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P.34 • The value of Eye Movement Desensitization Reprocessing in the treatment of tinnitus

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Current therapy forms most often provide psychotherapeutic treatment which are intended to train the patient how to deal with the tinnitus sound. Tinnitus Retraining Therapy (TRT) and Cognitive Behavioral Therapy (CBT) may significantly improve the quality of life for tinnitus patients but are not always sufficiently effective. Recent insights show that Eye Movement Desensitization Reprocessing (EMDR) may increase effectivity of psychotherapy. The aim of this randomized, controlled study with blind evaluator is to examine the effect of EMDR compared to CBT in chronic tinnitus patients.

Patients with subjective, chronic, non-pulsatile tinnitus will be randomized in two treatment groups: TRT and CBT versus TRT and EMDR. Evaluations will take place at baseline before therapy, at the end of the treatment and 3 months after therapy. The score on the Tinnitus Functional Index (TFI) will be used as the primary outcome measurement. Secondary outcome measurements will be the Visual Analogue Scale of Loudness (VAS), Tinnitus Questionnaire (TQ), Hospital Anxiety and Depression Scale (HADS), Hyperacusis Questionnaire (HQ) and psychoacoustic measurements.

The objective is to evaluate whether the bimodal therapy TRT and EMDR can provide faster and/or more relief from the annoyance experienced in chronic tinnitus patients' daily lives compared to the bimodal therapy TRT and CBT. This is, to our knowledge, the first prospective, randomized, controlled, clinical trial with blind evaluator that uses TRT and EMDR as a treatment for tinnitus. To date, patient recruiting and treatment has started.

EMDR could be an important therapy for patients with tinnitus who experience a great decrease in their quality of life. EMDR has shown promising results for the treatment of phantom limb pain. Therefore, we hypothesize that EMDR also may be an effective treatment method for patients with subjective, chronic tinnitus. Tinnitus viewed from the perspective of a trauma, more specifically in the auditory and limbic regions, leads to the need for effective information processing. The development of new neural networks could be generated through EMDR.

Bilateral stimulation promotes the plasticity of the brain causing neural networks to be adjusted. The use of bilateral stimuli to treat tinnitus is an innovative treatment method. In the literature, only limited data can be found in a few case studies where EMDR treatment is performed on tinnitus patients. Preliminary results of the current study will be presented at ITS 2017.

P.35 • Selective attentional impairment in chronic tinnitus: Evidence from an event-related potentials study

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Tinnitus is an auditory phantom sensation experienced in the absence of a sound source. Cognitive dysfunctions, especially in working memory and attention, are frequently reported to be associated with tinnitus. The aim of this study was to investigate attentional functioning in a group of subjects with chronic tinnitus using ERPs, and in particular the P300 components.

We studied 20 patients with chronic tinnitus and 20 healthy subjects that performed a P300 Novelty task. P3a amplitude was significantly lower in tinnitus subjects (TS) than in controls. P3a latency was comparable in patients and controls. The P3b parameters were similar in the two groups. N1 latency for all the stimuli was significantly longer in tinnitus subjects than in controls.

Our P3a findings point to a selective dysfunction in the orienting phase of attentional processing of the auditory stimulus, especially in the shift toward salient stimuli. In particular, while the temporal start of this cognitive activity appears to be preserved (as indicated by comparable P3a latencies in TS and controls), the attentional resources available for an adequate switching process are reduced (lower P3a amplitude in TS versus controls).

These results point to a general slowing in early stimulus perception in tinnitus subjects. Moreover, a specific difficulty emerged in attentional switching to unexpected events during an orienting response, probably owing to a dysfunction in the ventral attention network.

P.36 • Case Study – A Prescriptive Sound Amplification Method for Tinnitus Relief Using Hearing Aids

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Tinnitus represents the perception of the sounds in the absence of an external source. Depending on the definition of tinnitus and the criteria applied, prevalence rates in adult populations is 8.2–20.0%1, rising to 17.9–30.3% in those over 50 years of age, as described by 1. Fabijanska A., Rogowski M., Bartnik G., et al., 1999. Tinnitus sufferers are coping in various ways with their problem, some of them being profoundly affectéd in everyday tasks. Our aim is to find an algorithm of amplification of environmental sounds, easy to use via hearing aids, capable of offering tinnitus relief.