

Research Article,

Current Tread in Ear Syringing In Enugu

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Abstract:

Background:

Ear syringing is a clinical procedure mostly seen in ear, nose and throat (ENT) clinics. It involves irrigating the external auditory canal with normal saline at body temperature. The aim of this study is to highlight the current trend in ear syringing in a tertiary health institution in Enugu, South East Nigeria.

Method:

This was a prospective study of all patients that were managed for ear syringing in the ENT clinic of Enugu State University of Sciences and Technology, Teaching Hospital Park Lane, Enugu over a period of one year (January to December 2019)

Result:

A total of 211 patients consisting of 97 males and 120 females with M:F ratio of 1:1:3 were seen. The ages of the patients ranged from below 1-85 years. The indications for ear syringing were cerumen auris 142 patients (67.3%), Otomycosis 57 patients (27.7%) and foreign bodies in the ear (FB ear) 12 patients (5.7%). Ear syringing was done in the right ear (19.4%), left ear (24.6%) and both ear (55.9%). Most of the syringing were done by the ENT trained nurses in the clinic. No complication occurred during the period of study.

Conclusion:

Current trend in ear syringing in Enugu involves the use of economic ear syringe Kits, training and retraining of nurses in the ENT clinic and application of ceruminolytic agents prior to syringing.

Keywords: Ear, Syringing, Current Trend, Enugu.

Introduction:

Ear syringing is a common otorhinolaryngologic procedure by which external auditory canal is irrigated with normal saline at body temperature¹. It is a procedure which every doctor or nurses should be able to perform very well. However it is mostly done in ENT clinic by ENT nurses, resident doctors in ENT and on rare occasion by the consultant ENT surgeon². Ear syringing involves the act of removing ear wax, dead skin, foreign bodies and debris by gentle flushing with warm saline using Higginson syringe, economic syringing Kit or improvised wide bore cannular and 20ml syringe. Adequate knowledge of anatomy and physiology of the ear and also

training is required for effective ear syringing that will be free of complication^{3,4}.

The most common indication for ear syringing is cerumen auris (ear wax)^{5,6,7}. Cerumen auris is a mixture of ceruminous and sebaceous gland secretion mixed with desquamated epithelium in the external auditory canal. Prevalence of wax impaction in USA was found to be 10% among children, 5% among healthy adult and up to 57% in older persons in nursing home⁸. It is found to be disproportionately more common in children and elderly in Nigeria^{9,10}. Cerumen auris is usually expelled from the external auditory canal by migration, a process that is aided by jaw movement while eating and taking¹¹. This natural

processes believed by expert to be hindered by self-ear cleaning¹², hence impaction results, necessitating syringing. There are various method used in the removal of ear wax. These include the use of ceruminolytic agents, curette method such as using either Jobson-Horne probe or St Bartholomen wax hook and lavage⁵.

Another indication for ear syringing is foreign body removal from external auditory meatus. This procedure is mostly done for non-vegetative and animate foreign bodies^{13, 14}. Contra indication for ear syringing for foreign body removal includes the following, vegetative FB, button batteries and stones.

Otitis externa is an infection or inflammation of the external ear due to fungal (Otomycosis) or bacteria. This is one of the indications of ear syringing. Syringing in this condition is done to clear the external auditory canal of debris and also reduce the fungal load for effective treatment by antifungal and anti-bacterial agent.

Various methods of ear syringing are employed. Traditionally ear syringing with Hygisson syringe was common. Automatic syringes which are effective, loss traumatic and associated with few complications are now available for use. However an economic syringe kit was developed recently

Frequencies

which is equally cheap, easily available and effective was used in this study that resulted in no complication. The complications of ear syringing are the following – tympanic membrane perforation, vertigo, otalgia. These complications occur when untrained personnel perform the procedure.

This study aims to assess the current trend in ear syringing in a tertiary health institution in Enugu South East Nigeria.

Materials and methods:

This was a prospective study of all patients that were managed for ear syringing in ENT clinic of Enugu State University of Science and Technology, Teaching Hospital, Enugu over a period of one year. The following information was obtained as the patients were seen in the clinic- patient’s age, sex, indications for syringing, side of the ear syringed and any associated complication. Information obtained was analysed with SPSS version 14. The results were represented as tables and graphs.

Results:

A total of 211 patients consisting of 91 males and 120 females with M: F ratio of 1:1.3 were seen.

