Neuroendocrinical and psychophysiological reactivity to emotional stress in Borderline Personality Disorder (BPD)

During psychotherapy patients with BPD are confronted with their thoughts and emotions regarding suicide and self-injury. Our study explores the sensibility of the hypothalamic-hypophyseal axis and the peripheral sympathetic nerve system to these emotional stresses. We measure both endocrinical (i.e. cortisol in the saliva) and psychophysiological parameters (blood pressure, heart rate, EMG, EOG, skin conductance response, ECG) and use psychometric questionnaires to investigate subjective stress before and after interviews. The examination consists of three appointments: During the first appointment, the patient is familiarized with the process and all parameters are measured without intervention. During the second and third session in a randomised protocol an emotional neutral control interview and a typical therapeutic interview are conducted. The above listed parameters are measured before, during and after the interviews with a therapist.

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The existence of endophenotypes in Borderline-Personality-Disorder (BPD) and their first-grade relatives

Aggressiveness, impulsiveness and dissociation are typical personality traits for diagnosis of BPD. They might describe endophenotypes for this disease. The difference between a personality disorder and a normal personality is in the quantitative occurrence of these traits. The purpose of this study is to prove the existence of these factors for the first-grade relatives of Borderline-patients. Our hypothesis is that first-grade relatives show a high level for these personality traits and endophenotypes might account for a possible genetical component of the BPD.

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Clonidine for hypernoradrenergic symptoms in patients with borderline personality disorder/complex posttraumatic stress disorder.

Borderline Personality Disorder (BPD) and Posttraumatic Stress Disorder (PTSD) share common clinical and psychogenetic traits so that BPD may be conceptualised as a complex PTSD (Driessen et al., 2002). A growing body of studies have provided compelling evidence for exaggerated CNS responses to noradrenergic activation in traumatized humans with PTSD (Southwick et al., 1993 and 1999; Geracioti et al., 2001). This idea is supported by studies showing exaggeration of PTSD-symptoms by increasing the central noradrenergic activity using the $\alpha_2$-adrenergic receptor antagonist yohimbine (Southwick et al., 1999) and by studies showing efficacy of centrally acting antinoradrenergic drugs for symptoms commonly associated with hypernoradrenergic activation such as hypervigilance, irritability, insomnia, nightmares and flash-backs (Raskind et al., 2003; Morgan et al., 2003; Friedman, 2000). Although there is a large overlap in the pathogenesis of PTSD (particularly with type 2 trauma) and BPD to date there is a paucity of data with regard to the contribution of the noradrenergic system to the symptoms of BPD. In a randomized, placebo-controlled cross-over study (n=16 patients with BPD with or without comorbid PTSD) efficacy of clonidine, a centrally acting $\alpha_2$-agonist inhibiting noradrenergic transmission, will be examined on measures of hyperarousal (main outcome), sleep, intrusions and aversive inner tension.

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Neurocognitive mechanisms in emotion processing: a magneto-encephalographic study of the perception of faces and objects in patients with borderline personality disorder.

The aim of the study is to investigate the temporal resolution of cortical activation during the perception of faces and objects in patients with borderline personality disorder and healthy subjects. We developed a paradigm suitable for Magnetoelectroencephalography to measure the cortical activation pattern related to the perception of faces with and without emotional expression.

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