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Effectiveness of Ericksonian hypnosis in tinnitus therapy: preliminary results

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Abstract. *Effectiveness of Ericksonian hypnosis in tinnitus therapy: preliminary results. Introduction*: The present study was performed to evaluate the efficacy of Ericksonian hypnosis in reducing the impact of tinnitus on patients' quality of life.
Patients and methods: A controlled prospective longitudinal study was designed. The severity of tinnitus was assessed with Tinnitus Handicap Inventory (THI) before hypnotherapy and then 1 week, 1 month, 3 months, and 6 months after therapy. Health Survey SF-36 was used to assess health-related quality of life before and after hypnotherapy. Thirty-nine patients with severe idiopathic subjective tinnitus were enrolled in the study.
Results: The mean ± SD age of the patients was 44.5 ± 12.5 years, ranging from 21 to 65 years; 48% were female. Mean THI scores assessed at the beginning and 4 times after commencement of therapy were evaluated. The changes in THI scores were significant. Health Survey SF-36 was assessed separately. The greatest increases were seen in physical role followed by emotional role difficulty.
Conclusion: The preliminary results of our study demonstrated the effectiveness of Ericksonian hypnosis in the study group.

Introduction

Tinnitus is a common and potentially distressing otological problem that can have an important impact on the patient's quality of life.[1] The prevalence of tinnitus in the general population appears to be 8-15%. Despite recent advances in evaluation, no effective medical or surgical management has yet been found for tinnitus.

Tinnitus can be classified into two categories: subjective and objective tinnitus. Subjective tinnitus is heard only by the patient and is a perception of sound in the absence of any physical sound.[2] In contrast, objective tinnitus is produced by sound occurring within the human body, with either a vascular or a non-vascular etiology, and can be heard by both the patient and the examiner.[3]

According to the neurophysiological model, subjective tinnitus pathology depends on subconscious and emotional processes within the central nervous system.[4] Stimulation of subconscious implicit information processing is a key function of hypnosis.[5] Hypnosis was first reported to be beneficial in patients with tinnitus in 1950.[6] Although positive effects have been reported for the classical type of hypnosis, we used modern hypnosis developed by the American psychiatrist Milton H. Erickson.[5]

The present study was performed to evaluate the preliminary results of Ericksonian hypnosis after its use as an alternative treatment protocol at our clinic for reducing the severity of tinnitus and improving the quality of life. The goal of this study was to introduce Ericksonian hypnosis as an alternative treatment method for management of tinnitus. Our study group consisted of patients with subjective idiopathic tinnitus.

Patients and methods

This controlled prospective longitudinal study was approved by the hospital ethics committee, and all participants gave their written informed consent to participate. We selected 42 patients with tinnitus who were considered for treatment at our outpatient clinic between January 2009 and January 2010.

Otological evaluation

All patients underwent initial interview and otolaryngological examination. The initial interview consisted of a discussion of tinnitus, tinnitus awareness, and hearing problems. Exclusion criteria were sensorineural hearing loss-related tinnitus and treatable causes of tinnitus. Patients who had undergone any form of tinnitus management therapy in the past 1 year were excluded from the study. The

subjects were assessed carefully with standard audiological testing (radiological if necessary) to avoid overlooking patients who required surgical and/or medical treatment. Standard audiological testing included audiometry for pure tone average and speech discrimination, reflex, and otoacoustic emission testing.

Psychometric evaluation

All subjects consulted a psychiatrist (EA) to discern addictive, psychotic, or personality disorders. The psychiatrist evaluated the subjects with the Beck Depression and Beck Anxiety Inventories.

Tinnitus Assessment

Selection was completed after this meticulous initial evaluation, and eligible candidates were considered for hypnosis treatment. All patients completed the Tinnitus Handicap Inventory (THI), Turkish version,[7] which consists of 25 questions with three possible answers: "yes" (4 points), "sometimes" (2 points), or "no" (0 points). THI is a validated measure of the degree of handicap due to tinnitus with total scores ranging from 0 to 100, and it was used to quantify the severity of tinnitus.[8] This questionnaire provides a total score and three subscale scores: the functional (11 questions), emotional (9 questions), and catastrophic (5 questions) subscales. THI scores were obtained for each subject at five time points: before hypnotherapy and at 1 week, 1 month, 3 months, and 6 months after the therapy.

In addition, the Health Survey SF-36 (http://www.sf-36.com) was used to assess health-related quality of life before and after hypnotherapy using an 8-scale profile addressing physical functioning (PF), role physical (RP), bodily pain (BP), general health (GH), vitality (VT), social functioning (SF), role emotional (RE), and mental health (MH).

