

Pattern of Paediatric Ear, Nose and Throat Diseases in Port Harcourt, South-South, Nigeria

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ABSTRACT

BACKGROUND

It is known that children constitute the majority of the patients' population seen in a typical ORL clinic in most hospitals. In the absence of a well-documented pattern of disease in these children, planning for their special health needs would be difficult. This study therefore is aimed at finding the prevalence and pattern of these diseases in the paediatric population in our environment so as to more appropriately equip these clinics and provide better health care to this population.

METHOD

This was a descriptive retrospective study involving all patients aged 0-15years that were seen in the ENT clinic of UPTH from Jan 2008 to Dec 2010. The clinic records and patients case files were the source of data.

RESULTS

A total number of 2163 patients were seen within the study period. 949 of this were of the paediatric age group constituting 43.87% of the total number of patients seen. There were 547 males and 412 females giving a ratio of 1.3:1. Age group 0-5years were the most affected; 646 patients (67.33%) while the age 11-15years were the least affected; 106 patients (11.16%). Otologic disorders were the commonest disease entity, 620 cases (65.33%). Aerodigestive disorders ranked

2nd; 226 cases (23.8%) while neck diseases were the least, 7 cases (0.73%). Obstructive hypertrophy of the tonsils and adenoids (OHTA) was the highest single disease entity seen; 18.55% and the highest aerodigestive condition 77.87%. OHTA was seen more in the age group 0-5yrs. Cerumen auris the highest otologic disorder 28.06% ,was seen more in age group 6-10yrs, while CSOM was seen more in 11-15yrs group. Nasal Foreign bodies were the commonest rhinologic condition.

CONCLUSION

The prevalence of the ENT disease among the paediatric population is high. Obstructive hypertrophy of the tonsils and adenoids, cerumen auris, CSOM are amongst the commonest disorders seen in the paediatric population in this environment. The planning for healthcare service should be focused on providing facilities for managing these conditions, while the training of ENT specialist should emphasize on building competence in the management of these condition's.

KEYWORDS

Pattern; Paediatric ENT Disease; Nigeria.

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INTRODUCTION

Diverse ear, nose and throat diseases are seen in a typical ORL clinic and children constitute a large percentage of this population^{1,2}. These diseases which are common in children and infants are responsible for considerable morbidity in this stage of life³. It is also known that preventable ear diseases such as foreign body insertion and inhalations and hearing and speech disorders¹ are important health problems in children and infants⁴. Other conditions, such as otitis media is a known common medical problem in children^{5,6,7} with associated frequent morbidity and a common cause of hearing impairment at this age.^{8,9,10}

Socioeconomic status also appears to play a part in some of these childhood ENT diseases^{1,11}. Chronic otitis media has been found to be predominant in the lower socioeconomic class group^{12,13}. It is known that poverty is a major risk factor of CSOM in developing countries.¹⁴

The presentation and initial management of ENT diseases in children is a significant factor in the outcome of these conditions.

It has been found that children who are dependent on their parents may present late, a situation which may be driven by poverty.¹⁵

It is also known that these children present first at the onset of their illness to the primary care general practitioners and the paediatricians¹⁶. Due to the similarity of the symptoms of some of these conditions with other common childhood diseases, for instance otitis media and malaria; misdiagnosis by the paediatricians and general physicians do occur¹⁷ resulting in late presentation to the ENT specialist often when disease has progressed to a chronic condition or has become complicated¹⁸. The pattern of these diseases in children may vary from one population to another as well as from one geographic region to another¹⁹. Therefore, the knowledge of the pattern of common childhood ENT diseases will therefore be necessary for the adequate education of primary care

doctors and pediatricians who may be the first point of care and referral of these patients.

It will also help in the adequate training of Otolaryngology specialists for better health care delivery in our resource poor region.

Presently there is paucity of data on paediatric ear, nose and throat disorders in the South-South of Nigeria; hence this study seeks to determine the prevalence and pattern of ear, nose and throat diseases seen in the paediatric ENT clinic of a tertiary hospital in Port Harcourt, with the aim of generating information and knowledge for the planning and improvement of ENT services in this region.

PATIENTS AND METHODS

This is a descriptive retrospective study of cases aged 0-15 years seen in the outpatient clinic of the ENT surgery department of the University of Port Harcourt Teaching Hospital from January 2008 to December 2010. Ethical approval was also sought and obtained for the study. Data was collected from the clinic records and patients' case files. The diagnosis used here were that made by the consultants and the senior registrars. The data were analyzed for age, sex, diagnosis and treatment using descriptive statistics and the results presented in simple tables.

