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Article *in* Annals of African medicine · April 2018

DOI: 10.4103/aam.aam_28_17

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ISSN 1596-3519

Volume 17 Issue 2 April-2 June 2018

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Original Article

Topical Ear Drop Self-medication Practice among the Ear, Nose, and Throat Patients in Ido Ekiti, Nigeria: A Cross - sectional Study

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Abstract

Background: Self-medication is a common habit in our country; Nigeria, especially among patients with otorhinolaryngological disorders. Medication when taken wrongly may bring dire consequences to the individual, such as masking developing diseases and may cause many other undesirable effects. The aim of this study was to determine the prevalence and to analyze topical ear drop self-medication practices among respondents attending the Ear, Nose, and Throat Clinic of Federal Teaching Hospital Ido Ekiti, Nigeria. **Design and Methodology:** A 6-month hospital based cross-sectional study was conducted among patients who were seen in the Ear, Nose, and Throat facility of Federal Teaching Hospital, Ido Ekiti from July to December 2016 to determine topical ear drop self-medication practices. A pretested semi-structured questionnaire was used to obtained information from respondents. **Results:** A total of 162 respondents out of 493 patients seen during the study had otological problems. Of which 107 (66%) respondents had engaged in self-medication with topical ear drops. Their ages ranged between 2 and 83 years with a mean age of 36.6 ± 19.1 years. There were 75 males and 87 females. The major reason for self-medication was that their ailments were minor in about 40.2% and the most common indication for self-medication was ear blockage with hearing impairment (33.6%). Pharmacy/chemist shops (42%) were major sources of information for those that self-medicated. Chloramphenicol and gentamycin were the major drugs that were used by the respondents. **Conclusion:** Majority of the respondents in this study practiced self-medication using different topical ear drops. Major source of information on the topical ear drops used was from pharmacy/chemist shops. There is a need for adequate public health education to create awareness among people on the danger of self-medication and to enact or enforce the law to reduce access to over the counter drugs. Healthcare should be made available and avoidable at primary health-care level.

Keywords: Nigeria, practice, self-medication, topical ear drops

Résumé

Contexte: L'automédication est une habitude courante dans notre pays; Nigéria, en particulier chez les patients présentant des troubles oto-rhino-laryngologiques. Les médicaments pris à tort peuvent avoir des conséquences désastreuses pour l'individu, comme masquer des maladies en développement et causer de nombreuses autres effets indésirables. Le but de cette étude était de déterminer la prévalence et d'analyser les pratiques d'automédication les participants à la clinique de l'oreille, du nez et de la gorge de l'hôpital fédéral d'enseignement Ido Ekiti, au Nigeria. Conception et **Méthodologie:** 6 mois étude transversale en milieu hospitalier a été menée auprès de patients qui ont été vus dans l'établissement Oreille, Nez et Gorge de l'Enseignement Fédéral Hôpital, Ido Ekiti de juillet à décembre 2016 pour déterminer les pratiques d'automédication topique des gouttes auriculaires. Un questionnaire semi-structuré prétesté a été utilisé pour obtenir des informations auprès des répondants. **Résultats:** Un total de 162 répondants sur 493 patients vus au cours de l'étude avaient problèmes otologiques. Dont 107 (66%) répondants se sont engagés dans l'automédication avec des gouttes auriculaires topiques. Leur âge variait entre 2 et 83 ans avec un âge moyen de 36,6 ± 19,1 ans. Il y avait 75 hommes et 87 femmes. La principale raison de l'automédication était que leur

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DOI: 10.4103/aam.aam_28_17

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How to cite this article: Olajide TG, Aremu KS, Esan OT, Dosunmu AO, Raji MM. Topical ear drop self-medication practice among the Ear, Nose, and Throat patients in Ido Ekiti, Nigeria: A cross - sectional study. Ann Afr Med 2018;17:70-4.

