
Effects of mechanical stimulation of CT afferents on relapse-predicting biomarkers and alcohol craving in Alcohol Use Disorder during early abstinence

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Abstract

Alcohol use disorder (AUD) is one of the largest global health threats and among the most undertreated psychiatric disorders. Alcohol craving is one of the characteristic behavioral symptoms of this chronic brain disease and an important contributor to relapses. Affective touch has been shown to increase dopamine and to modulate the m-opioid system which both have a key role in AUD. C-tactile (CT) stimulating touch is postulated to increase oxytocin and to reduce stress system activity both of which have a beneficial effect on prevention of alcohol craving. CTs project to the insular cortex, a brain area involved in cue-induced craving and its stimulation has been suggested as a treatment method for AUD. This pilot study aims to assess whether acute mechanical stimulation of CTs influences relapse-predicting biomarkers (heart rate variability (HRV), salivary cortisol) and subjective alcohol craving in AUD patients during early abstinence. In this randomized controlled study, up to 40 patients who meet the DSM-5 criteria for mild to moderate AUD, will be exposed to alcohol-related, stress-inducing and neutral/relaxing images, while they receive either CT-optimal stimulation or non-CT-optimal control treatment. Saliva samples are collected at the baseline, before, and 3 times after each type of visual stimuli. HRV is derived from blood volume pulse, measured with a biosensor wristband throughout the experiment. Subjective craving is assessed with visual analog scale at the baseline and after the visual stimuli. The testing will continue until mid-June 2023. The preliminary results will be reported.

Keywords: C tactile, alcohol use disorder, addiction, relapse, craving

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