

**Original Research Article**

**OTOLOGIC DISORDERS IN CHILDREN: OUR  
EXPERIENCE IN A PRIVATE HOSPITAL SETTING IN PORT  
HARCOURT, NIGERIA.**

**ABSTRACT**

**Background:** Otologic disorders have been found to be important health problems among children Worldwide. This study was done to establish the pattern of otologic disorders in children as seen in a private hospital setting in Port Harcourt Nigeria and to suggest measures to curb the menace posed by these diseases.

**Patients and Methods:** A prospective study of all children seen with otologic disorders in Kinx Medical Consultant clinic located in Port Harcourt, Rivers State, Nigeria over a 2 years period from January 2013 to December 2014. The following patients' data were documented in a proforma and analyzed for age, gender, investigation results, diagnosis and treatment modalities. The data were entered into SPSS version 16 computer software and analyzed descriptively.

**Results:** A total of 85 patients presented with otologic disorders out of a total number of 650 cases seen in the clinic during the period of study, giving a prevalence of 13.08%. There were 35 males and 50 females giving M: F ratio of 1: 1.4. The age range was 6 months to 17 years with mean of  $(2.4 \pm 1.6)$  years. The age range 2-4 years accounted for majority of the cases 35 (41.18%). Chronic Suppurative Otitis Media was the commonest condition seen 30 (35.29%), followed by hearing loss 15 (17.65%) and otomycosis 15 (17.65%). The commonest mode of treatment was conservative medical treatment 50 (58.8%). The patients

24 with hearing loss were further sent for more audiological assessment in centres that have the  
25 appropriate facilities

26 **Conclusion:** Chronic suppurative otitis media was the commonest otologic disorder found  
27 among children in our series. Meanwhile, conservative medical treatment was the commonest  
28 mode of treatment. It is important to put some effort into the training of otologists, provide all  
29 the relevant surgical equipments as well as carry out otologic health education by embarking  
30 on public enlightenment campaigns targeting parents and guardians.

31 **KEY WORDS:** Otologic disorders, chronic suppurative otitis media, conservative  
32 medical treatment, hearing loss, otomycosis.

### 33 INTRODUCTION

34 Children form a bulk of patients seen by otolaryngologists across the globe. In Nepal 26.7%  
35 of Otolaryngologic cases seen in a tertiary health facility in Nepal were between the ages of  
36 1-16 years [1]. In Ibadan South Western Nigeria 41% of cases seen by Fasunla et al were in  
37 children less than 15 years old [2]. Otologic disorders ranked highest in children in most  
38 studies carried out by many researchers especially within the Sub Saharan African region [2-  
39 5]. No doubt otologic disorders are major public health concern due to their associated  
40 morbidity and mortality more so in the developing nations [5-7].

41 The otologic diseases cause significant discomfort and hearing loss both in children and  
42 adult. In children, speech developmental delays and academic failure may result [8, 9].  
43 Complications such as deafness, meningitis, brain abscesses, and facial nerve paralysis may  
44 also occur and hence proper management of ear disease is critical in all patients [10].

45 A large percentage of children with otologic disorders especially those in rural and semi  
46 urban areas may not have access to an otolaryngologist because of the dearth of this group of  
47 specialists within the Sub Saharan Africa. A literature check in our setting revealed paucity

of information on otologic disorders among children. Therefore, this study was done to establish the pattern of otologic disorders in children as seen in a private hospital setting in Port Harcourt Nigeria and to suggest measures to curb the menace posed by them.

# **PATIENTS AND METHODS**

A prospective study of all children seen with otologic disorders in Kinx Medical Consultant clinic located in Port Harcourt, Rivers State, Nigeria over a 2 years period from January 2013 to December 2014. The following patients' data were documented in a proforma and analyzed for age, gender, investigation results, diagnosis and treatment modalities. The data were entered into SPSS version 16 computer software and analyzed descriptively.

