

P-48 - THE ASSOCIATION OF THE APPETITIVE PEPTIDE ACETYLATED GHRELIN WITH ALCOHOL CRAVING IN EARLY ABSTINENT ALCOHOL DEPENDENT INDIVIDUALS

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Objective: Ghrelin plays an orexigenic role in regulating appetite and energy balance. Preclinical studies also provided support for an important role of ghrelin in the neurobiology of addiction-related reward pathways. In contrast, clinical data have failed to support an association between ghrelin and alcohol craving, possibly due to analysing the pharmacologically inactive, preprohormone ghrelin instead of ghrelin in its active, acetylated form.

Materials and methods: In a sample of 61 alcohol-dependent male inpatients we assessed plasma concentrations of both active and total ghrelin, using blood samples taken at the onset of withdrawal and then again after 14 days of controlled abstinence. During this time, we also assessed the patients' alcohol cravings (applying the obsessive compulsive drinking scale, OCDS), symptoms of depression (Beck Depression Inventory; BDI) and anxiety (State Trait Anxiety Inventory; STAI). The severity of alcohol dependence was assessed using the alcohol dependence scale (ADS).

Results: We found a significant positive correlation between the plasma concentration of active ghrelin and alcohol craving in both blood samples. In a linear regression model, the plasma concentration of active ghrelin on day one, the scores of the ADS, and the BDI explained 36% of the variance in OCDS sum score ($p < 0.0001$). By day 14, these same factors accounted for 54% ($p < 0.0001$). We did not detect any association between the plasma concentration of total ghrelin and patients' alcohol cravings.

Conclusion: Our results suggest that biologically active, acetylated ghrelin is involved in reward-associated craving during alcohol withdrawal and early abstinence in alcohol-dependent patients.