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CHEMOSENSORY DYSFUNCTION IN ALCOHOL-RELATED DISORDERS: A JOINT EXPLORATION OF OLFACITION AND TASTE
M. Brion1,2, P. de Timary1,3, C. Vander Stappen2, L. Guettat4, B. Lecomte5, P. Rombaux6, and P. Maurage1,2
1Laboratory for Experimental Psychopathology, Université Catholique de Louvain, Belgium, 2Psychological Science Research Institute, Université Catholique de Louvain, Belgium, 3Department of Adult Psychiatry, St Luc Hospital and Institute of Neuroscience, Université catholique de Louvain, Belgium, 4Department of Neuropsychiatry, Beau-Vallon Hospital, Belgium, 5Department of Neuropsychiatry, Saint-Martin Hospital, Belgium, and 6Department of Otorhinolaryngology, St Luc Hospital and Institute of Neuroscience, Université Catholique de Louvain, Belgium

Background. Dysfunctions in chemosensory perception (i.e., olfaction and taste) have been recently documented in a wide range of neurological and psychopathological states, these deficits strongly influencing patients’ quality of life and being considered as a potential biomarker of these disorders. Although odors are strongly involved in the development and maintenance of alcohol-related problems, olfactory and gustatory abilities have been far less explored in alcohol-dependence (AD) and Korsakoff Syndrome (KS, a frequent complication of AD mostly characterized by severe amnesia). The present study aimed at measuring olfaction and taste impairments in AD and KS, to determine the extent of these deficits as well as their interrelations and the continuum between AD and KS on chemosensory perception.

Methods. Olfactory and gustatory functions were explored among 20 KS patients, 20 AD patients and 20 healthy paired controls, with a strict control of psychopathological comorbidities. Olfaction (i.e., threshold detection, odor discrimination and identification) was assessed using the “Sniff Sticks” battery and taste (detection threshold) was measured using the “Taste strips” task.

Results. Significant impairments were found for high-level olfactory functions in AD (odor discrimination) and KS (odor discrimination and identification), even when potentially biasing variables were controlled for. Gustatory deficits were also observed in both groups, suggesting a global deficit for chemosensory perception in alcohol-related disorders. Finally, the increased deficit observed in KS compared to AD for odor identification extends towards chemosensory perception the proposal of a continuum between the impairments related to these two stages of alcohol-related disorders.

Conclusions. Our results show that AD and KS are characterized by strong deficits in olfactory but also gustatory abilities, which should be further taken into account in this pathology and could constitute a reliable marker of the transition between the successive alcohol-related psychopathological states. The gradient of impairment between AD and KS also supports a generalization of the “continuum hypothesis” to chemosensory perception. In view of the deleterious influence of these deficits on everyday life, rehabilitation programs focusing on these sensorial modalities should be developed in alcohol-related disorders.