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RESEARCH ARTICLE

PATTERNS OF SELF EAR CLEANING AMONG OTORHINOLARYNGOLOGY PATIENTS IN DEVELOPING COUNTRY

[1]Adegbiji, W.A., *[2]Olajide, T.G. and [3]Nwawolo, C.C.

[1] ENT Department, Ekiti State University Teaching Hospital, Ado Ekiti, Nigeria
[2] ENT Department, Federal Teaching Hospital, IdoEkiti, Nigeria
[3] ENT Department, Lagos University Teaching Hospital, Lagos, Nigeria

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ABSTRACT

Aims and objectives: Self ear cleaning is a common bad health practice among many patients despite associated complications. This study aimed at determining the prevalence, sociodemographic, clinical presentation, associated complications and management of self ear cleaning among patients in a tertiary hospital in sub Sahara Africa.

Materials and methods: This is a prospective hospital based study of patients with history of self ear cleaning. The study was carried out over a period 6 months between June and November, 2017. Informed consent was obtained from patients. Pretested interviewers assisted questionnaire was administered to obtain data. Data obtained were collated and statistically analyzed by using SPSS version 16.

Results: The prevalence of self ear cleaning was 93.4%. There were 47.9% males with male to female ratio of 1:1. Common reasons for self ear cleaning were 35.1% personal hygiene, 21.8% dirty/earwax and 11.8% itching. Both ears were most commonly cleaned among the patients in 46.9%. Right ear in 31.8% was commoner than left ear in 21.3%.

Commonest object used in ear cleaning was cotton bud in 44.5%. Other objects were finger, feather and key in 24.6%, 15.6% and 14.7% respectively.

Common clinical presentation were dirty/earwax in 35.1%, otalgia in 29.4%, hearing loss in 27.5% and itching in 24.2%.

Long time (chronic) ear cleaning accounted for 63.5% while short time (acute) ear cleaning accounted for 36.5%. Frequency of ear cleaning in these patients were daily in 49.3%, weekly in 17.1%, monthly in 13.3% and occasional in 20.4%.Major diagnosis was 34.6% personal hygiene, 22.7% allergy and 18.5% earwax impaction.

No complications were recorded in 39.3%. Common complications were external auditory canal injury in 28.9%, impacted foreign body in 25.6% and traumatic perforated tympanic membrane in 6.2%. All patients had health education. Other treatment was conservative/medical treatment in 71.1% and foreign body removal in 17.5%.

Conclusion: Ear cleaning was higher among the patients. Majority of the patients believed it is beneficial. This is associated with available complications.

INTRODUCTION

Self ear cleaning is when an object is inserted into the external ear canal with the aim of removing deposits. This habit is a common practice worldwide (Afolabi *et al.,* 2009; Lee *et al.,* 2005 and Hobson and Lavy, 2005). Common reasons given for self ear cleaning were earwax, itching, foreign body, irritation, ear blockage, hearing impairment, ear pain and ear discharge. Others people see this habit as part of personal hygiene so it is mandatory and normal (Olajide *et al.,* 2015).

Corresponding author: **Olajide, TG.,**
ENT Department, Federal Teaching Hospital, IdoEkiti, Nigeria.

Insertions of different object into the ear are common not only in adults but also common in pediatric population either by children themselves or by their parents. A large number of patients report to their family doctors and otorhinolaryngologists with otological complaint and urge to scratch their external ear canal with different available object. The practice of self ear cleaning has widely been condemned worldwide. This is subsequent to associated complication which includes ear trauma, impacted ear wax, infection, and impacted foreign body (Raman, 1997). Insertion of objects inside the ears is unnecessary and potentially dangerous to the user (Olajide *et al.,* 2015).

There is accidental ear injury in the patients which were self induced (Steele and Brennan, 2002 and Hobson and Lavy, 2005). Associated complications of self ear cleaning are traumatic laceration of ear canal, tympanic membrane perforation, impacted ear wax, otomycosis, otitis externa and impaction of foreign body (Nussinovitch *et al.,* 2004; McCarter *et al.,* 2007; Adegbiji *et al.,* 2012 and Adegbiji *et al.,* 2014). Impacted cerumen is seen in about 2% to 6% of the general population. Presentation of these complications includes bleeding, otalgia, hearing loss, tinnitus and vertigo (Amutta *et al.,* 2013; Guest *et al.,* 2004 and Neher *et al.,* 2008). Little studies have been conducted on the practice of self ear cleaning in developing country. This study aimed at determining the prevalence, sociodemographic features, clinical presentation, associated complications and management of self ear cleaning among patients in a tertiary hospital in sub Sahara Africa.

