Mothers' parenting stress is associated with salivary cortisol profiles in children with Attention Deficit Hyperactivity Disorder.

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Abstract

The aim of this study was to explore the relation between mothers' parenting stress and the functioning of the hypothalamic-pituitary-adrenal axis (HPAA), as expressed by daily salivary cortisol concentrations, in their children diagnosed with Attention Deficit Hyperactivity Disorder (ADHD). Seventy-five children aged 6-11 years diagnosed with ADHD predominant Hyperactive-Impulsive/Combined (ADHD-HI/C, N = 49) and Inattentive symptoms (ADHD-I, N = 26) and 45 healthy peers and their mothers participated in the study. Mothers completed measures assessing their children's ADHD status, perceived parenting stress (Parenting Stress Index - Short Form, PSI-SF), mothers' symptoms of psychopathology, social support and socioeconomic status. Children's salivary cortisol samples were collected at six different time points on a single day. Mothers of children with ADHD-HI/C reported higher levels of parenting stress than mothers of children with ADHD-I and controls. All PSI-SF subscales showed significant associations with children's Cortisol Awakening Response (CAR) in both ADHD groups, with the exception of the Parental Distress subscale in the ADHD-I group. In both ADHD groups, the Parent-Child Dysfunctional Interaction subscale, the Difficult Child subscale and the PSI total score were significantly associated with children's CAR. An interrelation is revealed between mothers' high levels of parenting stress and HPAA functioning in children with ADHD. In this population, CAR has been identified as a sensitive peripheral measure of HPAA functioning in children.