

Hypothalamic—Pituitary—Adrenal Axis Dysregulation in Sexually Abused Girls

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Abstract

Childhood sexual abuse is associated with an increased incidence of age-concurrent and adult psychopathology. Little is known, however, about the biological manifestations and sequelae of childhood sexual abuse. In this study, we characterized the hypothalamic-pituitary-adrenal axis of a self-selected sample of sexually abused and control girls recruited from a prospective longitudinal study.

Plasma ACTH and total and free cortisol responses to ovine CRH (oCRH) stimulation were measured in 13 sexually abused and 13 control girls, aged 7-15 yr. Psychiatric profiles and 24-h urinary free cortisol (UFC) measures were also obtained.

Sexually abused girls had a greater incidence of suicidal ideation ($\chi^2 = 4.51$; $df = 1$; $P < 0.05$), suicide attempts ($\chi^2 = 4.51$; $df = 1$; $P < 0.05$), and dysthymia ($\chi^2 = 8.85$; $df = 1$; $P < 0.01$) than control girls. Sexually abused girls showed significantly lower basal ($t = 2.1$; $df = 24$; $P < 0.05$), and net oCRH stimulated ($t = 2.02$; $df = 24$; $P < 0.05$) ACTH levels and significantly reduced total ACTH responses ($t = 2.5$; $df = 24$; $P < 0.05$) compared with control subjects. Their total and free basal and oCRH-stimulated plasma cortisol levels and 24-h UFC measures, however, were similar to those in controls.

The attenuated plasma ACTH with corresponding robust plasma cortisol responses to oCRH stimulation and normal 24-h UFC measures in sexually abused girls suggests a dysregulatory disorder of the HPA axis in these individuals. This may reflect pituitary hyporesponsiveness to oCRH. The ability of sexually abused subjects to correct for the proposed pituitary hyporesponsiveness to CRH may be related to their young age and the presence of intact glucocorticoid feedback regulatory mechanisms. (*J Clin Endocrinol Metab* **78**: 249-255, 1994)