Transient suppression of tinnitus by transcranial magnetic stimulation.

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It has been proposed that tinnitus is associated with an irregular activation of the temporoparietal cortex. If this activity is a functionally relevant component of the tinnitus-related network, a virtual temporary lesion of this area should result in transient reduction of tinnitus. To test this hypothesis, we applied 10Hz repetitive transcranial magnetic stimulation to eight scalp and four control positions in 14 patients with chronic tinnitus. Stimulation of left temporoparietal cortex significantly reduced tinnitus (Friedman analysis of variance, p < 0.05; compared with control), indicating that secondary auditory areas can be critical for tinnitus perception, perhaps as a consequence of maladaptive cortical reorganization.

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