Hypnotherapy

Hypnotherapy was performed by an audiometrist trained in Ericksonian hypnotherapy (GG). The first session focused mainly on the impact of tinnitus on the patient's life. The next interviews were based on relaxation, respiration exercise, and mental imagery. The patients described their tinnitus background and the nature of the problem. In each therapy session, the first 10 minutes were given over to general discussion of whatever was of interest to the subjects, which allowed time to focus the patient's attention on his or her symptoms. Trance techniques, fixation of attention, depotentiation, conscious sets, unconscious search, unconscious processes, and hypnotic response were used with all patients in each session to lead them into a trance.[9] While in the trance state, the patients learned to control the tinnitus and reduce its influence on their lives. Each session lasted approximately half an hour. Each patient underwent three sessions and five assessments. At the end of the therapy, all of the patients reported feeling happy and strong and said that they had better control over their tinnitus. The tinnitus symptoms continued in all cases, but they no longer severely affected patients' lives.

Statistical analyses

Statistical analyses were performed using PASS statistical software (NCSS, Kaysville, UT). Paired-sample *t*-tests were used to evaluate the study data (expressed as mean ± standard deviation). Friedman's test was used for intragroup comparisons of THI, and *post hoc* comparisons were performed using Wilcoxon's signed-rank test. In all analyses, $P < 0.05$ was taken to indicate statistical significance.

Results

Of the 42 patients who were candidates for hypnotherapy, three were excluded because they could not be evaluated after the first interview. The mean ± SD age of the study patients was 44.5 ± 12.5 years, ranging from 21 to 65 years; 48% were female.

Tinnitus Handicap Inventory

A statistically significant change in functional THI scores was observed ($P < 0.01$), with follow-up measurements at all time points higher than the score before hypnotherapy. The emotional score on the THI also showed significant changes ($P < 0.01$), with all of the follow-up measures yielding higher scores than the initial assessment. The same pattern was revealed by a comparison of the initial catastrophic score with follow-up scores, which also revealed significant differences ($P < 0.01$). Finally, the total scores on the THI showed significant change after hypnotherapy, with all follow-up measurements indicating higher scores in comparison with the initial assessment. The mean THI scores, assessed at the beginning of therapy and on four subsequent occasions, are shown in Table 1 and Figure 1.

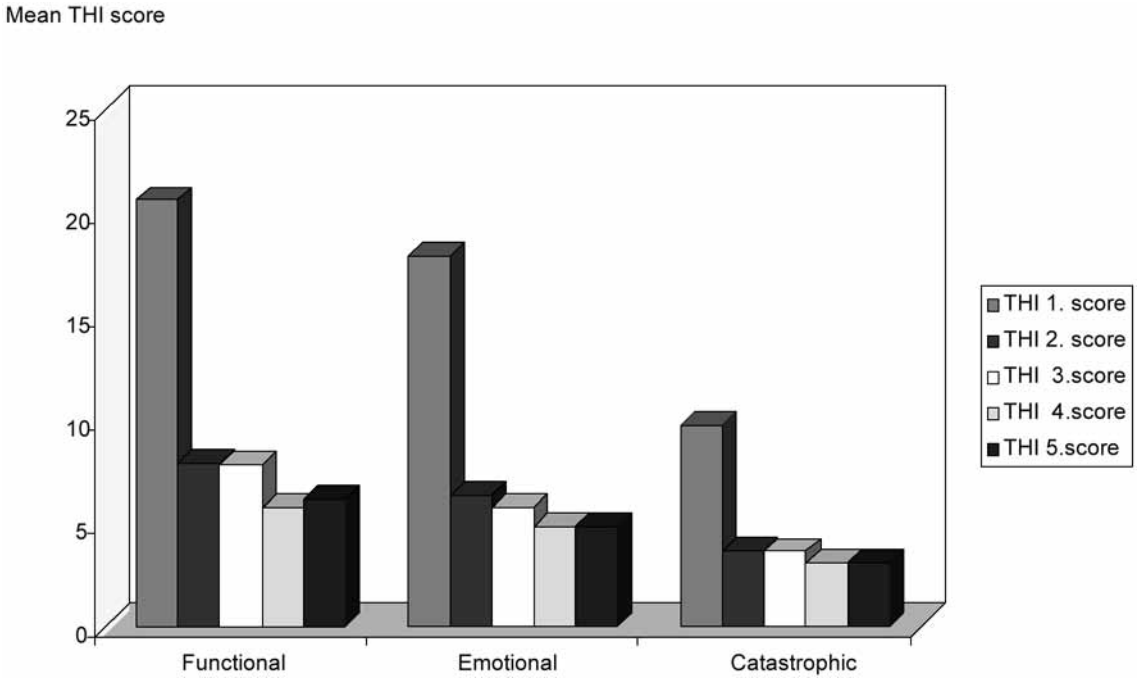

Figure 1
Mean THI scores assessed before and four times after hypnotherapy.

