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Acoustic CR neuromodulation therapy for subjective tonal tinnitus: A review of clinical outcomes in an independent audiology practice setting

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Objective: To describe the quantitative treatment outcomes of patients undergoing acoustic coordinated reset (CR) neuromodulation at a single independent audiology practice over a 22-26 week period as part of an open label, non-randomized, non-controlled observational study.

Methods: Sixty-six patients with subjective tonal tinnitus were treated with acoustic CR neuromodulation with a retrospective review of patient records being performed in order to identify changes of visual analog scale (VAS, n=66) and in the score of the tinnitus handicap questionnaire (THQ, n=51). Patients had their tinnitus severity recorded prior to the initiation of therapy using the tinnitus handicap inventory in order to categorize patients into slight up to catastrophic impact categories. THQ and VAS for tinnitus loudness/annoyance were obtained at the patient's initial visit, at 10–14 and 22–26 weeks.

Results: Visual analogue scale scores were significantly improved, demonstrating a 25.8% mean reduction in tinnitus loudness and a 32% mean reduction in tinnitus annoyance with a clinically significant reduction in percept loudness and annoyance being recorded in 59.1% and 72.7% of the patient group. THQ scores were significantly improved by 19.4% after 22–26 weeks of therapy compared to baseline.

Conclusion: Acoustic CR neuromodulation therapy appears to be a practical and promising treatment for subjective tonal tinnitus.

Biography

Mark Williams is a Chief Audiologist at The Tinnitus Clinic Ltd. He is a senior clinician specializing in the provision of tinnitus and hyperacusis management options for adults. He has a specific interest in tinnitus psychoacoustic measurement along with researching the efficacy of neuromodulation therapies for the treatment of subjective percepts. He has both led and contributed to a number of clinic based observational studies. He currently leads a multidisciplinary clinical team for The Tinnitus Clinic Ltd. He has previously led a team of audiologists for the NHS and has been a clinical tutor/examiner for MSc and BSc Audiology students at University College London (UCL). He originally studied at UCL and obtained an honors degree in Molecular Biology, a Master's degree in Audiological Science and a Post-graduate Diploma in Audiology Clinical Competency. He is registered as a Hearing Aid Dispenser with the Health Professions Council (HPC) and as a Clinical Audiologist with the Registration Council for Clinical Physiologists (RCCP).

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