Comparison of tinnitus characteristics and the impact on patients with presbycusis and noise-induced hearing loss

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INTRODUCTION

Progressive hearing loss is strongly related to chronic tinnitus. Diseases such as noise-induced hearing loss (NIHL) and presbycusis differ in their causes and risk factors. Nevertheless both of them often are accompanied by tinnitus sensation in the evolution of the conditions. This paper compares these two diseases in order to evaluate the perception of tinnitus and the general impact of symptoms on quality of life of patients who are included in the study.

OBJECTIVES

1- To compare acufenometry findings of patients with chronic unilateral disturbing tinnitus due to noise-induced hearing loss (NIHL) or presbycusis.
2- To determine if there is an association with the degree of annoyance.

METHODS AND MATERIALS

In this cross-sectional study, 38 patients with presbycusis and 17 with NIHL were evaluated between September 2003 and January 2014. The tinnitus pitch and loudness were evaluated using acufenometry. Tinnitus handicap inventory (THI) and the visual analog scale (VAS) were used to assess the impact of tinnitus on the patient’s life.

RESULTS

The mean age of the patients with presbycusis and NIHL was 67.74 ± 8.73 years and 62.29 ± 9.57 years, respectively (p = 0.04). The tinnitus pitch (3092 ± 2203 Hz vs. 4220.59 ± 2907.26 Hz; p = 0.12) as well as the loudness (42.71 ± 19.80 vs. 47.40 ± 20.80; p = 0.44) were similar in both the groups. In addition, no statistically significant difference was observed in the THI and VAS of both the groups (p = 0.76 and p = 0.46, respectively).

TABLE 1

<table>
<thead>
<tr>
<th>Groups</th>
<th>Pitch (p = 0.12)</th>
<th>Loudness (p = 0.44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presbycusis</td>
<td>3092 ± 2203 Hz</td>
<td>42.71 ± 19.80</td>
</tr>
<tr>
<td>NIHL</td>
<td>4220.59 ± 2907.26 Hz</td>
<td>47.40 ± 20.80</td>
</tr>
</tbody>
</table>

Table 1: Both groups pitch and loudness tinnitus.

CONCLUSIONS

Despite the differences observed in the cause of tinnitus and the mean ages of the patients, no significant difference was observed in the behavior of tinnitus in the groups with presbycusis and NIHL. Furthermore, tinnitus had a similar impact on the lives of patients from both the groups.

REFERENCES