

A Multidisciplinary Five-Day Center-Based Approach to Tinnitus Treatment

Summary by John A. Coverstone, AuD

A team from Jena University

Hospital in Jena, Germany, recently studied a multidisciplinary approach to treating tinnitus. Their treatment program was provided through an onsite, center-based program of care spanning five consecutive days, in which patients worked with ear, nose and throat (ENT) physicians, cognitive behavioral therapists, medical rehabilitation specialists, and audiologists.

The researchers recruited 308 individuals with chronic tinnitus for the study. They used the *Tinnitus Questionnaire* (TQ) to determine overall tinnitus distress and tinnitus severity on six subscales (emotional distress, cognitive distress, intrusiveness, sleep disturbance, hearing problems, somatic complaints). Patients were omitted from the study if their tinnitus was acute (less than 3 months); if tinnitus distress was classified as mild, or less than a score of 31, on the TQ; or if the patient did not accept habituation to

tinnitus as a program goal. It may be noted that these criteria omitted significant portions of the general population experiencing tinnitus so that insurance could be billed and a common outcome goal could

be established. Patients failing to meet these criteria still may require intervention and may be in significant distress from tinnitus.

Assessment using the TQ was provided during the patient-screening



process at the beginning of treatment, at the end of treatment, and during two follow-up visits at 20 days and six months after treatment. The TQ rates severity of tinnitus as either Mild (score of 0-30), Moderate (31-46), Severe (47-59), or Very Severe (60+). According to the authors, scores in the Severe or Very Severe range are considered to indicate uncompensated tinnitus and scores in the Mild or Moderate range are considered to indicate compensated tinnitus.

Patients involved in the program underwent treatment for five consecutive days, with treatment averaging seven hours per day.

During treatment, patients saw four specialists:

- 1** an ENT, who provided tinnitus-specific counseling, according to the neurophysiologic model of tinnitus developed by Jastreboff et al. (1996);
- 2** a cognitive behavioral therapist, who provided counseling through Cognitive Behavioral Therapy (CBT) in eight closed-group sessions over four days;
- 3** a medical therapist, who performed a physical examination for cervical spine dysfunction and provided one session per day in progressive muscle relaxation, back therapy training, and physical therapy; and
- 4** an audiologist, who fitted hearing aids and provided Terzo[®] hearing therapy, an experimental approach to auditory rehabilitation. Terzo[®] therapy was begun at the center and patients were to continue therapy after completion of the program, for a total of 25 days.

The authors reported excellent compliance with the program. Ninety-five percent of patients took part in all sessions, and 90 percent of patients completed all tasks of the Terzo[®] therapy program, with 85 percent using hearing aids throughout the target 25 days.

TQ scores improved overall from screening to the first day of treatment, with average scores of 52.36 and 48.79, respectively. Scores improved even more from the first day to the last day of the program, with average scores improving to 34.29. The authors further reported that scores remained stable at the 20-day and six-month follow-up examinations.

Subscale scores improved as well. Measures of emotional distress, cognitive distress, intrusiveness, and sleep disturbance all showed significant improvement from screening to first day of treatment and from first day to last day of treatment. Measures of hearing problems and somatic complaints did not change from screening to first day of treatment, but improved by the fifth day of the treatment program. It also was noted that those scoring in the range of Moderate on the TQ did not show improved scores from screening to first day of treatment. Those scoring in the range of Severe or Very Severe distress improved from screening to first day of treatment by four and seven points, respectively, and, on average, improved one category of clinical severity (for example, from Severe to Moderate).

The authors also correlated tinnitus distress with identifiable factors during the screening process. Higher tinnitus distress correlated with dizziness at tinnitus onset, tinnitus that could not be masked with background noise, tinnitus that worsened during physical stress (exercise), subjective hearing loss, comorbid psychiatric diagnoses, greater age, and greater degree of hearing loss. The authors indicated that all these factors are consistent with previous studies showing similar effects.

The authors demonstrated the efficacy of an intensive five-day treatment program for tinnitus. It was noted that they did not gather data on each modality of treatment independently, nor did they forego treatment to compare their approach with placebo. The improvement noted for many patients between the screening stage and beginning of treatment indicates a possible effect of simply seeking treatment without the treatment actually being provided. This approach also may provide barriers in the form of program costs and accessibility in more rural areas. Nonetheless, this provides a potential center-based treatment approach, which demonstrated success in a large patient population with tinnitus. 

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