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Research Article

Spectrum of Otorhinolaryngological Diseases Seen at a Tertiary Hospital in South-West Nigeria

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SUMMARY

Objective: This study evaluated the pattern of presentations of ear, nose and throat diseases in patients that visited the ENT department of the Lagos State University Teaching Hospital, Ikeja, Lagos, Nigeria.

Methods: The study was a retrospective study. All the patients that attended the outpatients' clinic of Ear, Nose and Throat (ENT) department, of the Lagos State University Teaching Hospital, Ikeja, Lagos from January 2008 to December 2010 were studied. Demographic characteristics, clinical variables and diagnoses were extracted from hospital records and analysed using the IBM-SPSS software (version 17). Test of statistical significance was carried out and accepted at $p<0.005$.

Results: There were 7,485 new patients during the period. The male to female ratio was 1:1.1. The age of the patients ranged from one month to 90 years, with a male mean of 54.0 years while the female mean was 46.0 years. The most common types of ENT diseases were foreign body in ear, nose and throat (17.5%), otitis media (15.8%), wax (15.6%), hearing loss (14.7%), adenotonsillar hypertrophy (9.8%) and rhinosinusitis (8.1%).

Conclusion: This study showed the need for policy makers to encourage and fund primary and secondary health care settings with the necessary equipment and personnel so that minor ENT cases can be attended to by trained staff of the centres. The content of medical curriculum for clerkship in otorhinolaryngology should also be looked into by medical management authorities.

INTRODUCTION

The knowledge of the anatomy and physiology of the ear, nose, throat, head and neck diseases is important because of the type of morbidities which they cause due to impairment of the inherent physiological function that can be found within the head and neck region.[1] These pathologies include those of hearing, breathing, swallowing, phonation, speech, olfactory and the respiratory tract.[1] The pattern of otorhinolaryngology, head and neck diseases that were observed in otorhinolaryngology (ENT) outpatient clinics were observed to vary from one country to another.[2,3] Equally, racial and ethnic differences were observed in the incidence rates and manifestations of various types of ENT diseases.[1-3] In the same vein, the knowledge of the management of diseases from the anatomical areas would help to boost the content to be included in future medical curriculum of the head and neck diseases and possibly provide relevant scientific data in the clinical management of pathologies from the anatomical area.[3] Availability of such basic data would help in the determination of clinical and research priorities as well as the course contents for training of various health personnel.[4] Scientific studies on the prevalence of ENT diseases in low-resourced countries are of vital importance to health planners. Unfortunately, such information was found to be lacking in Nigeria and other sub-Saharan African countries. In the same vein, when hospital-based data are monitored over a period, they may assist in assessing changes in disease pattern and mortality.[5]

This study therefore aimed at investigating the pattern of presentations of ear, nose and throat diseases in patients that visited the ENT unit of the Department of Surgery of the Lagos State University Teaching Hospital, Ikeja, Lagos, Nigeria.

METHODOLOGY

This study was a retrospective one which involved studying case notes of all patients that patronized the outpatients clinic of the Ear, Nose and Throat (ENT) Unit of the Surgical Department of the Lagos State University Teaching Hospital, Ikeja, Lagos, Nigeria from January 2008 to December 2010. The patients included those that were referred from the Accident and Emergency departments, other clinical departments of the hospital, various general hospitals as well as private clinics from Lagos and the

environs. The case notes of patients that visited the ENT department from January 2008 to December 2010 were retrieved and reviewed. The diagnoses register of the patients seen during the study period were retrieved and used in extracting data. Demographic variables such as age, gender, state of origin, and ethnic groups, including diagnoses and relevant investigations were also extracted.

Statistical analysis

Data entry and analysis were done using the IBM-Statistical Package for Social Sciences (IBM-SPSS, Chicago, IL, USA), version 17. Frequency tables were generated for variables and tests of statistical significance between variables were performed using Chi square and Fisher's exact test (as appropriate). A p-value of less than 0.05 was accepted as indicative of statistical significance.

RESULTS

In the 36 months of the study, there were 7,485 patients that registered at the ENT outpatients clinic. Of these, there were 3144 (42%), 2617(35%), and 1724 (23%) patients seen in 2008, 2009 and 2010 respectively. All the patients were newly-registered. The male to female ratio was 1: 1.1. The ages of the patients ranged from one month old to 90 years. The commonest ENT diseases recorded during the period were foreign bodies in ear, nose, and throat, otitis media, wax, hearing loss, adenoid and tonsillar hypertrophy, and rhino sinusitis as shown in Table 1. Table 2 shows the percentage incidences with regard to sex and age group, of the most common disease groups. Table 3 shows distribution with regard to the paediatric and adult age groups. Figure 1 shows the adult and paediatric patterns of presentations during the study period.

Table 1: Clinical diagnoses of patients seen between year 2008 and 2010.