les troubles étaient mineurs dans environ 40,2% des cas et l'indication la plus fréquente d'automédication était un blocage de l'oreille avec déficience auditive (33,6%). Les pharmacies / pharmacies (42%) étaient les principales sources d'information pour ceux qui se soignaient eux-mêmes. Le chloramphénicol et la gentamycine médicaments importants qui ont été utilisés par les répondants. **Conclusion:** La majorité des répondants à cette étude pratiquaient l'automédication en utilisant différents gouttes auriculaires topiques. La principale source d'information sur les gouttes auriculaires topiques utilisées provenait des pharmacies / pharmacies. Il y a un besoin de l'éducation en matière de santé publique pour sensibiliser les gens au danger de l'automédication et pour promulguer ou appliquer la loi afin de réduire l'accès à des médicaments en vente libre. Les soins de santé devraient être disponibles et évitables au niveau des soins de santé primaires.

Mots-clés: Automédication, Nigeria, pratique, gouttes auriculaires topiques

Introduction

Self-medication is still an important public health problem worldwide.[1] In economically deprived communities, most episodes of illness are treated by self-medication. According to the World Health Organization, self-medication is defined as "the selection and use of medicines by individuals to treat self-recognized illness or symptoms."[2] Self-medication is also explained as one involving the act of acquiring medication without a prescription, resubmitting an old prescription to procure medication, sharing medications with others or utilizing a medication that is already available in the residence.[3] Although self-medication practice is common in both developing and developed countries, higher degree of prevalence was found in the developing world.[4,5] The higher degree of prevalence in the developing countries could be attributed to many causes such as the ability to obtain wide range of drugs over-the-counter (OTC), poor regulatory practices, limited access to health-care facilities,[6,7] and the availability of illegal sellers of medications.[8] Despite efforts to limit prevalence of self-medication, its increase was evident in different countries[9] which may pose serious threats to the health of individuals and larger societies. Several studies revealed that inappropriate self-medication results in wastage of resources, increases resistance of pathogens and generally entails serious health hazards such as adverse drug reactions, prolonged suffering, and dependence. It also cause incorrect manner of administration, incorrect choice of therapy, and masking of severe disease.[10,11] Topical antibiotic solutions are frequently indicated in patients who have external or middle ear infections. Apart from topical antibiotic preparations that are used for otological problems, wax dissolving topical agent like cerumol ear drop are also available which can be self-medicated. The actual potential for ototoxicity of these ototopical antibiotic preparations has been a subject of considerable debate. Topical antibiotics are recommended as first-line agents in uncomplicated cases of ear infections.[12,13] It is to be noted that topical ear drop antibiotics provide a high concentration of antibiotic directly into the middle ear; hence, they should reduce the likelihood of the development of bacterial resistance. Furthermore, the risk for various systemic adverse effects, such as nausea, vomiting, diarrhea, and allergic reactions, also remains negligible with topical therapy.[14] Although self-medication may be difficult to eliminate, intervention can be made to discourage the rampant practice. The aim of this study was to determine the prevalence and to analyze topical ear drop self-medication practices among respondents attending the Ear, Nose, and Throat (ENT) Clinic of Federal Teaching Hospital Ido Ekiti, Nigeria.

Methodology

This study was hospital-based cross-sectional survey conducted among patients who were seen at the ENT Department of Federal Teaching Hospital Ido Ekiti from July to December 2016 to determine topical ear drop self-medication practice. The hospital is a tertiary health institution that serves as a referral center in Ekiti State and its environs in southwestern Nigeria. It also renders primary and secondary services. All the patients who had otological problem and gave their consent to participate in the study were interviewed using a previously prepared and pretested semi-structured questionnaire. Parents of patients below the ages of 16 years were requested to assist in completing the questionnaire. Patients who did not consent to the study and old patients of the ENT clinic on follow-up visits were excluded and also excluded from the study are those who have used other topical agents such as a nasal drop or spray and throat spray were excluded from the study. The information that was collected includes sociodemographic characteristics (age, gender, religion, occupation, and educational level), self-medication practice, reasons for self-medication, conditions/diseases for which the topical ear drops were used, the source of information and names of the topical ear drops that were used. Approval to carry out the study was given by the ethical and research committee of the hospital. Data obtained were analyzed using IBM SPSS Statistics Software Version 20.0 (2011) and presented in simple tables and charts.