Table 1
THI score evaluation

	Functional		Emotional		Catastrophic		Total	
	Mean ± SD	Median	Mean ± SD	Median	Mean ± SD	Median	Mean ± SD	Median
THI 1.score	20.62 ± 11.94	22	17.90 ± 8.62	16	9.74 ± 6.16	10	48.26 ± 23.17	40
THI 2.score	7.90 ± 7.58	6	6.36 ± 7.02	4	3.69 ± 4.71	2	17.95 ± 18.1	12
THI 3.score	7.85 ± 7.35	6	5.74 ± 6.54	4	3.64 ± 4.23	2	17.23 ± 16.91	12
THI 4.score	5.74 ± 7.40	4	4.82 ± 6.32	2	3.13 ± 4.15	2	13.69 ± 16.19	8
THI 5.score	6.15 ± 7.27	4	4.87 ± 6.27	4	3.08 ± 4.07	2	14.1 ± 16.73	8
P	0.001**		0.001**		0.001**		0.001**	

Friedman test **$P < 0.01$.

Health Quality Evaluation SF-36

The comparison of PF scores before and after hypnotherapy revealed improvement averaging 18.2 points, a statistically significant increase ($P < 0.01$). The RP score showed an average increase of 30.12 points after therapy, which was also statistically significant ($P < 0.01$). BP changed significantly during the course of hypnotherapy, with an increase of 7.82 in the average score ($P < 0.01$).

Significant improvements were also found in GH, which increased 9.33 points ($P < 0.01$); VT, which increased by an average of 15 points ($P < 0.01$); SF, which showed a 1.5-point improvement ($P < 0.01$); RE, for which scores advanced an average of 20.51 points ($P < 0.01$); and MH, which improved by an average of 8.51 points ($P < 0.01$). The greatest improvements were seen in the RP score, followed by PR and RE (Figure 2).

Discussion

Tinnitus patients usually visit a general otolaryngologist or otologist seeking relief from their symptoms. Previous clinical trials addressing tinnitus have had a number of methodological problems, including the need for longer

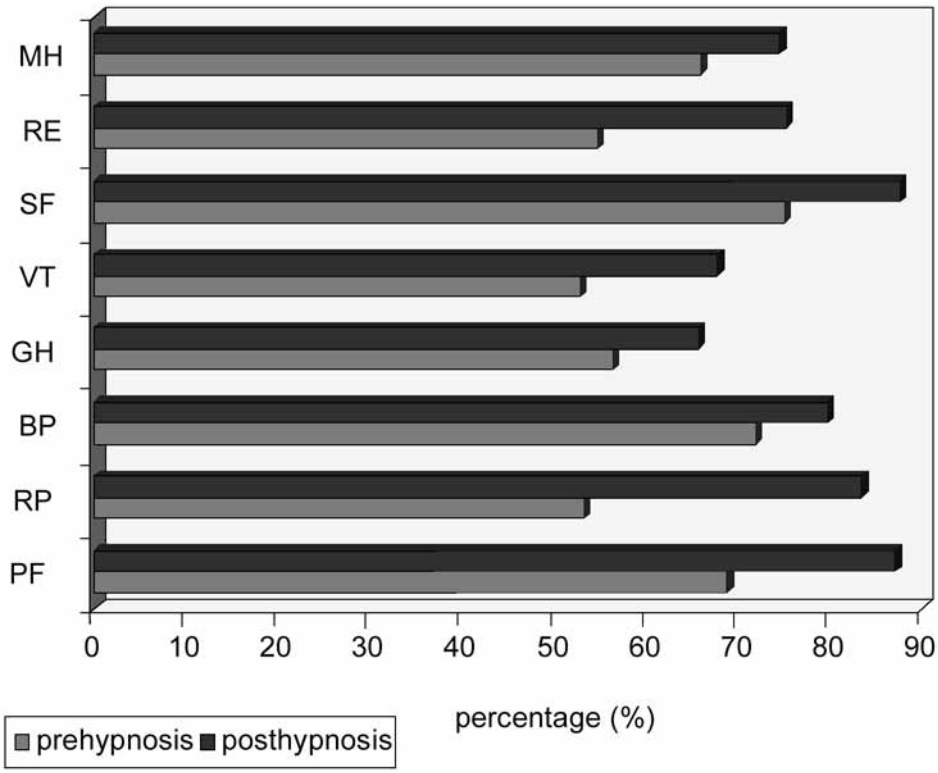

Figure 2
Health quality evaluation with SF-36 administered before and after hypnotherapy.

study periods and larger cohorts.[10] Although many alternative treatment options are available, it should be emphasized that there is currently no cure for tinnitus, but minimal changes in symptoms may improve the patient's quality of life. The results of the present study suggested that tinnitus sufferers may benefit from Ericksonian hypnosis.

