

Prevalence of Otolaryngological diseases in Nigerians.

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Background: To study the prevalence of Otolaryngological (ORL) diseases in a tertiary hospital.

Methods: Five hundred patients that were first attendee at the ORL clinic of the Obafemi Awolowo University teaching hospital Ile-Ife were randomly selected from the clinic lists. The age, sex, presenting complaints, and the diagnosis were noted. Analysis of the data were done using SPSS version 10.0

Results: The age ranges of ENT clinic attendee were 10 days – 95years with a mean age of 30.5 ± 22.7 years. There were 315 males and 185 females with a male to female ratio of 1.7:1. Diseases of the ear was the most common 51.8% (n=259), nasal and paranasal sinuses diseases accounted for 26% (n=130), pharyngeal diseases was found in 10.6% (n=53), laryngeal disease accounted for 3% (n=15). Oral cavity lesions were seen in 1.4%. (n=7) and Head and Neck tumors were found in 7.2% (n=36) these were made up of malignant (n=30) and benign (n=6) tumors.

Conclusion: Ear diseases were the most in this work and oral cavity lesions being the least common. The peak age incidence was in the 0-9 years. There is a need for manpower development in otological and paediatric otolaryngological surgery.

Introduction

Otorhinolaryngology in Nigeria is not as advanced as in the developed countries. Many of the tropical countries including Nigeria have few experts and very poor facilities to support the effort of the experts; this creates a very heavy workload on the Otolaryngologists working in these areas. There are therefore a few studies on the prevalence of the diseases of the Ear, Nose, and Throat-Head and Neck region. Martin¹ reported a personal survey on ENT diseases over a 5 – year period at Uganda, and Bhatia and Varughese² reported on the pattern of otolaryngological diseases in Jos community^{1,2}. Other works reported on particular disease entities like Secretory Otitis Media with Effusion (SOME), Acute Otitis Media, and pattern of Otological diseases respectively^{3,4,5}. The remarks by Manson-Bahr over five decades ago in his paper on Otorhinolaryngology in the tropics, still holds today: ‘Affections of the ear, Nose Throat as they occur in the tropics certainly deserves a more generous measure of scientific study than has so far been accorded them’⁶.

A study on the prevalence of the Ear Nose throat and Head and Neck diseases in Nigeria in particular will provide basic data that would help in identifying specific research and clinical priorities. The direction of manpower development as regards Otolaryngological health in Nigeria can also be easily identified. This paper aims at determining the prevalence of Otolaryngology – Head and Neck diseases among Nigerians living in the southwestern part of Nigeria that are first attendee at the ENT clinic of the Obafemi Awolowo University Teaching Hospital Complex (OAUTHC), Ile-Ife.

Patients and Methods

Records of 500 patients who are first attendee at the ENT clinic of OAUTHC, Ile-Ife were randomly selected from the general Outpatients clinic appointments lists over a five year period from January 2003 to December 2007. Ile-Ife is in the southwestern part of Nigeria. It provides tertiary health care to an aggregate population of 9 million people⁷. Official government regulations allow only patients referred by medical institutions or private practitioners to receive appointments at the outpatient department⁷. Every fourth patient who is a first attendee on the clinic list over a period of 5 years

(2003-2007) was selected. Six thousand ORL patients were seen during the review period out of which there were 2000 new attendees. The hospital records of the patients who met the inclusion criteria were reviewed, and the information extracted from the records was the demographic data, the presenting symptoms, the physical examination findings, and the diagnosis. The data collected were analyzed using descriptive analysis with the help of SPSS version 10.0 statistical software.

Results

The age distribution of the patients showed that there were more children attending the ENT clinic than adults. Mean Age: 30.5 $\pm$ 22.7years (Table 1). Males were 315 and 185 caes were females. The male to female sex ratio was 1.7: 1. Regarding the place of residence, 485 (97%) came from the Southwestern part of Nigeria. Only 15(3%) resided in other part of Nigeria

Symptomatology of ENT diseases

Table 2 gives the descriptive statistics of the presenting symptoms. Ear symptoms was the chief complaints in 53.6% of cases, nasal symptoms were found in 24.2%, pharyngeal and laryngeal symptoms were found in 13.6%, head and neck tumors symptoms were seen in 7.2% of cases while oral diseases symptoms were seen in 1.4%.

