

Psychoneuroendocrinological Studies on Chronic Stress and Depression

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Abstract

ABSTRACT: The adaptive response to stress is characterized by activation of neural and neuroendocrine cascades mediated mainly by the noradrenergic/sympathetic and limbic-hypothalamic-pituitary-adrenal (HPA) systems, respectively. Chronic psychosocial stress has long been associated with the origin and development of depression, where increased levels of cortisol have been observed in both conditions. In this regard, increased levels of cortisol could be directly involved in the mood changes observed in depression, and direct connections between these and alterations of the serotonergic neurotransmission have been also proposed. Therefore, we investigated the potential link between alterations of the limbic-HPA system with the serotonergic hypothesis of depression at both the molecular and clinical levels. Our findings support the notion that chronic psychosocial stress may lead to depression in certain individuals depending on the psychobiological background and their particular psychological resources. Therefore, certain interventions aimed at normalization of the HPA system could potentially prevent the development of depression in chronically stressed subjects. This would be possible through either pharmacological interventions or psychotherapeutic strategies, such as cognitive therapy, aimed at improving resilience and controllability in stressful situations.

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