

Scientific Article



Title

Diminished N1 auditory evoked potentials to oddball stimuli in misophonia patients

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Abstract

Researchers screened 20 patients with misophonia with the diagnostic criteria for misophonia, and 14 matched healthy controls without misophonia, and investigated any potential deficits in auditory processing of misophonia patients using auditory event-related potentials (ERPs) during an oddball task. Subjects watched a neutral silent movie while being presented a regular frequency of beep sounds in which oddball tones of 250 and 4000 Hz were randomly embedded in a stream of repeated 1000 Hz standard tones. They examined the P1, N1, and P2 components locked to the onset of the tones. For misophonia patients, the N1 peak evoked by the oddball tones had smaller mean peak amplitude than the control group. However, no significant differences were found in P1 and P2 components evoked by the oddball tones. There were no significant differences between the misophonia patients and their controls in any of the ERP components to the standard tones. The diminished N1 component to oddball tones in misophonia patients suggests an underlying neurobiological deficit in misophonia patients. This reduction might reflect a basic impairment in auditory processing in misophonia patients.

Source

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