

## **AUDITORY DISCRIMINATION THERAPY (ADT) FOR TINNITUS MANAGEMENT: CLINICAL TRIAL**

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**BACKGROUND.-** Neuroimaging research has showed the reorganisation of the cortical tonotopic map in tinnitus patients. The representation of the tinnitus frequency has shifted to the adjacent areas due to the lack of afferences from the damaged cochlea. Severity has been correlated with the magnitude of the shift. Auditory discrimination training proposed by H. Flor in 2004, designs a procedure to increase cortical areas responding to trained frequencies (close to tinnitus pitch) and to shrink the neighbouring ones (tinnitus pitch).

**OBJECTIVE.-** To describe the effect on tinnitus using an auditory discrimination training program .

**STUDY DESIGN.-** This prospective descriptive study included 29 patients with mild or moderate chronic tinnitus. Pitch was matched at 4, 6 or 8 khz. Tinnitus severity was measured according to a visual analogical scale (VAS, range 1-10) and the tinnitus handicap inventory –THI. Patients performed a 10-minute auditory discrimination task twice a day during one month. Discontinuous 8 khz pure tones were mixed randomly with short “white noise” sounds through a MP3 system. The patient should mark every sound in a notebook to keep the attention on. Results were achieved just after the month period. ADT group was compared with a 3-month Waiting List group (WLG, n=21)

**RESULTS.-** Thirty seven percent of the patients referred an improvement in tinnitus perception after the treatment. A statistical improvement was achieved considering VAS and THI score reduction after the training. A significative decrease in VAS and THI was obtained in the ADT group, compared to the WLG. Patients performed more than 90% of the sessions programmed so we cannot describe a dose response effect.

**CONCLUSION.-** ADT could open the door to a new management option for tinnitus based on sound training. Indications, method, dose and sound strategy need to be implemented.