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5	29	13.7	13.7	13.7
	6-10	40	19.0	19.0	32.7
	11-15	23	10.9	10.9	43.6
	16-20	17	8.1	8.1	51.7
	21-25	19	9.0	9.0	60.7
	26-30	13	6.2	6.2	66.8
	31-35	13	6.2	6.2	73.0
	36-40	3	1.4	1.4	74.4
	41-45	7	3.3	3.3	77.7
	46-50	7	3.3	3.3	81.0
	51-55	4	1.9	1.9	82.9
	56-60	8	3.8	3.8	86.7
	61-65	7	3.3	3.3	90.0
	66-70	5	2.4	2.4	92.4
	71-75	3	1.4	1.4	93.8
	76-80	3	1.4	1.4	95.3
81-85	4	1.9	1.9	97.2	
	Below 1yr	6	2.8	2.8	100.0
	Total	211	100.0	100.0	

		Sex			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	91	43.1	43.1	43.1
	Female	120	56.9	56.9	100.0
	Total	211	100.0	100.0	

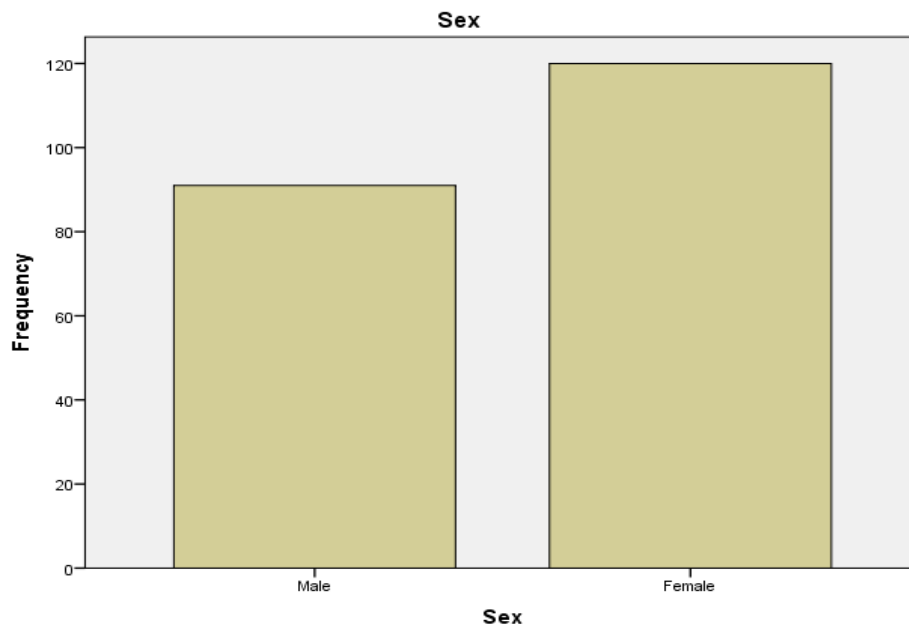


Figure 3

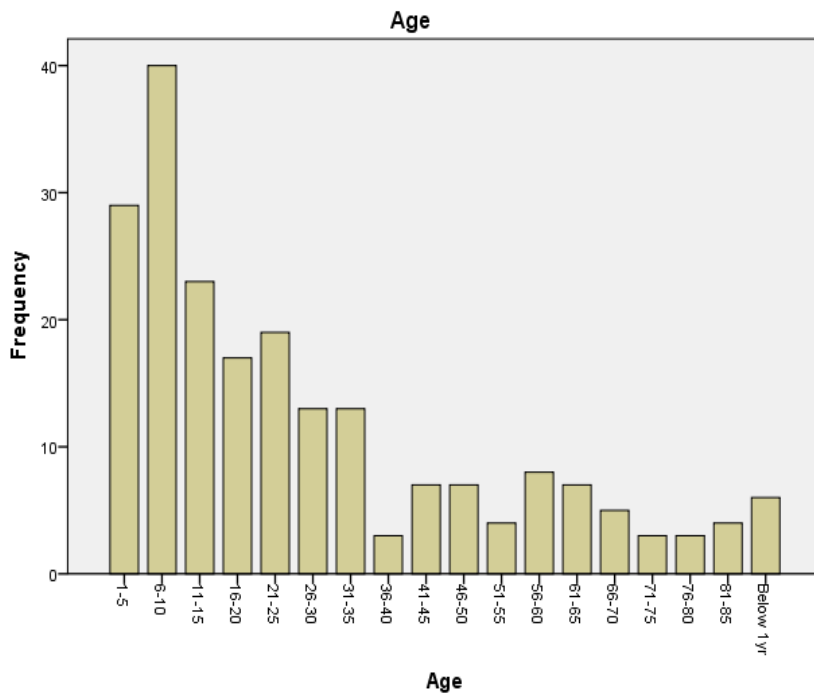
The ages of the patients ranged from below 1 to 80yrs.