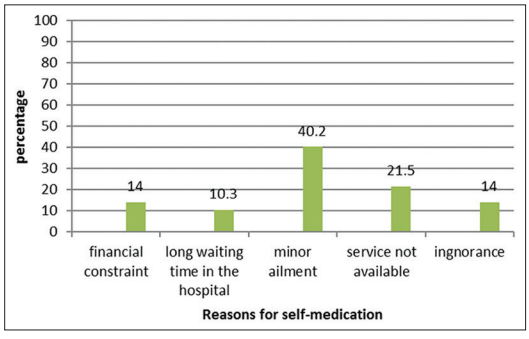

Figure 1: Reasons for self-medication

Results

Out of 493 patients seen in the ENT Clinic during the study, a total of 162 had otological/ear problems. Their ages ranged between 2 and 83 years with a mean of 36.6 ± 19.1 years. There were 75 males (46.3%) and 87 (53.7%) females. One hundred and forty-nine (92%) were Christian, whereas 13 (8%) practices Islam. Other sociodemographic characteristics are shown in Table 1. Of the 162 respondents, 107 (66.0%) respondents had used topical ear drop medications without prescription by specialists while 55 (34%) did not self-medicate. Self-medicated individuals were asked about the reason behind practicing self-medication. The most common reason given was that the ailment was minor in 43 (40.2%) of the respondents. Hence, they perceived that they know what to do. Figure 1 shows other reasons to includes financial constraint 15 (14%), nonavailability of the services or expert nearby 23 (21.5%), self-decision/ignorance 15 (14%), and to save time from the long queue in the hospital 11 (10.3%). As shown in Figure 2, the most common indication for self-medication was ear blockage with hearing impairment in 36 (22.2%) of the respondents, ear ache was responsible in 25 (23.4%), followed by ear discharge 20 (18.7%), noise in the ear 11 (10.3%), itching in the ear 10 (9.3%), whereas 5 (4.7%) was due to ear wax. Investigation about the source of information showed that 45 (42.0%) of respondents got access to topical ear drops through pharmacist/chemist shops. Figure 3 shows other sources to include previous prescription 26 (24.3%), health workers 14 (13.1%), family and friends 17 (15.9%), media and advertisements 5 (4.7%). Figure 4 shows the topical ear drops used by the respondents. The most common was chloramphenicol in 40 (37.3%) of

