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ACUTE OTITIS EXTERNA AS SEEN AT THE UNIVERSITY OF NIGERIA TEACHING HOSPITAL, ENUGU.

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Abstract:

Aim: is to evaluate clinical features of AOE diagnosed in and to update the previous study from our facility.

Methods: A prospective, clinical and laboratory study in a tertiary health facility

Results: A total of 3793 consecutive patients that attended the otorhinolaryngology clinics of the university of Nigeria teaching hospital Enugu during the period under study were assessed for clinical diagnosis of otitis externa. A total of 155 ears from 127 patients were diagnosed clinically and confirmed by microbial studies as having acute otitis externa. There were 66 males and 61 females out of the 127 patients seen. 71 ears had only bacteria isolated from the culture of their ear swab specimens, 28 fungus only and, 32 ears had both bacterial and fungal isolates while 24 ears had no isolates of microbes of the 3793 patients assessed.

Conclusions: Acute otitis externa is a common disease in Enugu with no gender bias and there were three times more cases of bacterial otitis externa than fungal otitis externa.

Key words: Otitis externa, microbial culture, preverlence

INTRODUCTION

Acute otitis externa (AOE) is defined as inflammation with redness or swelling of the external auditory canal or debris within the canal accompanied by pain, itching otorrhea, hearing loss or a stuffy feeling for less than three weeks[1] The incidence of AOE in humid tropical areas is higher than in temperate climates[2].

Earlier studies in Enugu, Nigeria by Okafor about three decades ago showed that the incidence of AOE was high, with about 117 new cases per year and ranking second to chronic suppurative otitis media as the commonest otologic disease in his practice[3]. The most common cause of otitis externa is bacterial infection, though fungal over growth is an identified cause in 10% of cases[4]. Predisposing factors to developing AOE were: excessive wetness of ear canal as in swimmers, residing in warm and humid places, harsh cleaning of the ear canal, trauma to the ear canal, dry ear canal skin, foreign body in the ear canal, lack of cerumen (ear wax), eczema and other forms of dermatitis[4]. This study is aimed to evaluate the clinical features of AOE diagnosed in our facility over a period of one year and to update on earlier work done on this subject over three decades ago[3].

PATIENTS AND METHODS

This was a one year prospective clinical study. Study population was all consecutive patients that presented for treatment at the otolaryngology clinics of the University of Nigeria Teaching Hospital (UNTH) Ituku-Ozalla Enugu from December 2007 to November 2008.

A clinical diagnosis of AOE was made when (i) one or more of three major symptoms of otalgia, itching of the ear canal and fullness in the ear canal; and one or more of minor complaints of tinnitus, hearing impairment or ear discharge were reported by the patients ; and (ii) otoscopic findings of tenderness on tragal palpation, accumulation of debris in the external auditory canal (EAC), edema, narrowing and redness of EAC, presence of mycelia growth, hyphae or spores in the EAC.

Ear swabs were then obtained from the ears with a clinical diagnosis of AOE for laboratory microbiological bacterial and fungal culture studies with a view to confirmation of diagnosis and identification of causative microbes.

RESULTS.

A total of 3793 patients were examined during the period under review and 127 of them were clinically diagnosed as having unilateral or bilateral AOE. Of these 127 patients There 66 patients were males and 61 females. 99 had unilateral ears affected by AOE while 28 had bilateral AOE ears, making a total of 155 ears for further evaluation. This gave the AOE a prevalence of 3.4%. The age range of these 127 patients was 2 to 88 years with a mean of 37 ± 1.81 years. Patients within the age group of 23-32 years (23.6%) were the most affected closely followed by patients in the age group of 13-22 years (17.3%) and 2-12 years (17.3%) respectively. The least affected age group was 53-62 years (5.5%). See Table I.

These 127 patients with 155 ears affected by AOE had microbiological culture of the ear swab. The result obtained showed that 71 ears had only bacteria isolates, 28 ears grew only fungal organisms, 32 ears had both bacteria and fungi isolated and 24 ears had no isolates of microbes. See Table 3. Unilateral AOE was found in 99 patients as compared to 28 patients that had bilateral AOE. See Table 2.

DISCUSSION

Okafor in a study from the same centre carried out more than three decades ago over a period of 5 years from July 1973-June 1978 on pattern of otological diseases in South Eastern Nigeria reported a prevalence of 6.8% of his patients suffering from otomycosis[3]. This figure is higher than the 3.4% obtained in this study. The period when Okafor did his study was 31 years prior to this study, when ear infections were probably more common in this locality than now, that we have improved health services, nutrition/hygiene and health consciousness. In this study, 20.6% had both bacterial and fungal infection coexisting and this should alert the clinician when monotherapy is not producing any expected clinical response in patients. Significantly, 15.5% of patients clinically diagnosed with AOE had no isolates of microbes

in their ear swab cultures. This may be a pointer to a possible failure of laboratory techniques or a third aetiologic agent not identified as a cause of acute otitis externa, possibly, viral or other agents. It may also be misdiagnosis of other dermatological disorders.

Adults predominated in the number of patients suffering from AOE. See Table I. This finding is in agreement with the report of Nwabuisi and Ologe in Ilorin Nigeria[5]. In addition, two other studies carried out in Enugu by Gugnani et al and Mgbor et al also found adults to predominate in their studies [6,7]

Males and females were affected equally by otitis externa from results of this study. This was in agreement with studies in Ilorin by Nwabuisi and Ologe [5]. However, reports of studies carried out in Turkey by Ali Z M et al and in Ibadan by Fasunla et al. were that of female preponderance over males in cases of otitis extern[8,9]. One did not expect any differences in the distribution of otitis externa between males and females because pathology of otitis externa was not known to be influenced by hormones.

We found more unilateral than bilateral otitis externa patients in this study. The predisposing factors to otitis externa such as trauma, self instrumentation of the ear, and suppurative ear infection were likely to affect or begin with one ear; hence we had more cases of unilateral otitis externa. However, swimming as a predisposing factor in the causation of AOE is expected to be bilateral otitis externa, but even then, might start as unilateral otitis externa.

CONCLUSIONS

Acute otitis externa is a commonly encountered clinical disease in our environment and the clinician must have a high index of suspicion when assessing patients with ear complaints. Bacteria organism causes more otitis externa than fungi and the disease is not gender dependent and affects all age groups.

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Table 1. Frequency distribution of Study patients by Age group

Mean = 37± 1.81years

Age group (years)	Frequency	Percentage (%)
2-12	22	17.3
13-22	22	17.3
23-32	30	23.6
33-42	18	I4.2
43-52	17	13.4
53-62	7	5.5
63 and above	11	8.7
Total	127	100

Table 2: Frequency Distribution of ears affected according to unilateral or bilateral affectation.

n =155 ears

Ear affectation	Number of patients affected	Number of ears affected
Unilateral	99	99
Bilateral	28	56
Total	**127**	**155**

Table 3: Frequency Distribution of Type of microbes isolated and ear affectation

n = 155

Type of microbe isolated	**Number of ears affected**			
	Unilateral	Bilateral		
Bacteria only	40	31	71	45.8
Fungi only	19	9	28	18.1
Both bacteria and fungi	24	8	32	20.6
No microbe growth	16	8	24	15.5
Total	**99**	**56**	**155**	**100**