

ATTITUDE OF SELF EAR CLEANING IN BLACK AFRICANS: ANY BENEFIT?

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ABSTRACT

Wax removal compromises the integrity of the ear's defenses. It is a leading cause of otitis externa, Ootomycosis and impaired hearing. Aims of the study are to assess the knowledge and implication of self ear cleaning among black Africans.

Material and methods: A prospective study carried out at the Tundun-wada community and National Ear Care Centre, Kaduna with administration of structured questionnaire after an informed consent and ethical clearance. Information retrieved includes biodata, believe, reason and object for cleaning of the ear, associated problems or benefit and examination.

Results: A total of 372 form the basis for the study, age range 1–76yr with a mean age of 30.37yr, median age 29.00 (S.D. = 13.79) and M: F ratio of 1:1. Mother responded for their children except for grown up. About 47.3% of the subjects were unemployed who were either children or complete house wife. About 90% of the subjects interviewed do self ear cleaning and over 90% believe ear should be cleaned to remove wax, because of itching in over 50% while a few is due to cosmetic reason. Cotton bud was the commonest material used for cleaning. About one-third of the subject has formed the habit unconsciously over 10years. The entire subjects interviewed had their ear examined; about 27% had ear discharge then wax impaction in 22% then foreign body 12%.

Conclusion: The habit of self ear cleaning should be discouraged as it is slow otologic poison with an attendant long term effect.

Key words: Wax , Black-African, Cotton-bud, Cosmesis

Introduction

Ear wax is a normal product of the ear which protects the skin of the ear from water and infection. Ear wax is formed from wax glands in the external ear canal as well as other components such as dead skin, sweat, and oil. The primary component of ear wax is keratin (derived from dead skin). Ear wax thus differs slightly from cerumen which is the secretory product of the ceruminous glands in the external auditory canal (1).

Earwax/cerumen is thought by most people to be a cosmetic nuisance that denotes unseemliness; its continuous removal compromises the integrity of the ear's defenses against infection due to repeated trauma, inflammation, infection. It can contribute to cerumen impaction, a leading cause of otitis externa, Ootomycosis and impaired hearing (2-7).

The epidermal desquamated cells tend to collect in the ear canal in sheets, becoming 60% by weight of total cerumen (8). Cerumen also contains lysozyme, an antibacterial enzyme capable of destroying bacterial cell walls (9). Genetics confers a significant difference in the type of cerumen (8). Caucasians and African-Americans have cerumen that is described as light to dark brown, sticky, and moist. Asians' and Native Americans' cerumen is gray or tan, brittle, and dry due to lower amounts of lipid and pigment granules. Cerumen has many helpful properties for the ear. It provides the external auditory canal with a protective barrier that coats and lubricates the canal (10). Its sticky nature traps foreign objects, preventing direct contact with various organisms, pollutants, and insects. Cerumen also has an acidic pH (about 4 to 5). This pH is unfavorable for organisms, which may help reduce the risk of infection of the external auditory canal (6). Cerumen formed is soft, fluidy

and odourless. It normally moves outward toward the distal part of the ear through a process known as ceruminokinesis (10). This movement is not facilitated by cilia, like in the cleansing process of the lungs, but a normal movement of the mandible during chewing moves the cerumen outward (10). As it moves, it becomes darker, less fluid, and develops its characteristic odor (10). The National ear care centre is a regional centre for ear nose and throat located in the Northern part of Nigeria. Its equivalent in other fields are the national orthopaedic hospital, the national eye center in Nigeria. Tundun-wada is one of the densely populated Hausa communities in the north-western part of Kaduna city, Nigeria. Aims of the study are to find out the knowledge and implication of self ear cleaning if beneficial or not.

Materials and method

It is a prospective analytical study carried out over a four week period between January 2008 and February 2008 at both the National Ear Care Centre and tundun-wada community administering a structured questionnaire to the respondent after an informed consent and ethical clearance obtained from relevant authorities. Information retrieved include biodata such as age, sex, occupation, believe in cleaning of the ear, reason for cleaning, object used for the cleaning, associated complications like bleeding, pain, itching or cerumen impaction, associated benefit if any. The adults filled the questionnaire on their own while the parents were asked to respond to the questionnaire on behalf of their children and the ears were subsequently examined taken each ear as a separate entity.

