

THE IMPACT OF ATRIAL NATRIURETIC PEPTIDE ON ANXIETY, STRESS AND CRAVING IN PATIENTS WITH ALCOHOL DEPENDENCE

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Objective: Atrial natriuretic peptide (ANP) is well known as a regulator of fluid and electrolyte homeostasis. However, studies suggest that ANP also plays an important role in the neurobiology of anxiety. Recent evidence suggests that ANP may be involved in the pathophysiology of addictive behavior. The present study aims to elucidate the effects of ANP on alcohol-dependent patients' anxiety, perceived stress and craving during alcohol withdrawal.

Methods: A sample of 59 alcohol-dependent inpatients was included in the analysis. A blood sample was taken at day 14 of detoxification in order to assess the concentration of ANP in plasma. In parallel, we assessed patients' alcohol craving, using the Obsessive Compulsive Drinking Scale (OCDS), as well as their symptoms of anxiety (State-Trait Anxiety Inventory; STAI). Patients' stress levels were assessed using the Perceived Stress Scale (PSS).

Results: We found a significant negative association between patients' ANP plasma concentrations and their anxiety, craving for alcohol, and perceived stress. Regression analyses suggest that ANP is a significant predictor both for patients' perceived stress and for the severity of their anxiety during early abstinence. Additionally, we were able to show the association of patients' ANP plasma levels and craving to be mediated by their perceived stress.

Conclusion: Our results suggest that the association of patients' ANP plasma levels and craving is mediated by their perceived stress. For this reason, intranasal application of ANP may prove to be a new avenue for the treatment of alcohol dependence in patients exhibiting high levels of perceived stress.