

Cognitive Functioning and Cortisol Suppression in Major Depression in a Long-Term Perspective

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Abstract : Major Depressive Disorder (MDD) is often associated with high levels of stress and disturbances in the Hypothalamic Pituitary Adrenal (HPA) system, yielding high levels of cortisol, in addition to cognitive dysfunction. Previous studies in this patient group have shown a relationship between cortisol profile and cognitive functioning in the acute phase of MDD and that the patients had significantly less suppression after dexamethasone administration. However, few studies have investigated this relationship over time and in phases of symptom reduction. The aim of the present study was to examine the relationships between cortisol levels after the Dexamethasone Suppression Test (DST) and cognitive function in a long term perspective in MDD patients. Patients meeting the DSM-IV criteria for a MDD were included in the study and tested in symptom reduction. A control group was included. Cortisol was measured in saliva collected with Salivette sampling devices. Saliva samples were collected 4 times during a 24 hours period over two consecutive days: at awakening, after 45 minutes, after 7 hours and at 11 pm. Dexamethasone (1.0 mg) was given on Day 1 at 11 pm. The neuropsychological test battery consisted of standardized tests measuring memory and Executive Functioning (EF). Cortisol levels did not differ significantly between patients and controls on Day 1 or Day 2. Both groups showed significant suppression after Dexamethasone. There were no correlations between cortisol levels or suppression after Dexamethasone and cognitive measures. The results indicate that the HPA-axis functioning normalizes in phases of symptom reduction in MDD patients and that there no relation between cortisol profile and cognitive functioning in memory or EF.

Keywords : depression, MDD, cortisol, suppression, cognitive functioning

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