A number of previous reports have examined treatment alternatives for chronic tinnitus, such as herbal medicine, dietary vitamin supplementation, transtympanic medications, electrical stimulation, and tinnitus retraining therapy.[11] The effects of herbal medicines showed dose-related changes. Vitamin B complex supplementation seemed to be useful in some tinnitus patients due to its central and peripheral nerve effects, but the results are still controversial.[11] Low-level laser therapy may be more effective in patients in the early stages of tinnitus.[11] Vibrational therapy has been reported using Aurex-3 (ADM Tronics Unlimited, Inc., Northwale, NJ), a new device promoted for the treatment of tinnitus, which involves production of mechanical vibrations that mask the tinnitus sound.[11]

Jastreboff and Jastreboff reported significant improvement of at least 80% in cases treated by tinnitus retraining therapy.[12] Berry *et al.*[13] reported significant improvement in THI scores following 6 months of tinnitus retraining therapy combined with sound-generator devices. However, that study also had a small number of patients and a short follow-up period. There have been no reports of well-controlled randomized studies to evaluate the effectiveness of tinnitus retraining therapy.[14] Transtympanic therapy can be effective for tinnitus secondary to Meniere's disease and that accompanying hearing loss. Suitable medications, optimal dosages, and appropriate routes of administration have yet to be established. Hoffer *et al.*[15] reported long-term reduction of tinnitus in 50% to 60% of cases with transtympanic management. Transcutaneous electrical stimulation was effective in 50% of patients suffering with tinnitus.[16] However, it is difficult to evaluate the efficacy of this therapy due to the placebo effect.

Masking of tinnitus is often referred to as "fighting fire with fire" in that external sound is provided to diminish patients' awareness of their tinnitus. A large-scale

review of patient records at the Tinnitus Clinic of the Oregon Health and Science University indicated that tinnitus can be masked in 95% of tinnitus patients; 92% of patients experienced complete masking, while 4.5% reported partial masking.[17]

Hypnosis involves inner absorption, concentration, and focused attention. When the mind is concentrated and focused in this way, it becomes possible to use the power of the mind to bring about change. The use of hypnosis and self-hypnosis can allow people to have increased control over their behaviors, thoughts, emotional responses, and even physiological responses and physical health.

Erickson suggested that body and the mind are connected, including even receptor sites and endogenous morphine of the autoimmune system as well as the information systems of the brain and nervous system. He believed that the potential of the human mind has yet to be fully determined, and he designed treatment protocols using patients' emotional resources to assist in achieving health through the "self-empowerment" of the human spirit and manipulation of sensory stimuli to resolve symptoms and promote healing.[18]

A number of previous studies have examined the use of hypnosis for tinnitus.[18-22] However, these studies were performed with male army personnel who had tinnitus associated with noise-induced hearing loss. Beneficial effects of this type of treatment were reported in 36–73% of cases. Mason *et al*.[6] found no differences in outcome between two groups of patients receiving either client-centered hypnotherapy or counseling, and reported that 68% of tinnitus patients showed a beneficial response to hypnotherapy. Their results were related to hearing loss in that hearing loss in tinnitus sufferers negatively affected the response to hypnosis. We concluded that this may explain why the success rate was high in our sample.

Maudoux *et al*.[23] used self-hypnosis in a clinical trial and reported that all of their 35 patients could cope with their tinnitus after 5 to 10 sessions of Ericksonian hypnotherapy (EH). They also assessed tinnitus with THI, and all groups showed significant improvement. The results of this non-randomized prospective longitudinal study indicated that EH, especially self-hypnosis, is a promising means of obtaining relief from tinnitus. Kirsch *et al*.[24] reported that cognitive-behavioral therapy combined with hypnosis was more effective in tinnitus sufferers than cognitive-behavioral therapy alone. A comparison of outpatient and inpatient therapy showed the former to have greater efficacy. However, Ross *et al*.[5] reported the therapeutic efficacy of a 28-day inpatient treatment schedule in tinnitus patients making use of therapeutic metaphors, indirect suggestion, anchoring, self-in-relation techniques, systematic changes in time focus, and ideodynamic hypnosis techniques based on the principles of EH. They confirmed the efficacy of hypnosis treatment based on the results of the Tinnitus Questionnaire and SF-36.

The present study had limitations related to the short follow-up period and the small number of patients. The greatest amount of improvement in tinnitus was experienced after the first hypnosis session, and this improvement was sustained throughout the 6-month follow-up. However, this follow-up period was not adequate, and further studies are required. However, the overall preliminary results of our study suggested the effectiveness of Ericksonian hypnosis in this sample. Further controlled studies in larger numbers of tinnitus patients are needed to confirm our preliminary results. Our study was also limited by the lack of placebo or sham treatment groups for comparison.

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