	2008	2009	2010	TOTAL	(%)
Clinical conditions					
Foreign bodies	464	683	160	1,307	17.5
Otitis media	558	346	276	1,180	15.8
Wax	448	404	316	1,168	15.6
Hearing loss	458	412	231	1,101	14.7
Adenotonsillitis	334	220	182	736	9.8
Rhinosinusitis	250	216	137	603	8.1
Otitis externa	261	145	90	496	6.6
Pharyngitis	58	58	47	163	2.2
Tinnitus	83	0	47	130	1.7
Epistaxis	47	51	26	124	1.7
Otomycosis	0	0	115	115	1.5
Nasal polyps	52	0	20	72	1.0
Laryngomalacia	22	13	6	41	0.5
Laryngitis	26	0	9	35	0.5
Hoarseness	0	24	11	35	0.5
Meniere's	12	0	13	25	0.3
Eustachian tube dysfunction	18	0	7	25	0.3
Nasopharyngeal carcinoma	18	7	0	25	0.3
Speech disorders	0	23	0	23	0.3
Vertigo	10	0	12	22	0.3
Sinonasal tumour	14	3	5	22	0.3
Acoustic neuroma	6	0	3	9	0.1
Parotid tumour	0	7	0	7	0.1
Halithosis	0	0	7	7	0.1
Bell's palsy	0	5	0	5	0.1
Laryngeal carcinoma	4	0	0	4	0.1
Cleft palate	0	0	3	3	0.0
Glomus tumour	1	0	0	1	0.0
Tongue tie	0	0	1	1	0.0
TOTAL	3144		1724	7,485	100.00

Table 2: Percentage incidences with regards to gender of the six most common diagnoses

Percentage incidence	2008		2009		2010	
	Male (%)	Female (%)	Male (%)	Female (%)	Male (%)	Female (%)
Foreign bodies	257 (55.4)	207(44.6)	337(49.3)	346(50.7)	92 (57.5)	68(42.5)
Otitis media	294(52.7)	264(47.3)	183(52.9)	163(47.1)	151(54.7)	125(45.3)
Wax	240(53.6)	208(46.4)	209(51.7)	195(48.3)	172(54.4)	144(45.6)
Hearing loss	258(56.3)	200(43.7)	208(50.5)	204(49.5)	88(56.1)	69(43.9)
Adenotonsillar hypertrophy	188(55.5)	151(44.5)	130(59.1)	90(40.9)	109(59.9)	73(40.1)
Rhinosinusitis	133(53.2)	117(46.8)	116(53.7)	100(46.3)	62(45.3)	75(54.7)

Table 3: Incidence distribution with regards to the paediatric and adult age groups of the six most common diagnoses

	Paediatric cases			Adult case			Total Paediatric (%)	Total Adult (%)
	2008 (%)	2009 (%)	2010 (%)	2008 (%)	2009 (%)	2010 (%)		
Foreign bodies	352(35.3)	505(50.7)	140(14.0)	112(36.1)	178(57.4)	20(6.5)	**997 (76.3)**	**310 (23.7)**
Otitis media	281(49.2)	154(27.0)	136(23.8)	277(45.5)	192(31.5)	140(23.0)	**571 (48.4)**	**609 (52.5)**
Wax	201(47.0)	81(18.9)	146(34.1)	242(33.0)	323(43.9)	170(23.1)	**428 (36.8)**	**735 (63.2)**
Hearing loss	108 (36.7)	111(37.8)	75(25.5)	350(43.4)	301(37.3)	156(19.3)	**294 (26.7)**	**807 (73.7)**
Adenotonsillar hypertrophy	248(42.2)	186(31.6)	154(26.2)	86(51.8)	34(23.0)	28(18.9)	**558 (79.0)**	**148(21.0)**
Rhinosinusitis	57(55.3)	27(26.2)	19(18.5)	193(38.6)	189(37.8)	118(28.6)	**103(17.1)**	**500(82.9)**