Table 1. Age Distribution

Age in years	Frequency \ Percentage of total (%)
0-9	113 (22.6)
10-19	76 (15.3)
20-29	80 (16.0)
30-39	69 (13.8)
40-49	41 (8.3)
50-59	46 (9.2)
60-69	38 (7.6)
70-79	27 (5.4)
80	9 (1.8)
Total	500 (100)

Mean Age: 30.5 $\pm$ 22.7years

Table 2. The Common Symptoms of ENT iseases

Symptoms	Frequency (% of total)
Otorrhea	109(21.8)
Hard of hearing	64(12.8)
Tinnitus	49(9.8)
Otalgia	31(6.2)
Vertigo	10(2.0)
Inability to talk	15(3.0)
Nasal blockade	41(8.2)
Rhinorrhea	20(4.0)
Epistaxis	16(3.2)
Sneezing	12(2.4)
Hoarseness	28(5.6)
Sore throat	20(4.0)
Stridor	14(2.8)

	10(2.0)
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Table 3. The Four Most common ORL Diseases per Anatomic sites

	Anatomical region	Frequency (%)
A	Ear:	259(51.8)
	CSOM	63
	SNHL	50
	AOM	38
	Deaf Mutism	18
B	Nose and Paranasal sinuses	130(26)
	Chronic Sinusitis	78
	Nasal polyp	14
	Epistaxis	10
	Frontal Mucocele	5
C	Pharynx	53(10.6)
	Adenoids	14
	CNSP	14
	Tonsillitis	13
	Esophageal Foreign Body	10
D	Larynx	15(3.0)
	Chronic laryngitis	4
	Foreign Body in the Airway	5
	Laryngeal edema	4
	Laryngomalacia	2
E	Oral Lesion	7(1.4)
	Cleft Lip	3
	Benign Lip Tumour (fungal)	2
	Ranula	1
F	Head and Neck tumours	36(7.2)
	Carcinoma of the Larynx	10
	Paranasal and Nasal Carcinoma	6
	Nasopharyngeal Carcinoma	4
	Laryngeal Papilloma	3
	Parotid Carcinoma	2

Summary of diagnosis

Table 3 describes the four most common ENT diseases according to anatomical region. Ear diseases were the most common in 51.8% followed by nasal diseases 26%, pharyngeal diseases 10.6%, and Head and Neck cancers 6.0%, Laryngeal diseases 3.0%, Oral lesion 1.4% while benign head and neck tumors were found in 1.2% of cases.

Discussion

This study shows that there are more males attending the ear, nose and throat (ENT) clinic and the highest age incidence was found to be in the first decade of life (Table I). The highest incidence of ORL diseases in the first decade of life is probably related to the fact that Otorrhea was the most

common complaints and that Otitis media was the most common childhood ENT disease. This agrees with existing literature; Ogisi and Brobby found Otitis Media to be the most common ear disease in the tropics^{8,9}.

Sensorineural hearing loss (SNHL) due to varying causes was the second most common ear disease, while the incidence of deaf mutism was found to be 3% in this study. Likhachev found an association between deaf mutism and poverty¹⁰. He noted that there was a significant reduction in the incidence of deaf mutism with improvement in the material condition and improved socio-economic facilities of the people in the then Soviet Union¹⁰. Establishment of a national neonatal hearing-screening programme for high-risk infants in Nigeria will lead to an early diagnosis and rehabilitation of affected patients.

Otosclerosis was found not to be common, accounting for 0.4% of the study population. An incidence of 1% of clinical otosclerosis and 10% histological otosclerosis had been established in the white¹¹. The low incidence recorded in this work agrees with the low incidence of Otosclerosis in blacks that had been established in the literature¹¹. Brobby also reported low incidence of otosclerosis in Kumasis Ghana¹². The low incidence of Otosclerosis in black race has been attributed to the flat occipital protuberance of the skull among Africans. However, Okafor found a higher incidence of otosclerosis in the southeastern part of Nigeria¹³. Further study to confirm this regional variation in the incidence of otosclerosis in Nigeria is necessary.

Cholesteatoma was found to be rare, while sequel of CSOM such as meningitis, brain abscess, and mastoid abscess and lateral sinus thrombosis were found in 2% of the cases. In these patients with intracranial suppurations, ENT referrals are usually very late and are associated with poor prognosis.

Nasal and Paranasal Sinus Diseases.

These constituted the second most common anatomical site for ENT diseases see (Table 3) and chronic sinusitis was found to be the most common.