RESULTS

A total of 2163 patients were seen within the study period. 949 patients were of the paediatric age group, constituting 43.87% of the total number of patients seen.

In this pediatric age group, there were 537 males (56.58%) and 412 females (43.41%) with a male female ratio of 1.3:1. The age group 0-5 years were the most affected with a total number of 646 patients, constituting 67.33% of the whole paediatric age group while the 11-15 years age group were the least involved with 106 patients accounting for 11.16% of the paediatric age group (table 1).

Otologic disorders were the most encountered disease entities with 620 cases, accounting for 65.33% of all the paediatric patients.

Aerodigestive disorders ranked second with 226 cases (23.8%) while Neck diseases were the least with 7 cases (0.73%), (Tables 2).

Obstructive hypertrophy of the tonsils and adenoids was the highest single disorder seen with 176 cases (18.55%) and the highest aerodigestive condition while acute tonsillitis was second with 2.42%.

Cerumen auris was the highest otologic condition seen in 174 cases (18.34%). The other major otologic conditions seen were Chronic Suppurative Otitis Media (CSOM) in 114 cases (12.0%), followed by otomycosis 88 cases (9.27%) and hearing/speech disorders in 86 cases (9.06%).

Foreign body in the nose constituted the highest Rhinologic condition with 41 cases (4.32%). The commonest condition found in the 0-5years age group was obstructive hypertrophy of the tonsils and adenoids seen in 157 cases of this age group (24.3%). Cerumen auris was the most prevalent condition in the 6-10years age group 54 cases, while CSOM was seen in 20 cases of the 11-15years age group.

Table 1: Age Distribution

Age group	Total	percentage %
0-5years	646	68.07
6-10years	197	20.75
11-15years	106	11.16
Total	949	100

Table 2: Age Distribution And Regional Spread Of Disorders.

Region of disorder	0-5years	6-10years	11-15years	Total	Percentage
Otology	386	158	76	620	65.33
Rhinology	57	14	25	96	10.11
Aerodigestive	196	25	5	226	23.81
External neck	7	0	0	7	0.73
Total	646	197	106	949	100

Details of the diseases according to the regions.

Table 3: Distribution of otologic conditions .

ENT DISORDERS	0-5YRS	6-10	11-15	TOTAL	PERCENTAGE
Acute otitis media	31	9	9	49	5.12
Cerumen auris	101	54	19	174	18.34
OME	3	5	1	9	0.95
CSOM	66	28	20	114	12.01
Otomycosis	56	23	9	88	9.27
Hearing/speech disorders	60	16	10	86	9.06
Aural polyp	0	2	3	5	0.53
Otitis externa	33	8	2	43	4.53
FB	21	6	0	27	2.83
Preauricular abscess/sinus	3	1	0	4	0.42
Meatal atresia	2	1	0	3	0.32
Microtia	2	1	0	3	0.32
Traumatic TM perforation	8	4	3	15	1.58
Total	386	158	76	620	65.3%

Table 4: Distribution of rhinological conditions

ENT disorders	0-5yrs	6-10	11-15	Total	percentage
Rhinosinusitis	14	8	15	37	3.90
Epistaxis	2	2	4	8	0.84
FB	38	3	0	41	4.32
Septal haematoma	1	1	0	2	0.32
Nasal polyp	0	0	6	6	0.63
Nasopharyngeal mass	1	0	0	1	0.12
Chr.dacrocystitis	1	0	0	1	0.12
Total	57	14	25	96	10.11

Table 5: Distribution of aerodigestive conditions.

ENT disorders	0-5yrs	6-10	11-15	Total	percentage
Acute tonsillitis	15	6	2	23	2.42
Obstr. Tonsils&adenoids	157	17	2	176	18.55
Unilateral tonsillar mass	0	1	0	1	0.12
Ankyloglossia	0	1	0	1	0.12
Laryngomalacia	9	0	0	9	0.95
Airway FB	8	0	0	8	0.84
Hoarseness	1	0	0	1	0.12
Lip haemangioma	1	0	0	1	0.12
Precarious teeth	1	0	0	1	0.12
Ranula	2	0	0	2	0.21
Total	196	25	5	226	23.81

Table 6: Distribution of external neck conditions

ENT disorders	0-5yrs	6-10	11-15	Total	Percentage
Branchial cyst	2	0	0	2	0.21
Thyroglossal cyst	1	0	0	1	0.12
Mumps parotitis	2	0	0	2	0.21
Salivary gland fistula	1	0	0	1	0.12
Pharyngocutaneous fistula	1	0	0	1	0.12
Total	7	0	0	7	0.73