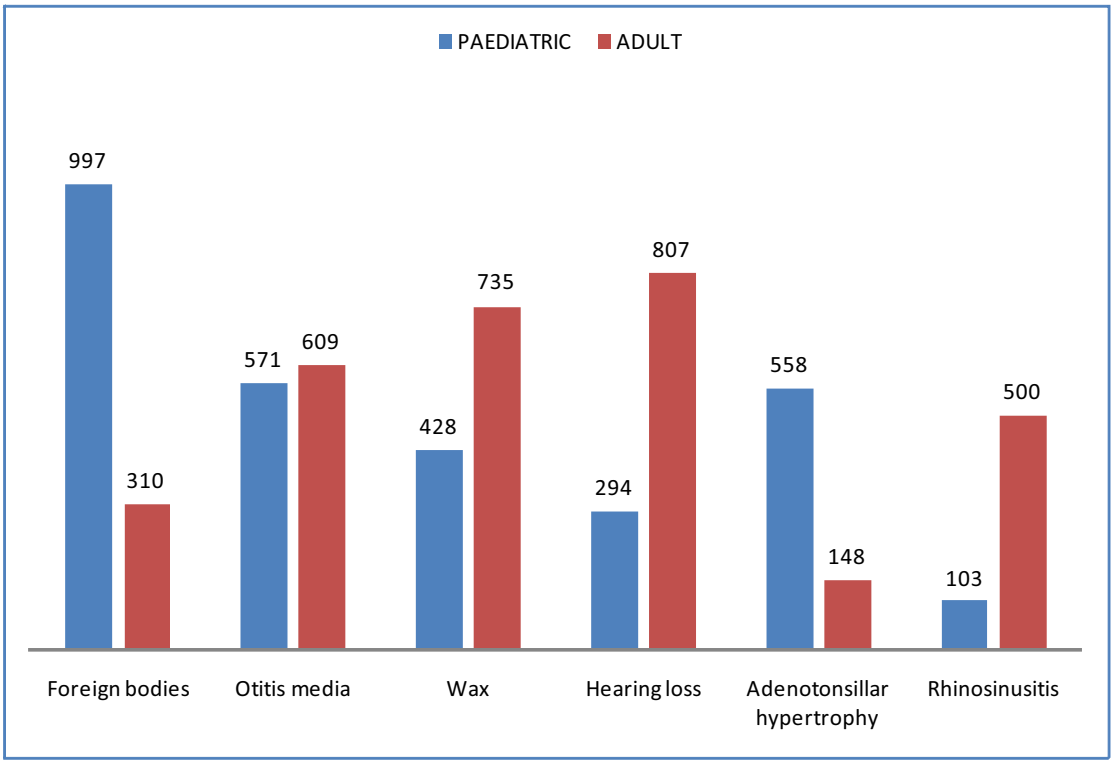

Figure 1: Adult and paediatric patterns of presentations

DISCUSSION

The findings of this study showed that the patterns of presentations of various ENT diseases in Lagos, Nigeria were in consonance with findings from other studies in the literature. Our findings showed that an average number of 207 new patients with ear, nose and throat diseases visited the ENT unit monthly. This large number of patients could be due to the location of the hospital, Lagos State, where largest numbers of ENT surgeons work and also due to the large population of Lagos State, estimated to be 18 million people. The teaching hospital is also owned by the state government and it provides not only tertiary healthcare services but also primary and secondary services to the citizens of Lagos State for free.

The results showed that the presented diseases affected all age groups. Nearly half of the patients (48.7%) were children below the age of 16 years. The majority (75%) of the paediatric group had foreign bodies in their ears, noses or throats. Previous studies showed that children within the age bracket, 1.7 to 4.8 years, were the age group mainly at risk of foreign body aspirations [6-9]. There was also a propensity to mainly involve male children with most series showing 60-70% male predilection.[6-9] Children, most especially males, have the tendency to be curious and have tendencies to probe into the body orifices such as the ones within the head.[10-11] Aspiration of tracheobronchial foreign body that commonly affects young children, is potentially life-threatening and require medical and surgical interventions.[12-16]

Among the adult group, chronic otitis media was observed to be the commonest otolaryngological disease seen in patients attending the ENT clinic. Previous studies have also shown that otitis media diseases were the commonest otolaryngological diseases among adults.[17-18]

There were other observed associated conditions such as nasopharyngeal carcinoma, chronic rhinitis, rhino-sinusitis, upper respiratory tract infection, tubo-tympanic disease, central or large subtotal perforations of tympanic membrane, and attico-antral diseases, attic perforations and cholesteatoma. These findings were similar to the 9 % to 11 % reported from other developing countries.[17-20]

In developing countries such as Nigeria, poverty, ignorance, dearth of ENT specialists and limited access to specialist medical care could explain the high rates of otitis media in the patients.[17-20] The results of this study also showed that impaction cerumen constituted the third commonest presentation. This finding is in agreement with earlier reports.[14-16,22] In the same vein, hearing loss was the fourth commonest disorder among the patients who visited the unit. Previous studies showed that hearing loss was one of the commonest ENT disorders.[24] In children, studies have shown that it also affects the development of language and may cause work-related difficulties in the adult.[23-24] The fifth commonest disorder from the findings of this study was adeno-tonsillitis. Patients with these conditions presented with loud snoring, mouth breathing, frequent rhinorrhea. This condition was observed to be more prevalent in the paediatric group as expected.

Lastly, the sixth commonest disorder was rhino sinusitis. Patients with this disorder presented with allergic rhinitis, vasomotor rhinitis, mixed allergic and vasomotor rhinitis and infective rhino sinusitis. These clinical observations from this study could assist the medical management authorities to redefine contents of medical curriculum in otorhinolaryngology, thereby enriching the

local medical graduates in their pursuit of relevant knowledge.

CONCLUSION

This study showed the need for policy makers to encourage and fund primary and secondary health care settings with the necessary equipment and trained personnel so that minor ENT cases can be attended to by trained staff of the primary and secondary care centres. The content and extent of medical curriculum for clerkship in otorhinolaryngology should also be looked into.

Conflict of Interest

The authors declare there is no conflict of interest.

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