The maxillary sinuses were affected in 40 (8.0%) while, Pan Sinusitis, was found in 16(3.2%). Complications of chronic sinusitis such as nasal polyp and frontal mucocoele were seen commonly in this study. Chronic sinusitis was found to also account for a large percentage of outpatients' attendance at ORL clinics in the Western World until recently. Low socio-economic factors and overcrowding which are prevalent in our society might be responsible for the high prevalence of chronic sinusitis in this work. Improvement in the housing condition in western world has led to a significant reduction in the incidence of this disease. Therefore an improvement in the housing, feeding and better social facilities in our society is likely to be associated with a lower incidence of many of the infective diseases of the ORL region.

Pharyngeal diseases

They are the third most common ORL diseases found in this study. Of these, chronic nonspecific pharyngitis, acute tonsillitis, adenoids, and esophageal foreign bodies (FB) are the most common. (Table 3). The FB in these cases were the ₦1 coin, some other metallic objects –kerosene stove chamber cover, pin, coca cola bottle cover, kola nuts and fish bone. The FB in close to 90% of cases was impacted at the level of cricopharyngeus and was promptly removed at emergency oesophagoscopy, and this occurs in children of age 3 months - 5 years.

Hoarseness was associated with chronic laryngitis, laryngeal papilloma and cancer of the larynx while stridor was found in patients with FB in the Airway, and Laryngomalacia (Table II). Airway obstruction in 4(0.8%) was due to retropharyngeal abscess in infants of between 3 months – 2 years. Retropharyngeal abscess constitutes an emergency and they usually present very late having being treated as a case of bronchopneumonia before referral. A high index of suspicion is needed in order to save this group of patients.

Head and Neck tumors

They were seen in 7.2% of ORL patients in this study. Over 90% of the malignancies reviewed in this work are Squamous cell carcinoma. Burkitts lymphoma was found in 0.6% of cases while adenocarcinoma was also found to be rare. The head and neck malignancies were noted in the older patients above the age of 50 years while the benign tumors were found in younger age group. This figure is high when compared with the work of Bhatia and Varughese in Jos community, in the plateaus state of Nigeria². A regional variation in the incidence of Head and Neck cancer in Nigeria may be plausible.

There is a need for the Nigerian otolaryngologist to embark on a national survey of ORL diseases, so as to find the probable aetiological factors, establish regional variation in the incidence of ORL diseases and to stimulate research into the development of preventive measures.

References

1. Martin JAM. Diseases of the ear, nose and throat in tropical Africa. A Uganda survey. *Journal of Laryngology and otology* 1967; 81: 1079-1098.
2. Bhatia PL, Varughese R. Pattern of Otolaryngological Diseases in Jos community *NMJ* 1987; 67-73.
3. Okeowo PA. Observation of non-suppurative middle ear problems in Nigerian children. *Journal of tropical Pediatrics* 1978; 24: 4-6.
4. Elton P, Cornell J. Study of Otitis media and malaria among pyrexia attendees of an under fives clinic. *Journal of Tropical Medical Hygiene* 1978; 111-112.
5. Okafor BC. The chronic discharging ear in Nigeria. *Journal of Laryngology and Otology*, 1984; 98: 113-119.
6. Manson-Bahr. Tropical diseases affecting the throat, nose and ear. *Journal of laryngology and otology* 1961; 75: 175-195.
7. Lawal O, Agbakwuru A, Olayinka OS, Adelusola K. Troid malignancy in endemic nodular goiters: Prevalence, pattern and treatment. *EJSO* 2001; 27:157-161.
8. Ogisi FO, Osammor JY. Bacteriology of Chronic Otitis Media in Benin. *NMJ* 1987; 12(2): 187-190.
9. Brobby GW. The discharging ear in the tropics: a guide to the diagnosis and management in the district hospital. *Tropical Doctor*, 1992; 22:10-13
10. Likhachev AG. Deaf Mutism: In *Diseases of the Ear, Nose and Throat* 1978; 102-105, Mir Publishers 1978.
11. Belal AA. Otosclerosis. In: Belal AA, ed. *Belals Otolaryngology- head and Neck Surgery*, Alexandria. 1992; 32-33.
12. Okafor BC. Otolaryngology in South Eastern Nigeria. I. Pattern of Diseases of the ear. *NMJ*, 1983:11-19.
13. Brobby GW. Two cases of Otosclerosis in Kumasi Ghana- a case report: *Tropical and Geological medicine* 1985; 38: 292-295.