MATERIALS AND METHODS

This was a prospective hospital based study of patients with history of self ear cleaning. The study was conducted in ear, nose and throat department of Ekiti state university teaching hospital, Ado Ekiti, Nigeria. The study was carried out over a period 6 months between June and November, 2017. Aims and objective of the study were explained to the patients and confidentiality assured. Informed consent was obtained. Consented patients were enrolled into the study. Data were collected with pretested interviewers assisted questionnaire. The questionnaires contained information on sociodemographic features such as age, sex, religion and occupation. Other information obtained includes pattern of self ear cleaning, frequency, type of object used, reasons for self-ear cleaning, complications, danger and benefit of ear cleaning. Detailed ear examination including otoscopy was carried out. The data obtained was collated and analyzed using SPSS version 16.0. The data was expressed by frequency table, percentage, pie charts and bar charts. Ethical clearance was sought for and obtained from ethical committee of the institution.

RESULTS

A total of 226 patients were seen in the department out of which 211 practices self ear cleaning. The prevalence of self ear cleaning was 93.4%. The peaked age group was 31-40 years with prevalence of 79 (37.4%). Table 1 illustrated Age group distribution of the patients. There were 101 (47.9%) males and 110 (52.1%) females, the male to female ratio being 1:1.About 17 (8.1%) practiced Islam while 194 (91.9%) were Christians. Common education level were post secondary in 102 (48.3%) and nil formal education in 58(27.5%). Majority of them were artisans, business, farming and student/apprentice 37 (17.5%), 35 (16.6%), 31 (14.7%) and 29 (13.7%). Others were applicant in 28 (13.3%) and industrial workers in 27 (12.8%). Table 2 demonstrated Sociodemographic features of the patients. Common reasons for self ear cleaning were 74 (35.1%) personal hygiene, 46 (21.8%) dirty/earwax and 25 (11.8%) itching. Other indications includes ear blockage, hearing impairment and ear discharge which accounted for 22 (10.4%),1 3 (6.2%) and 12 (5.7%) respectively. Table 3 showed Indications for self ear cleaning. In this study both ears were most commonly cleaned among the patients in with 99 (46.9%). The right ear in 67 (31.8%) was commoner than left ear in 45 (21.3%).

Figure 1 showed the lateralization of self ear cleaning among the patients. Commonest object used in ear cleaning was cotton bud in 94 (44.5%). Other common object were finger, feather and key in 52 (24.6%), 33 (15.6%) and 31 (14.7%) respectively. Table 4 further illustrated common objects used for self ear cleaning among the patients. Common clinical presentation were dirty/earwax in 74 (35.1%), otalgia in 62 (29.4%), hearing loss in 58 (27.5%) and itching in 51 (24.2%). Other clinical features were 37 (17.5%) personal hygiene and 26 (12.3%) tinnitus. Table 5 demonstrated clinical features among the patients. Long time (chronic) ear cleaning was the commonest and accounted for 134 (63.5%) while short time (acute) ear cleaning accounted for 77 (36.5%). Common short time duration were (9-12) weeks in 39 (18.5%) and (5-8) weeks in 22 (10.4%). Frequency of ear cleaning in these patients were daily in 104 (49.3%), weekly in 36 (17.1%), monthly in 28 (13.3%) while occasional in 43 (20.4%). Figure 2 illustrated the duration of self ear cleaning at presentation. In this study, major diagnoses were 73 (34.6%) personal hygiene, 48 (22.7%) allergy and 39 (18.5%) earwax impaction. Other diagnoses were noted in 20 (9.5%) otitis externa and 17 (8.1%) otitis media.

Table 6 showed the diagnosis among the patients. No complications were recorded in 83 (39.3%). Common complication were external auditory canal injury in 61 (28.9%), impacted foreign body in 54 (25.6%) and traumatic perforated tympanic membrane in 13 (6.2%). No information on ear cleaning was received in 76 (36.0%) while information was received in 98 (46.4%) family and in 37 (17.5%) neighborhood.

