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The cortisol response to psychosocial stress in children and adolescents with conduct disorder

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Conduct disorder (CD) is characterized by a pervasive pattern of antisocial behavior in childhood or adolescence, involving physical aggression and serious violation of societal rules. CD is a common antecedent of antisocial personality disorder and is associated with a host of other negative outcomes in adulthood, such as poor psychological health. Understanding the causal mechanisms that lead to CD is an important step in preventing its emergence and designing interventions aimed at ameliorating its symptoms.

In a series of studies, we demonstrated that the cortisol response to psychosocial stress was markedly attenuated in 7–12 year old clinic-referred children with CD. This neuroendocrine abnormality was accompanied by lower basal skin conductance levels (SCL) and heart rate (HR), and differential patterns of psychophysiological reactivity compared to healthy controls. We also found that this pattern of a blunted cortisol response to stress was specific to children with CD, and predicted a poor outcome following therapeutic intervention.

In our most recent research, adolescents with CD ($n = 45$) and control participants with no history of serious antisocial behavior ($n = 100$) were recruited from the community. Participants collected saliva for four consecutive days to examine the diurnal profile of cortisol secretion and the cortisol awakening response. Subsequently, they competed with a peer to complete computerized tasks designed to provoke frustration, shame and anger. All tasks were performed under motivational conditions and involved elements of negative social evaluation and achievement stress. The outcome measures were salivary cortisol concentrations, HR and SCL changes and subjective ratings of positive and negative affect. Preliminary results from this study will be presented along with an outline of our previous work in children with CD. The implications of a deficit in HPA axis functioning for our understanding of serious antisocial behavior in young people will be discussed.

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