

Tinnitus Pattern in A Tertiary Centre

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Abstract

Background: Tinnitus can be defined as sound perception without any external stimulation. It can be objective or subjective. It is therefore a symptom arising from various conditions including otological, vascular and systemic conditions. Treatment can only be successful with detailed history, physical examination and appropriate diagnostic tools.

Aim: To report the pattern of tinnitus. Causes, associated symptoms and medical treatment.

Patient and Method: A retrospective study of 57 patients that were presented with history of tinnitus and other associated symptoms between January 2010 -December 2013 in the otolaryngology department, University of Port Harcourt Teaching Hospital. From their various casefiles, age, gender, causes, duration and character of symptoms were recorded in tables and analyzed.

Results: Within the period of study January 2010 to December 2013, 57 patients presented with tinnitus, male 34 (60%) and female 23 (40%). With male female ratio of 1.5:1. Associated symptoms include hearing loss 11 (1%) followed by dizziness 9 (15%), others are stated on table V. Age group 57-62 had the highest number of presentations 13 (23%).

Conclusion: Tinnitus is a distressing condition with a multi-symptom association. Thorough clinical evaluation is mandatory for effective treatment.

Keywords: Tinnitus; Dizziness; Acoustic neuroma; Otologic; Hearing loss

Introduction

Tinnitus is simply sound perception without corresponding external stimulus. It is a distressing otologic problem and generates psychological disorders that interfere with quality of life. The prevalence of tinnitus increases with age and also represents a common symptom in children with hearing loss [1]. Tinnitus can have different causes, but basically otologic conditions are commonly associated with the presence of tinnitus. Tinnitus is generally classified as objective or subjective.

Subjective tinnitus is audible to the patient only, while objective tinnitus is audible to both the patient and the examiner [2]. The sound perceived by those with tinnitus can range from a quiet background noise to a noise that is audible over loud external sounds. Sounds heard have been described as cricket, wind, engine, steam sounds etc. [3]. The various methods of treatment have produced mixed results, hence it is generally accepted that tinnitus has many physiological cause. The aim of the study is to highlight the pattern of tinnitus, cause and treatment outcome in a tertiary centre.

Patient and Method

It is a retrospective study of all patients who reported with history of tinnitus and other associated symptoms, in the department of otorhinolaryngology of University of Port Harcourt Teaching Hospital Port Harcourt. Study was done between January 2010 to December 2013. Fifty-seven patients reported history of tinnitus with other associated otological symptoms. The pure tone audiometric test was recorded as well as age, gender, occupation, duration of symptoms. Other records were associated symptoms and other medical conditions, were recorded on tables and analysed.

Results

(Table 1) represents age range and number of patients. Age group 57-62 had 13 (22.8%), followed by 47-52 age group having 11 (19.3%). (Table 2) represents various medical conditions with tinnitus and number of patients. The highest number was seen in patients that had wax, followed by traumatic tympanic

membrane perforation. (Table 3) shows duration of symptoms and number of patients.

Table 1: Age range with Number of patients and percentage.

Age Range	No. of patients	Percentage
15 - 20	2	3.5
21 - 26	4	7
27 - 32	6	10.5
37 - 42	9	15.8
47 - 52	11	19.3
57 - 62	13	22.8
67 - 72	8	14
67 - 72	4	7
Total = 57		

Table 2: Diagnostic conditions and number of patients.

Diagnostics	Number of Patients
NIHL	1
Meniere's Disease	5
SNHL	1
Wax	11
OME	4
Hypertension	8
Otomycosis	5
ASOM	2
Head injury	1
Traumatic tympanic membrane perforation	5
Sudden deafness	1
Unknown	5
presbycusis	2
Ototoxicity	6
Total	57

Table 3: Duration of Symptoms and Number of Patients.

Duration of symptoms	Number of Patients	Percentage (%)
Less than 7 days	2	3.5
1 - 4/52	21	37
1 - 4/12	13	23
Greater than 4/12	17	30
Unknown duration	4	7
Total	57	

Discussion

Tinnitus represents a symptom of diverse pathologies. It can be said that all levels of the nervous system are to some extent involved in tinnitus. In our study, age 57-62 had the highest number of patients 13 (22.8%), followed by age 47-52 having 11

(19.3%) [3,4]. (Table 2) listed various diagnosed conditions found with tinnitus, cerumen being the highest, followed by trauma to the tympanic membrane. Others not included in our list are multiple sclerosis, vestibula Schwannoma (Acoustic neuroma), cerebellopontine angle tumours, meningitis and others. Some oral medications are also incriminated as salicylate, non-steroidal anti-inflammatory drugs, aminoglycoside antibiotics and some diuretics [5]. Duration of symptoms were represented in (Table 3). This ranges from less than one week to above (4) four months 17 (30%), 4 (7%) were unknown duration Byung et al. stated that about 40% of patients cannot identify any cause or duration associated with tinnitus onset.

