Cortisol dysregulation in obesity-related metabolic disorders

Cita

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Abstract

Purpose of review: The present review highlights recent investigations in the prior 18 months focusing on the role of dysregulated cortisol physiology in obesity as a potential modifiable mechanism in the pathogenesis of obesity-related cardiometabolic disorders.

Recent findings: Given the clinical resemblance of obesity-related metabolic disorders with the Cushing's syndrome, new studies have investigated the intracellular regulation and metabolism of cortisol, new measurements of cortisol in scalp hair as a tool for long-term exposure to cortisol, and the cortisol-mineralocorticoid receptor pathway. Thus, current and future pharmacological interventions in obesity may include specific inhibition of steroidogenic and regulatory enzymes as well as antagonists of the mineralocorticoid and glucocorticoid receptors.

Summary: The understanding of how adrenal function is challenged by the interplay of our genetic and environmental milieu has highlighted the importance of inappropriate cortisol regulation in cardiometabolic disorders. Increased adipose tissue in obesity is associated with hypothalamic-pituitary-adrenal axis overactivation, increased cortisol production at the local tissue level, and probably higher mineralocorticoid receptor activation in certain tissues.