# **RESULTS**

A total of 85 patients presented with otologic disorders out of a total number of 650 cases seen in the clinic during the period of study, giving a prevalence of 13.08%. There were 35 males and 50 females giving M: F ratio of 1: 1.4. The age range was 6 months to 17 years with mean of (2.4 ± 1.6) years (Table 1). The age range 2-4 years accounted for majority of the cases 35 (41.18%). Chronic Suppurative Otitis Media was the commonest condition seen 30 (35.29%), followed by hearing loss 15 (17.65%) and otomycosis 15 (17.65%) (Table 2). The commonest mode of treatment was conservative medical treatment 50 (58.8%) (Figure 1). The patients with hearing loss were further sent for more audiological assessment in centres that have the appropriate facilities.

**TABLE 1: SHOWING AGE RANGE OF PATIENTS**

| AGE (YEARS) | NUMBER | PERCENTAGE (%) |
|-------------|--------|----------------|
| < 2         | 20     | 23.53          |

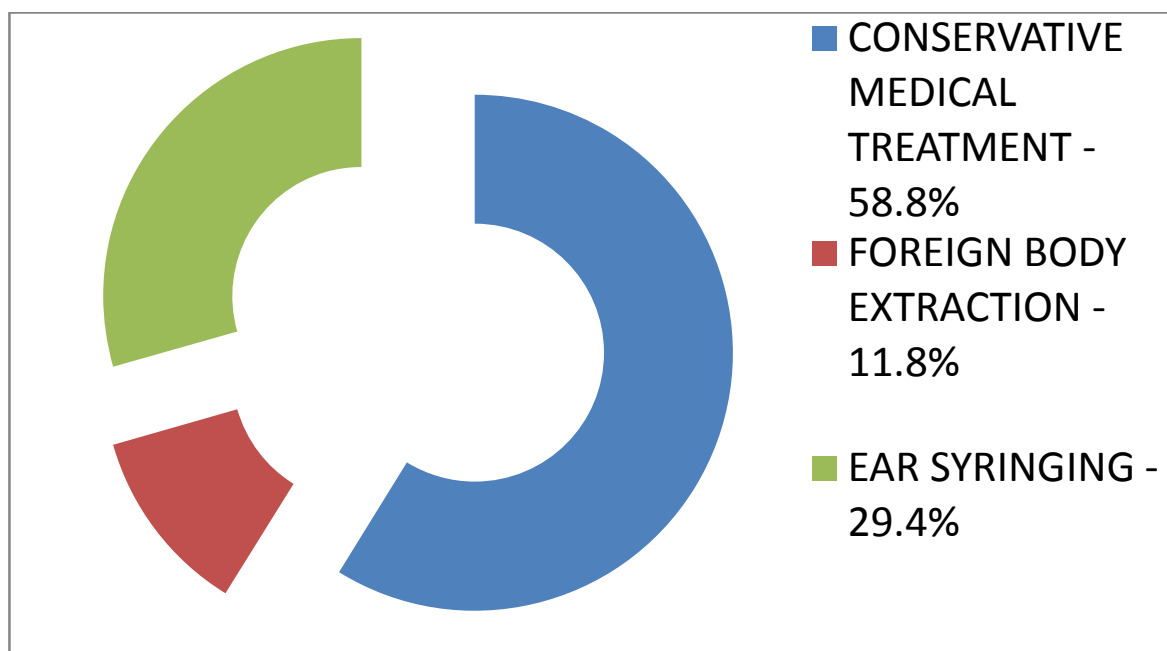
|         |    |       |
|---------|----|-------|
| 2 - 4   | 35 | 41.18 |
| 5 - 7   | 10 | 11.76 |
| 8 - 10  | 8  | 9.41  |
| 11 - 13 | 4  | 4.71  |
| 14 - 15 | 6  | 7.06  |
| > 16    | 2  | 2.35  |

