



## CLINICAL PROFILE AND MANAGEMENT AUDIT OF EAR WAX IMPACTION IN OWERRI, SOUTH EAST NIGERIA

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### **Abstract:**

Ear wax impaction is a common daily otolaryngology clinic presentation cutting across age group, sex and race, yet our sub-region has little knowledge and research on this common disease.

**Objective:** To clinically profile patients with ear wax and audit our current management practice in the Federal Medical Centre Owerri, South East Nigeria and to make recommendation where appropriate.

**Design.** Hospital based retrospective study.

**Setting:** Federal Medical Center Owerri, South East Nigeria.

**Subjects/Participants:** Patients clinically diagnosed with ear wax impaction from January to December 2010.

### **Results**

A total of 338 patients presented with ear wax, of the 3,375 patients that attended the ENT clinic during the period under review accounting for 10.01% prevalence rate. 150 (44.4%) were males while 188 (55.6%) were females giving a M:F ratio of 1:1.3.

Commonest predisposing factor was cotton swab abuse in 26 (7.7%) patients. Aural syringing after use of cerumenolytic agents in 272 (80.5%) patients with wax impaction was the commonest treatment modality. There were no recorded complications.

**Conclusion:** Ear wax impaction is a common clinical entity in our sub-region. Treatment is simple and safe; but ignorance remains a major challenge.

Key words: Ear, Wax, Cerumen Syringing, Auditory, Otagia

Introduction:

Cerumen is a combination of secretions produced by a sebaceous (lipid producing) and apocrine (ceruminous) glands admixed with desquamated epithelial debris<sup>1</sup>.

It has a PH of 6.3 to 6.8 in a normal external auditory canal though higher in diabetics<sup>2</sup>.

There are genetically and racially determined differences in the physical characteristics of cerumen that vary in appearance and consistency and may be associated with immunoglobulin and lysozyme content<sup>3</sup>.

Excess wax accumulation in some individuals can cause hearing difficulty, pain dizziness, discomfort and may become a source of infection, yet others may have very scanty amount of wax.

Despite the fact that wax impaction is one of the commonest otolaryngology diseases; there is very scanty literature on this ailment from our environment.

Aim: To clinically profile patients with ear wax and audit our current management practice in the Federal Medical Centre Owerri, South East Nigeria and to make recommendation where appropriate.

### Methodology

A one year hospital based retrospective study of ear wax patients seen in the ear, nose & throat department of the Federal medical Centre Owerri from January to December 2010.

### Results

A total of 338 patients presented with ear wax, of the 3,375 patients that attended the ENT clinic during the period under review accounting for 10.01% prevalence rate. Patients were aged between 6 weeks and 103 years with a peak age range of 21- 40 years accounting for 24.3% of patients. 150 (44.4%) were males while 188 (55.6%) were females giving a M:F ratio of 1:1.3. Wax was found in the right ear of 65 (19.2%) of patients and in the left ear in 70 patients (20.7%) and bilateral in 203 (60.1%) of patients. The major presenting symptoms were otalgia in 124

(36.7) patients, hearing loss in 100 (29.6%) patients, tinnitus in 66 (19.5%) patients, feeling of ear blockage in 37 (10.9%) patients, ear itching in 17 (5.0%) patients. It was an incidental finding in 6 (1.8%) patients.

Identifiable predisposing factors included cotton swab abuse in 26 (7.7%) patients stenosed external auditory canal in 10 (3%) and foreign body in the ear in 4 (1.2%) patients. No predisposing factor was identified in 262 (77.5%) patients. The common treatment modalities were aural syringing after use of cerumenolytic agents in 272 (80.5%) patients with wax impaction and use of cerumenolytic agents only in 236 (69.9%) in the rest of the patients. There were no recorded complications.

### Discussion

Our study shows that the prevalence of wax impaction amongst the patients seen over the period under review was high 10.01%. This also supports the findings of Okafor about three decades ago in his study on pattern of diseases of the ear in South Eastern Nigeria that wax impaction was the third commonest ear condition seen after chronic suppurative otitis media and otitis externa<sup>4</sup>.

Studies conducted amongst specific age groups puts the incidence of wax impaction even higher. In Illorin North West Nigeria, amongst the elderly, the incidence was found to be 48.7%<sup>5</sup> and in the UK a comparable figure of 30% to 65% was found. <sup>6,7,8</sup>

Amongst children the prevalence of wax impaction was also significantly high comparable to adult prevalence figures as reported by Eziyi et al in Ile- Ife South West Nigeria. The incidence in children stood at 46.7%<sup>9</sup>.

