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MULTIDISCIPLINARY MANAGEMENT OF CHRONIC TINNITUS IN AUDIOPHONOLOGY CENTRE: SURVEY OF PSYCHIATRIC COMORBIDITIES AND PSYCHOTROPIC MEDICATIONS USE OVER 10 YEARS OF ACTIVITY

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SUMMARY

Background: *The multidisciplinary management of disabling chronic tinnitus in the audiophonology centre demonstrates its relevance. The detection and treatment of overlapping psychiatric pathologies is a crucial issue in the work of liaison psychiatry.*

Subjects and methods*: A 10-year retrospective review of the activities of a university audiophonology centre with 166 patients who consulted for disabling chronic tinnitus and who underwent a Mini International Neuropsychiatric Interview. The diagnostic criteria used were those of the DSM IV.*

Results: *Our sample shows that major depressive disorders, somatoform disorders and sleep disorders were the most frequently encountered. Alcohol misuse was also seen as the most common substance-related disorder. Thirty (30%) had prior psychiatric or psychological monitoring, and 60% were previously treated with at least one psychotropic drug.*

Conclusion: *The systematic approach of liaison psychiatry appears to be essential in the treatment of disabling chronic tinnitus, given the associated psychiatric comorbidity. Beyond the detection of unrecognized or untreated disorders, patient education to attentional mechanisms and hypervigilance, which reinforce an unpleasant perception of tinnitus, as well as the management of stress and somatizations and sleep hygiene, is recommended.*

Key words: *tinnitus - liaison psychiatry - psychiatric comorbidities - psychotropic drugs*

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INTRODUCTION

Management of disabling chronic tinnitus in multidisciplinary audiophonology centres is recommended (Zenner et al. 2017) and should be the first therapeutic option (Zirke et al. 2012). The collaboration of otolaryngologist, psychiatrist, psychologist, audiologist and social worker is essential, given the multifactorial origin of chronic tinnitus. For years, given the great heterogeneity of different types of disabling chronic tinnitus (Landgrebe et al. 2010), validated practice standards have been lacking. Audiophonology centres are an appropriate response to the need for systematic assessment of chronic tinnitus. We have previously discussed the benefit of systematic psychiatric assessment in this context (Jacques et al. 2013).

We will discuss the results in another work of management focused on Tinnitus Retraining Therapy (Jastreboff 2015) combined with cognitive behavioural therapy, whose common goal, through different approaches, is to promote habituation to tinnitus. The measurement tool used to monitor patient progress is the Tinnitus Questionnaire (TQ) (Meeus et al. 2007).

We will focus in this article on preexisting or discovered psychiatric comorbidities in a population of patients consulting for chronic tinnitus in an audiophonology centre, based on a retrospective study of records. We will also focus on psychotropic medications taken before and after treatment. On the basis of the observed results, we will formulate new reflections on the systematization of the treatment of disabling chronic tinnitus in liaison psychiatry.

SUBJECTS AND METHODS

A retrospective review was conducted of patient records between 2010 and 2020 for consultations for chronic disabling tinnitus at the audiophonology centre of the Centre Hospitalier Universitaire de Godinne, Catholic University of Louvain, UCL Namur UHC, avenue Dr G. Therasse n 1, 5530 Yvoir, Belgium.

On the basis of this review, psychiatric diagnoses and treatments were listed before treatment in the centre and after.

One hundred sixty-six (166) patients consulted the audiophonology centre for disabling chronic tinnitus.

The diagnostic criteria used were those of the DSM IV and the Mini International Neuropsychiatric Interview, implemented at the first psychiatric interview.

RESULTS

Our population therefore consisted of 166 patients (n=166) with chronic tinnitus, having a mean age of 45.2 years. (Age between 16 and 77 years) who consulted between 01/01/2010 and 01/01/2020 and whose treatment had been completed.

Our population included 109 males (66%) and 57 females (34%). For the males (n=109), the mean age was 52 (age range: 16 to 74). For the females (n=57), the mean age was 50 (age range: 18 to 77).

Table 1. Prior psychiatric monitoring

For psychiatric monitoring (n=35)	n
Major depressive disorders	20
Dysthymia	1
Isolated sleep disorder	1
Somatoform disorder	3
Panic disorder	2
Generalized anxiety disorder	1
Obsessive-compulsive disorder	1
Post-traumatic stress disorder	1
Alcohol misuse	4
Schizophrenia	1

A total of 646 45-minute psychiatric consultations were conducted, with a mean of 3.8 consultations per patient. (Number of consultations per patient between 1 and 17).

Of the total sample (n=166), 49 patients had prior psychiatric or psychological monitoring (30%): 35 patients had psychiatric monitoring, 12 had psychological monitoring and 2 had psychiatric and psychological monitoring (Table 1, 2, 3).

Table 2. Prior psychological monitoring

For psychological monitoring (n=12)	n
Tinnitus	6
Major depressive disorders	4
Post-traumatic stress disorder	1
Somatoform disorder	1

Table 3. Prior psychiatric and psychological monitoring

For psychiatric and psychological monitoring (n=2)	n
Major depressive disorder	1
Panic disorder	1

Of the total sample (n=166), 99 patients (60%) were previously taking psychotropic treatment as follows in table 4 and table 5.