(Table 1) shows age range and number of patients with percentage. Age group 57-62 has highest number of patients 13 (23 %), followed by age group 47-52 having 11(19%). Age group 15-20 represent the least in number of patients 2(3.5%) [6]. Many of the patients that complained about tinnitus have associated hearing loss, depending on the aetiological factor. (Table 4) listed associated hearing loss. Twelve (12) (21%) had normal hearing, ten 10(17%) patients had severe hearing loss, while conductive hearing loss and mixed hearing represented one 1(1.8%) each [7]. The study identified some medical conditions in patients with tinnitus in (Table 5). These medical conditions may have been the aetiological factors in these patients, 37 (65%) did not have any medical condition. Seven 7(12.3%) were hypertensive while four 4(7%) had diabetes mellitus [8].

Table 4: Types of hearing loss and the number of patients.

Type of hearing loss associated with tinnitus	Number of Patients
Normal hearing	29
Mild hearing	2
Moderate	7
Profound	7
Severe	10
CHL	1
Mixed	1

Table 5: Medical conditions associated with tinnitus.

Medical conditions	Number of Patients
Hypertension	7
Diabetes Mellitus	4
Ear trauma	3
Head injury	1
Sickle cell disease	3
Seizure	2
Nil medical condition	37
Total	57

The study characterized the sound experienced by these patients in (Table 4). 32 (56%) patients described the sound as

being continuous. 13 (23%) described it as progressive, while 8(14%) said it is intermitted [8,9]. (Table 5) listed associated symptoms in patients having tinnitus. In addition to tinnitus 11(19.2%) patients had hearing loss, 9(15%) patients had dizziness, while otalgia was observed in 8 (14%). Itching was noted. 6 (10%) [9,10]. Treatment was first directed to medical conditions associated with each individual patient. Example, those with hypertension, diabetes, were treated with fairly good outcome of their symptoms (tinnitus). However, other researchers like Dobie RA in a review of randomized clinical trials in tinnitus recommend that diazepam and flurazepin significantly changed the intensity of tinnitus [11]. Some recommendations were recommended by Murai et al. in their review of pharmacologic treatment of tinnitus [12].

Conclusion

Tinnitus is a complaint that comes with psychological/distressing feeling. In association are multiple other symptoms that may come with comorbid diseases. Detailed evaluation becomes mandatory for effective treatment. No singular treatment seems to be completely adequate. Therefore, treatment should be directed at individual patient needs.

References

1. Baguley DM (2002) Mechanism of tinnitus. *Br Med Bull* 63: 195-212.
2. Luxon LM (1993) Tinnitus: its causes, diagnosis and treatment *BMJ* 306(6891): 1490-1491.
3. Erlandsson SI, Hallberg LR, Axelsson A (1992) Psychological and audiological correlates of perceived tinnitus severity. *Audiology* 31(3): 168-179.
4. Moller AR (1984) Pathology of tinnitus. *Ann Otol Rhinol Laryngol* 93(1): 39-44.
5. Jastreboff PJ (1990) Phantom auditory perception (tinnitus) Mechanisms of generation and perception. *Neurosci Res* 8(4): 221-254.
6. Byung IH, Hon WL, Kyoung S (2009) Tinnitus: characteristics, causes, mechanisms and treatments. *J Clin Neurol* 5(1): 11-19.
7. Eggermont JJ (1990) On the pathophysiology of tinnitus: a review and a peripheral model. *Hear Res* 48(1-2): 111-123.
8. Vernon J, Griest S, Press L (1990) Attributes of tinnitus and the acceptance of masking. *Am J Otolaryngol* 11(1): 44-50.
9. Kroener-Herwig B, Biesinger E, Gerhards F, Goebel G, Verena Greimel K, et al. (2000) Retraining therapy for chronic tinnitus: a critical analysis of its status. *Scand Audiol* 29(2): 67-78.
10. Jastreboff PJ, Hazell JW (1993) A neurophysiological approach to tinnitus: clinical implications. *Br J Audiol* 27(1): 7-17.
11. Dobie RA (1999) A review of randomized clinical trials in tinnitus. *Laryngoscope* 109(8): 1202-1211.
12. Murai K, Tyler RS, Harker LA, Stouffer JL (1992) Review of pharmacologic treatment of tinnitus. *Am J Otol* 13(5): 454-464.



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