Cortisol levels at baseline and under stress in adolescent males with attention-deficit hyperactivity disorder, with or without comorbid conduct disorder.


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Abstract

Reported findings on cortisol reactivity to stress in young people with ADHD are very variable. This inconsistency may be explained by high rates of comorbidity with Conduct Disorder (CD). The present study examined cortisol responses to a psychosocial stressor in a large sample of adolescent males with ADHD (n=202), with or without a comorbid diagnosis of Conduct Disorder (CD). Associations between stress reactivity and callous-unemotional traits and internalizing symptoms were also assessed. The ADHD only (n=95) and ADHD+CD (n=107) groups did not differ in baseline cortisol, but the ADHD+CD group showed significantly reduced cortisol stress reactivity relative to the ADHD only group. Regression analyses indicated that ADHD symptom severity predicted reduced baseline cortisol, whereas CD symptom severity predicted increased baseline cortisol (ADHD $\beta=-0.24$, CD $\beta=0.16$, $R=0.26$) and reduced cortisol stress reactivity ($\beta=-0.17$, $R=0.17$). Callous-unemotional traits and internalizing symptoms were not significantly related to baseline or stress-induced cortisol. Impaired cortisol reactivity is hypothesised to reflect fearlessness and is associated with deficient emotion regulation and inhibition of aggressive and antisocial behaviour. Consequently, it may partly explain the greater severity of problems seen in those with comorbid ADHD and CD.