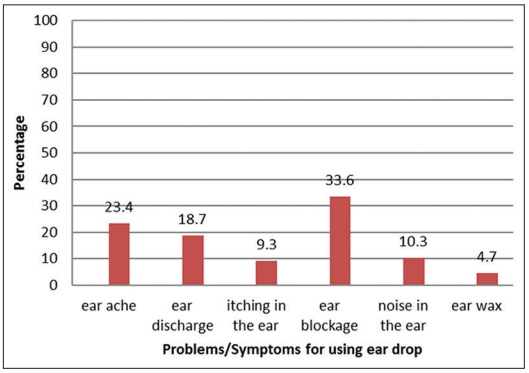

Figure 2: Problems/symptoms for using ear drop

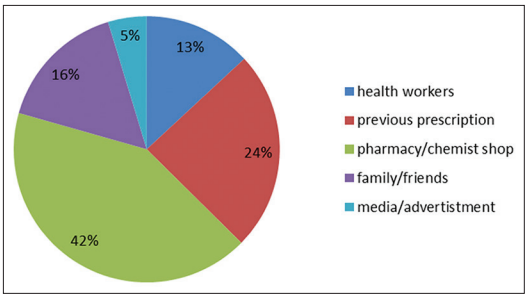

Figure 3: Source of information of respondents

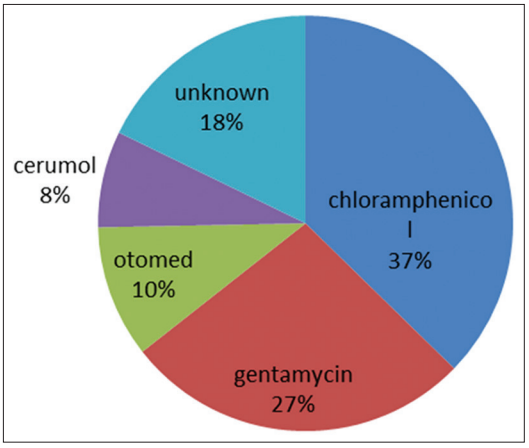

Figure 4: Types of ototopical agents used by respondents

Table 1: Sociodemographic variable of respondents (*n*=162)

Category	Frequency, *n* (%)
Age group (years)	
0-20	30 (18.5)
21-40	61 (37.7)
41-60	47 (29.0)
61-80	20 (12.3)
>80	4 (2.5)
Total	162 (100)
Gender	
Male	75 (46.3)
Female	87 (53.7)
Total	162 (100)
Tribe	
Yoruba	137 (84.6)
Hausa	5 (3.1)
Ibo	12 (7.4)
Others	8 (4.9)
Total	162 (100)
Religion	
Christian	149 (92.0)
Islam	13 (8.0)
Total	162 (100)
Education	
Nil	23 (14.2)
Primary	19 (11.7)
Secondary	41 (25.3)
Tertiary	79 (48.8)
Total	162 (100)
Occupation	
Nil	30 (18.5)
Student	33 (20.4)
Farming	10 (6.2)
Teaching	13 (8.0)
Business	27 (16.7)
Civil servant	41 (25.3)
Retiree	8 (4.9)
Total	162 (100)

our respondents. Others are gentamycin 29 (27.1%), otomed 11 (10.3%), cerumol (7.5%), whereas 19 (17.8%) could not remember the names of the ear drops that was used.

Discussion

Self-medication practices among otorhinolaryngological patients with otological/ear problems are common. Moreover, it has important roles in the care of minor ailments and symptoms[15] but not without its inherent side effects. The study showed that females engaged in topical ear drops self-medication than their male counterparts. This findings was in agreement with many studies conducted by previous authors.[1,16-20] However, male preponderance was recorded in the studies carried out by other researchers.[21-23] It is generally believed that women are more health conscious and seek health services more frequently and better health practices than men.[24] The highest proportion of those who practice self-medication was in the age group 21–40 years in this study. Large proportions of our respondents were Christian and Yoruba, this is in keeping with the environment where the study was carried out in the south-west Nigeria. Despite the fact that large proportions of our respondents were literate, it is surprising that most of them still engaged in self-medication with topical ear drops without prescription by specialists. This was also in agreement with previous studies.[18,25,26]

In this study, the prevalence of topical ear drop self-medication was 66.0%. This is higher than the 31% reported by Afolabi *et al*.[27] in their study at Lokoja, in Kogi State. Other studies that also recorded low prevalence are 42% in Ondo and[28] 27.5% in Ethiopia.[29] However, the prevalence of 79% and 85% for ophthalmic[26] and general outpatients,[30] respectively, reported in Owo was higher than our own study. Similarly, higher prevalence of 81.8%[31] and 73.9%[25] was recorded in Sudan. The higher prevalence of self-medication in this study may be attributed to shortage in the number of health facility and ENT specialist in the state. This is worrisome looking at the possible hazards associated with this ugly practice. Few side effects were recorded in our study which included bitterness in the throat, increased itchiness in the ear and irritation following application of topical ear drop. The bitterness was recorded among those that self-medicated on chloramphenicol ear drops. The itchiness may be due to superimposed fungi infection.