DISCUSSION

The paediatric age group was found to constitute 43.87% of the total number of patients seen in the ENT out-patient clinic

during the study period. The paediatric age group from this study constitutes a significant percentage of the total patient load seen. This finding agrees with that of 41% by Fasunla et al in Ibadan, 2013.¹

There was a slight male preponderance in this study which we could not deduce a reason for, however it was also similar to other studies^{20,21}

The 0-5 years age group was the most affected population (68.07%), this was also found in some other studies.^{22,23,24} In a study in Ethiopia, about 57.8% of the patients with ear disease was paediatric and the age group below 5 years was the most affected²⁵ in contrast, Sigdel in Nepal found age 6-10 years the most affected.²¹ This may be due to closer monitoring by care givers warranted by their younger age hence early medical attention being sought at the slightest sign of ill health. Their older counterparts who are more independent may not enjoy such keen attention. It is also the age of play groups and Daycare with attendant increased risk of exposure to pathogens in such environment; therefore increased susceptibility to possible infections and inflammations.^{26,27}

Most external neck conditions were congenital and found only in the group 0-5yrs.

In this study majority of these children presented with ear diseases (65.33%). The eustachian tube and these children's susceptibility to common respiratory tract pathogens are thought to be the possible explanation.^{3,28-31} The prevalence here was notably high however this was also found by some other researchers. Fasunla et al and Sigel had similar result in Ibadan and Nepal respectively^{1,21} while kishve et al and Aritz et al though had ear diseases as the commonest, had lower prevalence; 57.8% and 47% respectively^{20,31}. The ear disorder most commonly encountered is cerumen auris. It is known that humidity, temperature and racial differences play important roles in wax production²¹. In addition, the common habit of cleaning the ear frequently is known to destroy

the naturally occurring self-ear cleaning process³³. The care givers and mothers in our environment take it as a duty to always clean these children's ears thereby encouraging wax accumulation³⁴ sharma et al and Jacob et al reported wax as the most common cause of hearing impairment.^{12,35}

The age group 0-5yrs were also found to be more affected with ear problems which is similar to some earlier studies.^{24,25} the commonest affectation of age 6-10 years was cerumen auris while for age 11-15 years, it was CSOM similar to findings of Bijan et al.²²

Obstructive hypertrophy of the tonsils and adenoids was found to be the highest single disorder encountered in the paediatric age group (18.55%). These are lymphoid tissues and as such part of the immune system. it is postulated that at this age the children are prone to various upper respiratory tract infections and inflammations³⁶ such that these being part of the defense systems tend to hypertrophy. Cerumen impaction (18.34%) was the second commonest condition noted. Sigdel in Nepal found cerumen auris to be the commonest paediatric ENT disorder(33.4%)²¹. Others with similar findings and high prevalence include; Jacob et al 29.8% Adhikari 62%, while Arup et al and Hatcher et al had lower prevalence 9.9% and 8.6% respectively^{12,37,38,39} however we cannot deduce a plausible explanation for these differences in prevalence. In contrast however, some researchers found CSOM the commonest otologic disease^{12,18, 20, 38,39} our prevalence of 12.0% appears lower than that of an earlier study in Ife Nigeria 33.9%. The study however was only on ear diseases. It is known that CSOM is a major health problem in developing countries and also a leading cause of persistent mild to moderate hearing impairment in children and young adults.¹⁰ There was very low prevalence of otitis media with effusion in our study.

Hearing and speech disorders was found to rank high in this study with a prevalence of 13.87% amongst otologic conditions and 9.06%

overall. Even though in this study we did not determine the individual causes of this condition, it is known that the most important ENT disease in school going children is hearing impairment associated with different types of otitis media which is largely preventable with early detection and intervention²⁴This brings to fore the need for enhanced safe motherhood campaign as well as effective immunizations against childhood diseases such as measles, rubella etc. There is also the need for infant and preschool hearing screening so as to identify and help these children early enough to achieve better communication and societal integration. The primary care physicians and paediatricians should be taught on how to recognize some common ENT disorders promptly, therefore be able to refer early and prevent complication.

CONCLUSION

Obstructive hypertrophy of the tonsils and adenoids, cerumen auris, Chronic Suppurative Otitis Media, Otomycosis and hearing/speech disorders constitute the commonest ENT diseases in the paediatric population in this region. There is therefore a need to equip the outpatient clinics and the theatre for a more effective health care delivery as well as effective and proper training of the otolaryngologists. There is a need to train the practitioners in the primary and secondary health facilities as well since these patients first present to them in order to prevent poor management and complications. The public and the parents as well should be enlightened on the dangers of over cleaning the ears.

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