Results

A total of 400 patients were interviewed out of which 372 satisfied the inclusion criteria for the study by filling all part of the questionnaire completely before submission. Age ranges 1–76yr were involved in the study; the children that cannot respond directly to the questionnaire were answered by their mother who responded. The mean age is 30.37yr

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and the median age is 29.00yr (S.D. = 13.79) with a sex ratio of 1:1 male to female. Majority of the respondents were unemployed (47.3%) who were housewives, children or students. Ear cleaning is practice by 88.4% of the respondents and 90.9% believed that ear should be cleaned. Improved hearing and Cosmesis were the main reasons adduced to ear cleaning by the respondents in 39.5% and 35.8% respectively (Table 2.0). Self ear cleaning was a common practice in 77.7% then mothers in 17.5% and the least was by fathers 2.2%. Knowledge of implication of self ear was correct among 19.6% of the respondent and most got the information from hospital

Almost three-quarter of the respondent (72.3%) does the self ear cleaning about 1-5 times per day most of whom were females; most were done in the morning after bath in especially among males in 54.5% while majority of the females cleaned it any time of the day in 51.0% (table 3a & 3b) Cotton bud was the commonest single agent used in cleaning the ear in 89% while some used multiple agents with the least being broom stick table 4.0. About one-third of the respondents have indulged in the habit for over ten years in 33.3% while the remaining 66.4% were less than 10yrs in various degrees. About a fifth of the respondent believed the benefit from ear cleaning are to reduces itching, improve their hearing and Cosmesis in 22.6, 21.8 and 21.0% respectively.

Examination finding showed that only 24% of the respondent had a normal intact external auditory canal however there is otorrhea in 27%, wax in 22% otomycosis in 10%, foreign body in 12% and injury to the EAC in 5% of the respondents.

Table 1.0

Age range	Frequency (%)
1-5yr	20 (5.38%)
6-14yr	35 (9.41%)
15-24yr	81 (21.76%)
25-39yr	123 (33.07%)
40-64yr	112 (30.11%)
65yr and above	01 (0.27%)

Table 2.0

Reasons	Yes Frequency (%)	No Frequency (%)
Itches	133 (35.8)	239 (64.2%)
Soothing	54 (14.5%)	318 (85.5%)
Improve hearing	147 (39.5%)	225 (60.5%)
Cosmesis	109 (29.3%)	263 (70.7%)

Table 3.0a Time of cleaning

Time	Frequency
No fixed time	10 (2.7%)
1-5 times/day	269 (72.3%)
5-10 times/day	37 (9.9%)
>10times/day	4 (1.1%)
1-5 times/week	32 (8.6%)
1-5times/month	20 (5.4%)

Table 3.0b Time when ear is cleaned

Time when ear is cleaned	Frequency (%)
No specific time	10 (2.7%)
Morning after bath	179 (48.1%)
Anytime of the day	165 (44.4%)
At night	3 (0.8%)
When relaxing	15 (4.0%)

Table 3.0c Sex and Time of Cleaning

Time when ear is cleaned Sex of the patient	Morning after bath	Anytime	At night	Relaxing	No response	Total
Male	97(54.5%)	66 (37.1%)	1(0.6%)	10 (5.6%)	4 (2.2%)	178
female	82(42.3%)	99 (51%)	2(1.0%)	5 (2.6%)	6 (3.1%)	194
Total	179	165	3	15	10	372

Table 4.0 Objects used in ear cleaning

Object used in cleaning	Yes Frequency (%)	No Frequency (%)
Cotton bud	331 (89.0%)	41 (11%)
Hair pin	38 (10.2%)	334 (89.8%)
Feathers	33 (8.9%)	339 (91.1%)
Biro cover	32 (8.6%)	340 (91.4%)
Keys	28 (7.5%)	344 (92.5%)
Broom stick	14 (3.8%)	358 (96.2%)

Table 5.0 Perceived benefits

Benefits	Frequency
Reduce pain	39 (10.5%)
Reduces itch	84 (22.6%)
Soothing	68 (18.3%)
Feels ear is clean	78 (21.0%)
Hears better	81 (21.8%)
No benefit	18 (4.7%)
Total	372

Table 6.0 Ear Examination Findings

Findings	Frequency (%)
Ear discharge	100 (27%)
Otomycosis	37 (10%)
Injury to EAC	19 (5%)
Wax impaction	82 (22%)
Appears normal	89 (24%)
Foreign body	45 (12%)
Total	372

