Plasma Oxytocin and Vasopressin do not Predict Neuropeptide Concentrations in Human Cerebrospinal Fluid.

Abstract: The involvement of the neuropeptides oxytocin (OXT) and vasopressin (AVP) in human socio-emotional behaviours is attracting increasing attention. There is ample evidence for elevated plasma levels upon a wide variety of social and emotional stimuli and scenarios, ranging from romantic love via marital distress up to psychopathology, with cause versus consequence being largely unclear. The present study examined whether plasma levels of both OXT and AVP are reflective of central neuropeptide levels, as assumed to impact upon socio-emotional behaviours. Concomitant plasma and cerebrospinal fluid (CSF) samples were taken from 41 non-neurological and nonpsychiatric patients under basal conditions. Although OXT and AVP levels in the CSF exceeded those in plasma, there was no correlation between both compartments, clearly suggesting that plasma OXT and AVP do not predict central neuropeptide concentrations. Thus, the validity of plasma OXT and AVP as potential biomarkers of human behaviour needs further clarification.