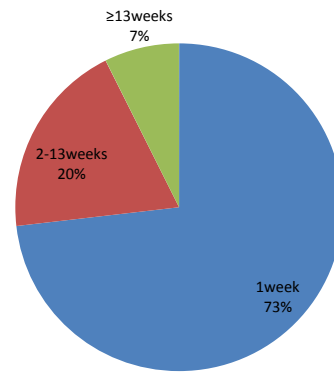


Figure 2. Duration of emergency prior to presentation.

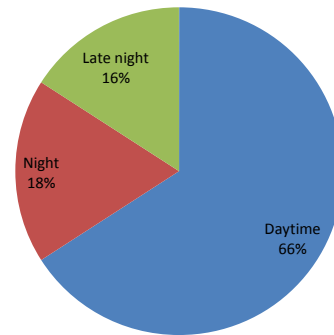


Figure 3. Time of presentation among the patients.

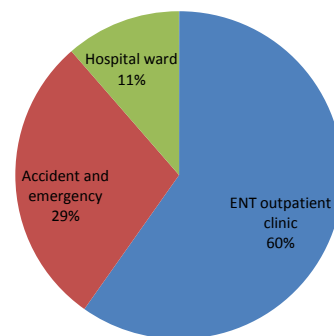


Figure 4. Pattern of presentation among the patients.

4. Discussion

Geriatric otorhinolaryngologic emergency conditions are common otorhinolaryngologic workload in our institution with high prevalence as noted in this study. This is similar to the report of other studies in Nigeria and beyond [13] [14]. This is because geriatrics population is on the rise worldwide which has led to its projected increase in the near future even in developing countries due to global human development report released by the United Nations Development Programme (UNDP) [15].

Sociodemographic features of geriatric emergency in this study revealed a high prevalence of age group 60 - 64 years, female preponderance and predomi-

nant urban dwellers. These findings are contrary to findings in other studies [16] [17]. This could be due to the geographical difference in the study population. The finding is however similar to report from a study done southern part of Nigeria [18].

Common etiology of geriatric emergency in this study was trauma/road traffic accident/foreign body impaction, infection/inflammation and tumor these are due to degenerative changes in all the body organs functional. Similar findings were reported in other studies [19] [20]. These accounted for the commonest distribution of throat and ear pathology in our findings in a geriatric otorhinolaryngological emergency. Contrary findings were reported from other studies in the southern and western part of Nigerian [21] [22].

Most common diseases were a sinonasal tumor, upper aerodigestive foreign body impaction, earwax impaction, otitis externa, pharyngotonsillitis and pharyngeal tumor in this study. This leads to the common clinical presentation of pain, hearing loss, tinnitus, bleeding, difficulty breathing, discharge, and nasal blockage. This concurs with other research workers on elderly emergency otorhinolaryngology [23] [24].

Geriatric otorhinolaryngologic emergency conditions are similar to other forms of emergencies with the mostly early presentation, common presentation during the day time and were referred mainly by general practitioners or casualty officers [25].

The process of aging leads degenerative changes with resultant organs dysfunction among the geriatric patients. This leads to the associated comorbid illnesses in geriatric patients which must be ruled out by detailed clinical assessment. The major comorbid illnesses in this study were hypertension, arthritis, diabetes mellitus, and cardiopulmonary diseases. A similar finding was reported in other studies [26] [27] [28].

5. Conclusion

The geriatric otorhinolaryngological emergency is a common pathology. They are associated with comorbid illnesses and disabilities at presentation. Detailed clinical assessment is mandatory for effective management outcome. Provision of adequate personnel and equipment by policymakers are strongly advised.

Limitation

The study was a hospital-based study and such the data may not absolutely represent what is obtained in the entire community.

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Conflicts of Interest

All the authors declare that there were no competing interests.

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