Table 1. Age group distribution of the patients

Age group (year)	Number	Percentage (%)
1-10	17	8.1
11-20	9	4.3
21-30	56	26.5
31-40	79	37.4
41-50	35	16.6
51-60	13	6.2
≥61	2	0.9
Total	211	100.0

Table 2. Sociodemographic features of the patients(N = 211)

Sociodemographic features	Number	Percentage (%)
Sex		
Male	101	47.9
Female	110	52.1
Religion		
Christian	194	91.9
Muslim	17	8.1
Residential		
Urban	117	55.5
Rural	94	44.5
Education level		
Nil	58	27.5
Primary	9	4.3
Secondary	42	19.9
Post secondary	102	48.3
Patients occupation		
Student/Apprentice	29	13.7
Applicant	28	13.3
Business	35	16.6
Driver	24	11.4
Industrial worker	27	12.8
Farming	31	14.7
Artisans	37	17.5

Table 3. Indications for self ear cleaning

Aetiology	Number	Percentage (%)
Personal hygiene	74	35.1
Dirty/earwax	46	21.8
Itching	25	11.8
Hearing impairment	13	6.2
Blockage	22	10.4
Ear discharge	12	5.7
Water in the ear	11	5.2
Irritation	8	3.8
Total	211	100

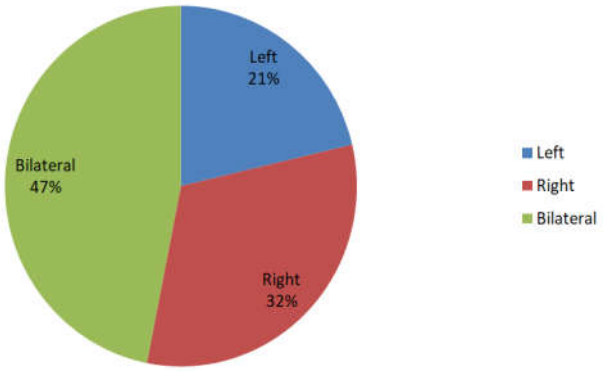

Figure 1. Lateralization of the ear among patients

Table 4. Common objects used for self ear cleaning

Objects used	Number	Percentage (%)
Cotton bud	94	44.5
Finger	52	24.6
Keys	31	14.7
Sticks	28	13.3
Toothpick	19	9.0
Biro cover	9	4.3
Paper roll	26	12.3
Feathers	33	15.6
Others	24	11.4

Table 5. Clinical features among the patients

Clinical features	Number	Percentage (%)
Otalgia	62	29.4
Personal hygiene	37	17.5
Hearing loss	58	27.5
Tinnitus	26	12.3
Itching	51	24.2
Bleeding	19	9.0
Dirty/earwax	74	35.1
Ear discharge	17	8.1

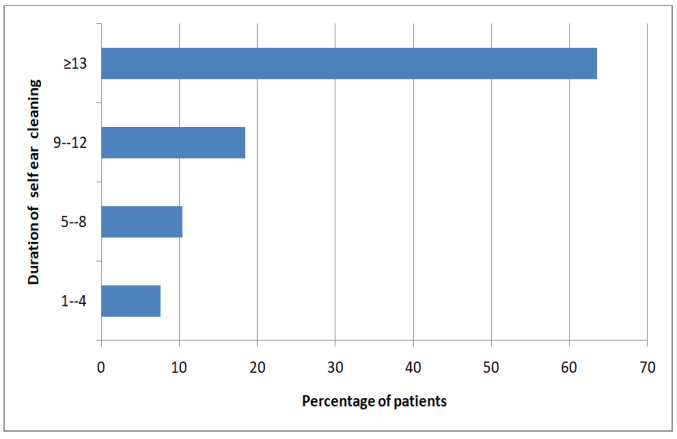

Figure 2. Duration of self ear cleaning at presentation

Table 6. Diagnosis among the patients

Diagnosis	Number	Percentage (%)
Allergy	48	22.7
Otitis media	17	8.1
Earwax impaction	39	18.5
Hearing impairment	14	6.6
Personal hygiene	73	34.6
Otitis externa	20	9.5
Total	211	100.0

Table 7. Management of self ear cleaning among the patients

Management	Number	Percentage (%)
Complications		
Nil	83	39.3
External auditory canal injury	61	28.9
Impacted foreign body	54	25.6
Traumatic perforated tympanic membrane	13	6.2
Information on ear cleaning		
No information	76	36.0
Family	98	46.4
Neighbour	37	17.5
Health education	211	100
Conservative/medical treatment	150	71.1
Foreign body removal	37	17.5

All patients had health education. Other treatment offered were conservative/medical treatment in 150 (71.1%) and foreign body removal in 37 (17.5%). Table 7 showed management of self ear cleaning among the patients.