Age * Sex Crosstabulation

Count		Sex		Total
		Male	Female	
Age	1-5	21	8	29
	6-10	16	24	40
	11-15	9	14	23
	16-20	7	10	17
	21-25	7	12	19
	26-30	4	9	13
	31-35	5	8	13
	36-40	1	2	3
	41-45	2	5	7
	46-50	5	2	7
	51-55	2	2	4
	56-60	3	5	8

Chijioke c. Anekpo / Current Tread in Ear Syringing In Enugu

61-65	2	5	7
66-70	0	5	5
71-75	1	2	3
76-80	2	1	3
81-85	2	2	4
Below 1yr	2	4	6
Total	91	120	211



The indications for ear syringing were cerumen auris 142 patients (67.3%). Otorrhyosis 7 patents (27.7%) and foreign body in the ear 12 patients (5.7%)

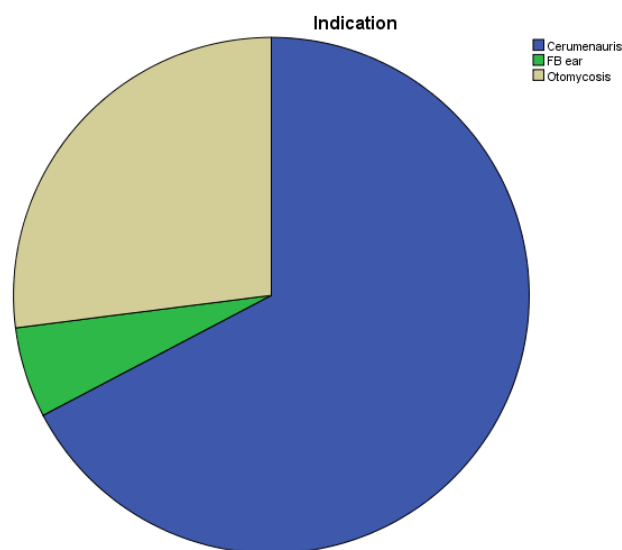


Figure 6

Ear syringing was done in both ear (55.9%) in the right ear (19.4%) and left ear (24.6%) – see figure 4. Most of the syringing were done by ENT trained nurse. No complication occurred during the period of study.

Discussion:

Ear syringing is a clinical procedure in ORL clinics mostly done by ENT trained nurses. It is the commonest procedure seen in ORL clinics. Ogunleye in Ibadan reported that syringing is the most common otologic procedure. In the UK, approximately 4 million ears were syringed annually⁸.

The age range for ear syringing in our study was from below 1year to above 80years as shown in figure 4 and 5. It was highest between the ages of 6years to 10 years and gradually declined in the elderly. However, larger proportions of ear syringing were done in children below 10years, for cerumen auris (wax) impaction and ear foreign bodies. In the elderly, syringing was done for cerumen auris and otomycosis.

The study revealed that more female had ear syringing than male in agreement with what Adoga el al reported. Wax impaction may be a major indication for ear syringing in both male and female but females may be more dispose

because of the habit of using cotton bud to clean their ears which may disturb the natural dislodgment of wax or debris.

59.7% of the patients had bilateral ear syringing done. This was frequently performed compared to the right ear syringing (19.4%) and left ear syringing (24.6%). This was similar to what was found in Kaduna and Ibadan at a lower percentage of 43% and 51.1% respectively. The most common indication for syringing in the study was cerumen auris (wax impaction) 67.3%. This had been reported^{1, 15, 16}. Removal of impacted cerumen auris through syringing is a difficult task. We always apply a ceruminolytic agent for a period of one week to soften the wax and also use an economic ear syringe Kit for the developing countries. The economic ear syringe Kit is easily available, affordable and may result to few or no complication from the procedure compared to the traditional ear syringing apparatus -the Hygisson syringe.



Economic ear syringing kit

Otomycosis was the second indication for ear syringing (27.7%). The same trend was reported by Taiwo O. Adedeji el al at Osogbo¹⁷ at a lower prevalence rate of (10.2%). Otomycosis is more prevalent in sub-Saharan Africa with warm, wet humid climate and dusty environment^{18, 19}. In our centre, treatment of otomycosis includes syringing to reduce the fungal debris, tropical antifungal ear drop for 2-4 weeks and occlusion of the affected ear while bathing to prevent water.

The least indication for ear syringing was foreign body in the ear (57.7%). This was similar to what was reported in Osogbo by Taiwo O. Adedeji el al¹⁷. Ear syringing was done for non-vegetative foreign bodies alone.

Although many authors reported various types of complications of ear syringing, however in our study we did not record any complication. Complication reported includes the following vertigo external auditory canal abrasion, tympanic membrane perforation. These complications

could be prevented if thorough examination of the ear was done and proper technique carried out. That was what we applied that resulted in zero complication.

More so we have highly experienced ENT trained nurses that made use of the economic ear syringe Kit for ear syringing. Published studies reported that major complication following ear syringing occurs in 1 out of 1000 cases of ear syringed and that adequate training about ear syringing is needed to minimize or prevent such conditions^{18,20,21,22}.

Conclusion:

Current trend in ear syringing in Enugu South East Nigeria involves the use of cerumionlytic agent to soften the impacted cerumen auris prior to syringing, use of economic syringing Kit designed to reduce the force a pressure on the tympanic membrane and finally using highly trained ENT nurses for the procedures.

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