68

69 **TABLE 2: SHOWING OTOLOGIC DISORDERS**

| <b>OTOLOGIC DISORDER</b>                    | <b>NUMBER</b> | <b>PERCENTAGE (%)</b> |
|---------------------------------------------|---------------|-----------------------|
| CHRONIC SUPPURATIVE OTITIS MEDIA            | 30            | 35.29                 |
| CERUMEN AURIS                               | 10            | 11.76                 |
| FOREIGN BODY IN THE EXTERNAL AUDITORY CANAL | 10            | 11.76                 |
| OTOMYCOSIS                                  | 15            | 17.65                 |
| ACUTE OTITIS EXTERNA                        | 5             | 5.88                  |
| HEARING LOSS                                | 15            | 17.65                 |

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71

72 **FIGURE 1: SHOWING MODE OF TREATMENT**

73 **DISCUSSION**

74 Prevalence of otologic disorders in this study is 13.08%. This is much less than 57.84%  
 75 gotten in Nepal [1] and 33.9% gotten by Akinpelu and Amusa in Nigeria [2]. The lower  
 76 prevalence gotten in this study may be as a result of the smaller sample size used in this study  
 77 and most of our patients were from the urban areas since Port Harcourt is a cosmopolitan  
 78 city.

79 This study showed a slightly female preponderance which is at variance with the male  
 80 preponderance observed by Nepali and Sigdel in Nepal [1] and Akinpelu and Amusa in Ile-  
 81 Ife in Nigeria [6]. The commonest age group affected was 2 to 4 years which accounted for  
 82 41.18% of otologic disorders. This is similar to the work of Akinpelu and Amusa [6] where  
 83 they found children less than 5 years of age to be more affected with otologic disorders.

84 The commonest otologic disorders seen in this study was chronic suppurative otitis media  
 85 (35.29%) followed by hearing loss and otomycosis. This agrees with the work done by

86 Akinpelu and Amusa [6] who found chronic suppurative otitis media to be commonest with a  
87 prevalence of 33.9%. Furtehrmore, Ilechukwu et al in Enugu and Singh and Kumar in India  
88 also found otitis media to be the most commonly diagnosed ailment affecting the ears in  
89 children [5, 7].

90 However, our study differs from the works of Ahmed et al in North-Western Nigeria [3].  
91 Nepali and Sidgel in Nepal [1] and Adhikari et al in kathmandu Valley [4]. who found  
92 Cerumen Auris to be the commonest otologic disorder with a prevalence of 69.1%, 40.9%  
93 and 60.6% respectively.

94 A study done by Ologe et al in rural school children between 6-14 years of age group in  
95 Nigeria and that done by Shankar et al also showed high prevalence of chronic otitis media  
96 [11,12]. In fact, chronic suppurative otitis media is about the commonest condition seen in  
97 the otorhinolaryngologic (ORL) clinic in Nigeria according to the findings of Ogisi and  
98 Osammar in 1982 and Bhattia and Varursheje in1987 [13,14].

99 The importance of early diagnosis of otologic diseases cannot be over emphasized. Several  
100 researchers have documented that early detection and timely treatment of otologic disorders  
101 in patients particularly poor and illiterate ones may prevent life-threatening complications  
102 and reduce the burden of the disease [8-12, 15, 16]. However, we did not find complications  
103 in our patients.

104 Conservative Medical treatment was the commonest mode of treatment used in the  
105 management of the children with otologic disorders in our series. This mode of treatment was  
106 also found to be the predominant mode of treatment by other researchers [2, 3, 15]. The  
107 paucity of otologic surgeries can be blamed on lack of relevant equipments such as operating  
108 microscopes, microsurgical instruments and the expertise to carry out otologic surgeries [15].

109 **CONCLUSION**

110 Chronic suppurative otitis media was the commonest otologic disorder found among children  
 111 in our series. Meanwhile, conservative medical treatment was the commonest mode of  
 112 treatment. It is important to put some effort into the training of otologists, provide all the  
 113 relevant surgical equipments as well as carry out otologic health education by embarking on  
 114 public enlightenment campaigns targeting parents and guardians.

115 No conflict of interest

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