

Alterations in hypothalamic-pituitary-adrenal (HPA) axis and psychological disturbances in patients with PTSD and stress related bodily disorders

In recent years, neurobiological studies revealed increasing evidence for a relatively decreased cortisol secretion in several stress related disorders. In particular, a reduced adrenal activity has been described in posttraumatic stress disorder (PTSD). Hypocortisolism has also been found in stress related bodily disorders, such as fibromyalgia syndrome (FMS) and chronic pelvic pain (CPP). Both syndromes are associated with chronic or traumatic stress experiences. However, findings concerning alterations of the HPA axis or the psychological factors in these disorders are still heterogeneously.

The mechanisms underlying hypocortisolism remain still unknown, although different potential mechanisms have been discussed. Also, it might be possible that there are similar HPA-related mechanisms that are comprehensive for these disorders. The existence of subgroups within and between various disorders, showing different neuroendocrine patterns, might be a possible explanation.

The aim of the present study was to evaluate the hypothesis of overlapping subgroups concerning HPA axis alteration. We examined 59 woman with PTSD, FMS or CPP and 30 controls using standardized endocrine challenge tests. A cluster analysis partitioned the sample of patients in three homogeneous groups with different neuroendocrine patterns. This result is in line with the idea of the existence of subgroups with different endocrine patterns which are independently from the diagnosis of these patients. Further studies are needed to replicate these findings and to differentiate other neuroendocrine patterns.