In this study, the major indication for self-medication was ear blockage with associated hearing impairment (33.6%), this was followed by earache in 23.4% of our respondents. Other indications are ear discharge, noise in the ear, itching in the ear and ear wax. Afolabi *et al*. in their study reported earache as being the most common indication for using topical ear drops.[27] He noticed that respondents usually responded quickly to pain trying to find ways to relieve it. However, ear blockage which may be associated with hearing impairment was also one of the sensitive clinical conditions that our respondents trying to seek a solution for without delay, since hearing impairment as we know is a hidden disability with its social implications. With these different clinical conditions found in our respondents, it could have been better for them to seek a specialist opinion for proper evaluation and appropriate treatment.

Majority of our patients attributed the reason for self-medication to the fact that they perceived their ailments as being minor; hence, they can manage it through self-care. This is similar to previous studies.[16,22,23,26] However, this assumption is rather dangerous as it is widely believed that human malpractices such as inadequate dosing, incomplete courses and indiscriminate drug use have contributed to the emergence and spread of antimicrobial resistance.[32] Some of these conditions/problems like ear wax (cerumen Auris) will require only application of ceruminolytic agents such as cerumol ear drop and syringing where necessary rather than using topical ear drop antibiotics. Furthermore in a situation where topical ear drop antibiotics are necessary there is a tendency to have used different topical ear drops for different clinical conditions due to wrong or misdiagnose which eventually constitute abuse or misuse of such drugs. Other reasons for self-medication given by our respondents in this study are nonavailability of expert/health service, ignorance/self-decision, long waiting time in the hospital, and financial constraint. Bamgboye *et al*. reported inaccessibility to a health facility as a leading promoter of self-medication in their study.[33] It was noticed in a study that the concentration of few available specialists in the urban centers where most of the tertiary health-care facilities are sited has contributed to the lack of access to ENT specialists.[27] Where experts are scarce self-medication tend to thrive. Self-medication is easier than to access health-care services which are located far from where the patient resides.

Majority of our respondents got their information about drugs they had used through pharmacy/chemist shops. This was consistent with previous studies.[23,34] It is a major source of concern as people have free access to OTC drugs, which are presumably believed to be readily available and cheaper. There is a need to institute legislation or to enforce the existing ones so that there will be a reduction in assessing the OTC drugs. Some respondents got their information through the previous prescription because they could remember medications previously prescribed for them and used for similar previous conditions since those medications were successful in improving such conditions or symptoms. The study like others showed the important roles of other family members and close friends to be a good source of advice about self-medicated drugs because some of them experienced similar conditions previously.

Chloramphenicol and gentamycin ear drops were the most common ototopical agent that was used among the respondents in this study. This is similar to study done by Afolabi *et al*.[27] Other agents that were used are cerumol and otomed ear drops. However, about 18% of them cannot remember the names of topical ear drop antibiotics that were self-medicated. This gives serious concern as there is the likelihood of misuse and even inappropriate application of those agents to various otological problems/conditions as previously noted. This can lead to abuse, drugs resistance and the majority may not even benefit from those agents since there is no appropriate assessment and diagnosis.

Prolonged use of topical ear drop antibiotics and corticosteroids will often result in fungal (otomycosis) super infection[35] and the most common complaint in otomycosis is aural fullness and pruritis deep inside the canal[36] which may mimic other allergy. The limitation to this study includes that it may not be representative of general population since it is a hospital-based study and also since it is self-reporting, there is always a problem of recall accuracy and unverifiable information.

Conclusion

Majority of the respondents in this study practiced self-medication using different topical ear drops. The main reasons identified for self-medication was that their ailments were considered as being minor and a major source of information on the drugs used was from pharmacy/chemist shops. There is a need for adequate public health education to create awareness among people on the danger of self-medication and to enact or enforce the law to reduce access to OTC drugs. Healthcare should be made available and avoidable at primary health-care level.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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