DISCUSSION

There is high prevalence of ill health practice of self ear cleaning among the patients attending our ENT center. The findings are consistent with others reports in the literature, which report a very high prevalence of self ear cleaning (Lee *et al.,* 2005 and Olaosun, 2014). This high prevalence is alarming despite self ear cleaning was not prescribed to patients. Contrary record revealed lower prevalence in a study done among health workers (Oladeji and Babatunde, 2015). The peaked age group of self ear cleaning was fourth decades of life in this study. This is because of very high activities among this age group. Contrarily, third decades were the peaked age group in other study (Oladeji and Babatunde, 2015). There is female preponderance in this study. This may be as a result of high prevalence of personal hygiene among female over male. Majority of the patients were urban dwellers compared to minority rural dwellers. This may be because the institution is in the state capital and presence of various barriers to health care services (Adegbiji *et al.,* 2017 and Adegbij *et al.,* 2017). Self ear cleaning was commonest among the post secondary in this study and this is an indication of high level of bad health practices. There was almost same level of prevalence of self ear cleaning among all the occupation. This may be incidental findings. Commonest reason why studied patients cleaned their ear was personal hygiene to remove dirty or earwax. Earwax was generally believed to be dirty and must be removed regularly. This is done during bath, morning even at leisure time like body bath and teeth brushing. Other reasons for self ear cleaning were dirty/ earwax, itching and sense of ear blockage or hearing impairment. Previous studies revealed similar findings (Gadanya *et al.,* 2016 and Ahmed *et al.,* 2014). Bilateral self ear cleaning were major finding in this study as in previous study (Suresh and Shamim, 2008). Major indications for self ear cleaning such as personal hygiene, dirty/earwax, itching, and water in the ear commonly occurred in both ear.

Unilateral ear cleaning were less common as this may be due to unilateral otological pathology. Many patients claim it is beneficial practice because it is done on ear disorders. There are various object inserted into the external auditory canal for ear cleaning, soothed or remove object from the canal. In this study, commonest used object was cotton bud. This is readily available in the market, street and supermarket. It is cheap because it is dispense in small quantity of ten to twenty pieces and without any warning sign on the containing polyethylene bag. There should be law enforcing warning sign on cotton bud container in developing country. Other used object included finger, feathers and key. This findings concurred with other study (Hobson and Lavy, 2005).

Ear related symptoms experienced by patients in this study includes dirty/earwax, otalgia, itching and hearing loss. These are the trigger factor for self ear cleaning. Contrarily, itchiness and earache seemed to be the most common symptoms experienced leading to self ear cleaning in other studies (Ullauri *et al.,* 2014 and Macknin *et al.,* 1994). Patients cleaned their external ear canal very often with varied period at presentation. Majority cleaned their ear for more than three months prior to the study and has become habitual or chronic ear cleaner. This bad health practice has become a regular activity in the studied patients. This is done like regular bathing and teeth brushing. Moreover, on the frequency of ear cleaning among the patients, about half of the patients cleaned their ear everyday while very few cleaned their ear weekly, monthly and occasionally. This is similar to findings in other study (Hobson and Lavy, 2005). Major diagnoses of ear cleaning in this study were personal hygiene, allergy, earwax impaction and hearing loss. Impacted earwax was also a common reported complication.

Causes of self ear cleaning must be diagnosis and appropriate treated otherwise it may be difficult to stop self ear cleaning practice. Other diagnosis included various form of otitis externa and media. These findings were recorded in previous studies (Afolabi *et al.,* 2009; Olajide *et al.,* 2015 and Nussinovitch *et al.,* 2004). No complication was recorded in a third of the patients. This may be because majority of the patients were adults. Commonly associated complications of self ear cleaning in this study were external auditory canal injury and impacted foreign body. This finding is similar to previous studies (Sperling and Portnoy, 2016 and Smith *et al.,* 2012). No prior information on self ear cleaning among the patients. This concurred with findings in other studies (Reynolds, 2004 and Kumar and Ahmed, 2008). Adequate management of this bad health habit requires health education at all levels. Continuous medical education in the outpatient clinic is necessary. Individual patients were treated on the causes and associated complications by medical and conservative treatment. Other treatment offered included foreign body removal.

Conclusion

Self ear cleaning was higher among the studied patients. Majority believed it is beneficial because there was no prior information on self ear cleaning. Ear cleaning has been found to compromise the integrity of the ear canal. This is associated with avoidable complications. Education and information about the danger must be disseminated as widely as possible across all age groups.

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Competing interests

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

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