Table 4. Psychotropic treatments

Of the total sample n=166	Taking Psychotropic drug n=99 (60%)
A benzodiazepine alone	47 (28.2% of the total sample)
prescribed by the attending physician	40 (24%)
prescribed by the treating psychiatrist	7 (4.2%)
An antidepressant alone	13 (7.8% of the total sample)
(not considering trazodone as an antidepressant but as a hypnotic)	
prescribed by the attending physician	7 (4.2%)
prescribed by the treating psychiatrist	6 (3.6%)
An antidepressant and a benzodiazepine	14 (8.4 % of the total sample)
prescribed by the attending physician	7 (4.2%)
prescribed by the treating psychiatrist	7 (4.2%)
Trazodone	5 (3% of the total sample)
trazodone alone, prescribed by the attending physician	2
trazodone with a benzodiazepine prescribed by the attending physician	1
trazodone with an antidepressant prescribed by the attending physician	1
trazodone with an antidepressant prescribed by the treating psychiatrist	1
An antipsychotic alone	0
Specific regimens	20 (12% of the total sample)
Prescribed by the attending physician	
two benzodiazepines	5
three benzodiazepines	2
three benzodiazepines, an antidepressant and trazodone	1
three benzodiazepines and an antidepressant	1
two antidepressants	1
two antidepressants and a benzodiazepine	1
an antidepressant, trazodone and a benzodiazepine	1
Prescribed by the treating psychiatrist	
two benzodiazepines	1
two benzodiazepines, an antidepressant, an antipsychotic	1
a benzodiazepine, an antidepressant, an antipsychotic	3
a benzodiazepine, three antidepressants and an antipsychotic	1
trazodone, an antidepressant, an antipsychotic	1
trazodone, a benzodiazepine, two antipsychotics	1

Table 5. Psychiatric comorbidites

For the entire sample (n = 166)	n
No psychiatric diagnosis	26 (15%)
One psychiatric diagnosis	73 (44%)
Two psychiatric diagnoses	54 (33%)
Three psychiatric diagnoses	11 (7%)
Four psychiatric diagnoses	2 (1%)

Of the entire sample (n=166), 45 patients (27%) after undergoing assessment did not undergo rehabilitation or stopped it early.

Among the reasons for withdrawal for these 45 patients:

- for 26 of them, the motivation to undergo rehabilitation (minimum of four sessions per month) was hampered by questions of availability.
- for 13 of them, who had prior psychiatric monitoring, unstable psychiatric pathology proved to be an obstacle to rehabilitation: Major Depressive Disorder (5), Dysthymia (1), Obsessive-Compulsive Disorder (1), Generalized Anxiety Disorder (1), Schizophrenia (1), Suicide (1), Alcohol Misuse (2), Opioid Misuse (1).
- for 6 of them who had no prior psychiatric monitoring, two did not meet the indications for monitoring and four had an unstable psychiatric disorder.

For the entire sample (n=166):

- 47.5% had anxiety disorders: the two most frequent were somatoform disorder (n=34) and panic disorder (n=12);
- 29% had depressive disorders: the most frequent was major depressive disorder (n=43);
- 15% had substance use disorder: the most common was alcohol misuse (n=16);
- 42% had sleep disorder: isolated sleep disorder (n=30), sleep disorder associated with anxiety disorder (n=15), sleep disorder associated with depressive disorder (n=15) and sleep disorder associated with alcohol consumption (n=9).

For all sleep disorders (n=69), 25 patients resolved it by taking melatonin, 13 by taking trazodone, 5 had to undergo polysomnography and 26 had resolution of sleep disorders through rehabilitation and relaxation.

For the patients who fully completed their rehabilitation (n=121):

- 32 participated in a relaxation group (26%);
- 23 continued psychiatric monitoring after rehabilitation that they did not have prior to it (14%).

DISCUSSION

Our population sample had an almost complete absence of patients with either psychotic disorder or bipolar disorder. This raises the question of the absence of chronic disabling tinnitus in this population, or the difficulty of accessing care in the presence of unstable psychiatric symptoms.

Major depressive disorders were the most common disorders in our population.

Somatoform disorders and panic disorders were the most frequent anxiety disorders.

Of the various instances of substance misuse, alcohol appeared to be the most common.

Sleep disorders, isolated or in combination, were the most common complaint for which patients requested treatment. Moreover, there was a significant percentage of patients medicated with benzodiazepines before the start of treatment.

Learning relaxation in a group setting remains an important element in treatment. Indeed, the principle of habituation therapy involves desensitization to the unpleasant experience of tinnitus by a modification of sensory hypervigilance.

This hypervigilance is also central in sleep disorders, somatization disorders and panic disorders (which are strongly associated with chronic tinnitus, as our sample seems to show).

In view of the results from our sample, the importance of psychoeducation in sleep hygiene and evidence-based recommendations in the prescription of hypnotics (melatonin and trazodone in particular rather than long-term benzodiazepines) should certainly be reinforced.

CONCLUSION

The multidisciplinary management of disabling chronic tinnitus by an audiophonology centre appears to be the measure to recommend from the outset, in order to optimize the prognosis of patients and avoid overconsumption of psychotropic drugs and specialized consultations. The systematic psychiatric screening examination seems essential to us in view of the significant psychiatric co-morbidities, and must be accompanied by psychoeducation on the principles of treatment by habituation, on the mechanisms of hypervigilance and chronic stress, as well as on sleep hygiene. The systematization of this psychoeducation, as well as the proposed relaxation group, seem fundamental to us as part of preventive medicine at the general hospital in order to limit costs.

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Contribution of individual authors:

All authors made a substantial contribution to the design of the study, and/or data acquisition, and/or the data analysis and its interpretation.

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