In Benin, South-South Nigeria, the prevalence of wax impaction amongst aetiological factors for hearing loss was still high at 8.7%<sup>10</sup>.

Adults in the age range of 21-40 years were the most affected in our study accounting for 24.3% of all patients see table 1. This is in keeping with the fact that wax accumulates over a period of time, therefore adults are more likely to have more wax impaction than children. Zeba et al<sup>11</sup> in their study on impacted cerumen found that patients in the 11-45 years age group were the most affected. This is close to the commonest age group of 21-40 years found in our study.

This study shows that slightly more females than males had wax impaction in a ratio 1.3: 1 table 1. This was the exact opposite of Zeba's finding of male female ratio of 1.3:1<sup>11</sup>.

The male female ratio from Birnin Kebbi<sup>12</sup> North east Nigeria is also in favour of a slight male preponderance over females.

However one would expect a female preponderance as males by virtue of being bread winners of the family may not have enough time to present to hospitals for medical evaluation. On the other hand it could be argued that the religious practice of limiting female movement in the north as compared to the relative freedom of women in the south of Nigeria may

account for these slight differences in the sex of patients seen in our hospitals.

Otalgia, hearing impairment, ear blockage or feeling of discomfort, feeling of foreign body as well as tinnitus in that order were the commonest ear complaints by our patients, and these were the major reasons for coming to the hospital. See table 11.

We also found from our study table 111, that bilateral ear affection by wax was twice as common as either right or left ear presence of wax accounting for 60.1% of all cases seen. Zeba et al<sup>11</sup> in their study also found that bilateral ear impaction was commoner than either right or left ear affectation.

Cotton bud abuse came out tops as a predisposing factor to wax impaction amongst the predisposing factors accounting for 7.69%, though the greater number of patients seen had no identifiable predisposing factors 77.51% of all cases seen. See table 1V.

Accumulation of excess cerumen results from misguided attempts to remove wax with objects and also from the breakdown of the natural epithelial migration of the external auditory canal <sup>13, 14, 15, 16</sup>.

Cotton bud as the commonest used object in the ear was also reported by Afolabi et al<sup>18</sup>. Thus it becomes very important as part of otologic health education to discourage the use of cotton buds alongside other objects in the ear as they help in pushing the ear wax beyond the skin lined external auditory canal which subsequently gets retained and cannot be removed by the natural outward migration of the epithelium of the external auditory

canal. The danger of ear drum perforation, trauma to canal skin, infecting the external auditory canal amongst other health problems also remain a possibility if these wrong practices are not stopped.

The commonest treatment modality employed for our patients was the use of cerumenolytic agents followed by ear syringing in 80.5% of cases. The rest of the patients were treated by use of cerumenolytic agents alone.

None of our patients benefited from the use of suctioning or use of wax hook or any other known method of treating wax impaction and would appear that use of cerumenolytics and ear syringing are quite effective methods of treating wax impaction as we did not record any complications.

### Conclusion

Wax impaction is a common otologic presentation in our subregion. Ignorance with the profound abuse of cotton buds is a major predisposing factor factor. Health education is of the essence as treatment is simple and effective.

Table I for wax impaction Age/sex distribution

Age group	M	F	Number of Patients	% Age
0-10 yrs	42	60	102	30.17%
11-20 yrs	18	23	41	12.13%
21-30 yrs	19	21	40	11.83%
31-40 yrs	17	25	42	12.43%
41-50 yrs	19	16	35	10.36%
51-60 yrs	14	28	42	12.43%
> 60yrs	21	15	36	10.65%
Total	150	188	338	100%



Table II: Symptomatology frequency Table

Symptom	Frequency	%
Otalgia	124	30.77
Hearing impairments	100	24.81
Tinnitus	66	16.38
Discomfort/Blockage/fullness/feeling of FB	79	19.60
Ear discharge	9	2.23
Itching	17	4.22
Giddiness	2	0.50
Coincidental finding	6	1.49
Total	403	100

Table III Side of Ear affection

Ear	No	%
Right Ear	65	19.2%
Left Ear	70	20.7%
Bilateral	203	60.1%
Total	338	100%

Table IV Predisposing factors to wax impaction

Factor	No	%
Cotton bud abuse	26	7.69%
Trauma	8	2.37%
Foreign body in the ear	4	1.18%
Narrow ear canal	18	5.33%
Thick hair in ear Canal	8	2.37%
Assoc infection	12	3.55%
Unidentified	262	77.51%
Total	338	100

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