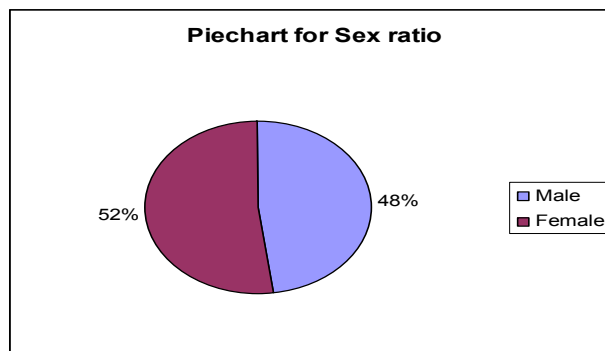


Figure 1.0

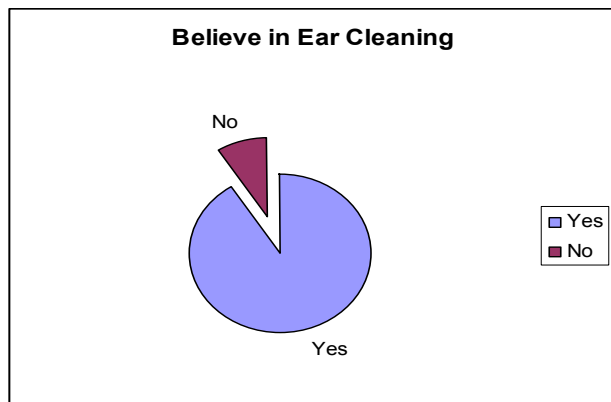


Figure 2.0

Discussion

Cerumen has many helpful properties which included a protective barrier that coats and lubricates the external auditory canal (3). The sticky nature traps foreign objects, preventing direct contact with various organisms, pollutants, and insects. Cerumen also has an acidic pH (about 4 to 5) which is unfavorable for organisms, thus help reduce the risk of infection of the external auditory canal (1). Cleaning of the wax by self was found to cut across all age group as about one third of the patient are in the adolescent group from these study with almost equal male to female ratio in contrast to observational report in Ilorin that found female to be predominant and wax to be more common among younger age group (2). Majority of the patients are unemployed who are either children or complete house wife which indicated that lower socioeconomic class are most involved in the act. Despite the risk involved in ear cleaning being a blind procedure almost 90% of the patient interviewed clean their ear and over 90% believed ear should be cleaned and majority of the patient does that from the multiple reasons such as to remove wax, reduce itching (2) in over 50% of the responder and cosmetic reason (11) in a few. This further support the poor awareness among the population about the risk both long and short term associated with self ear cleaning and also not aware of the function of the wax which is a natural protective barrier of the ear. Only 19.6% of the subjects interviewed are aware about this as this may be associated with insufficient man power in ENT as most got the information from the hospital. Majority of the ear cleaning are done by self in over 90% of the adolescent and adult while majority of the children have their ear cleaned by the mother and about 2.2% have their ear cleaned by their father, this is not surprising as most fathers would have been out to fend for the family. It is surprising to find out that majority of the males cleaned it in the morning after bath as this is regarded as path of cosmesis while the females cleaned it any time of the day. Less than 1% does the act at bed time. Cotton bud was the most widely used material for cleaning (2) it is also ineffective to remove earwax and potentially dangerous, increasing the risk of otitis externa and leading to traumatic perforation of the tympanic membrane (2,12-14) from previous study others

uses feather, key, hair pin and broom stick which has been found to be associated with various form of otitis externa ranging from Otomycosis, trauma and discharging ear (7) which is similar to finding in our study. About one-third of the patient has developed the habit unconsciously over 10 years and almost half has been doing it for almost three years. The analysis showed that most common perceived benefit of the ear cleaning done is to improve their hearing especially among males (15-17), this may be achieved if done by trained personnel however self attempt further worsen the hearing and reduction of itching and cosmesis reason among the female respondents. Cerumen removal must be carefully done by qualified personnel, because removal by an inexperienced person can cause damage to the external auditory meatus, traumatic perforation of the tympanic membrane, and/or otitis media (2,14).

The examination of the ear of the subjects showed that only 24% had an intact external and middle ear. More than three-quarter of these patient had one form of complication of the act or the other. About one third had otitis externa this was closely followed by wax impaction then foreign body the commonest form of which was cotton bud which was used in the ear cleaning, majority of the patients affected were children while most foreign bodies were found in the adults (Table 6.0).

In conclusion there is need for public health education on the need to discourage the habit of self ear cleaning which was thought to be beneficial but is associated with danger such as otorrhea, foreign body impaction (18-19), wax impaction (5) traumatic perforation (2) all which can lead to hearing loss of various degrees. The hearing loss is a social handicap with reduced economic output on the individual and on the community as a whole and this support the adage of prevention is better and cheaper than cure.

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Conflict of interest

No conflict of interest.

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