

Sound therapy for tinnitus patients

The theory of 'habituation of the disordered auditory system' using low level sounds to regulate a person's tinnitus continues to play a big part in the management of tinnitus.

Inge Louisa Stevens reports.

According to Prof Tarik Ghannoum from the Audio-Vestibular Medicine Unit of Cairo University, Egypt, there are three main aims of sound therapy for tinnitus patients.

He told delegates on Day 1 of the Recent Advances in Diagnosis & Management of Audio-Vestibular Disorders track at the 7th EROC Congress in Dubai that the first, and most important, is to promote relaxation and reduce stress. Secondly, sound therapy is used to work on neuromodulation targeting neuroplastic changes through sound therapy, closely followed by the habituation of perception and habituation of reactions.

As Prof Ghannoum explained, there are different schools of thought on how to achieve habituation. The first proposed therapy is Continuous

Complete Masking where a masking noise is applied to continuously cover up the tinnitus while the masker is in use, however, the minimal masking level should not be louder than the tinnitus. This desired outcome is that this therapy is more "acceptable than tinnitus" for the patient.

"If we cannot achieve continuous complete masking in cases when tinnitus is too loud or temporal decay is more than 10 dB in 3 minutes, we can apply Continuous Partial Masking," said Prof Ghannoum. "This is where you apply low level background noise to 'reduce' the loudness of tinnitus, but not cover it completely."

Inhibitory Masking refers to the total or partial inhibition of tinnitus, as a consequence of continuous or partial masking, and Frequency Sound Specific Management (FSSM) is the use of a sound at the pitch component of the individual tinnitus.

"FSSM therapy is generally more accepted and is more effective to induce inhibition and for the management of tinnitus patients," said Prof Ghannoum.

The neurophysiological model of Sound Enrichment has also gained worldwide acceptance. The idea is to produce a sound that does not cover the tinnitus, but allows the patient to hear them equally at a mixing point.

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During his talk, Prof Ghannoum outlined some of the current practicable instruments being used in sound therapy for tinnitus patients including Acoustic Co-ordinated Reset (CR) Neuromodulation, Serenade, Danalogic iFIT Tinnitus, and TIPA Tinnitus Device, to name a few.

According to Prof Ghannoum, the data available suggests that sound therapy "on its own" has benefits in the management of tinnitus and that there is strong theoretical background that suggests how sound has a possible inhibitory effect on tinnitus generation in some pathological entities. "The use of hearing aids, when tinnitus is combined with hearing loss, will almost always lead to improvement in the hearing problems and quality of life," he concluded. ■