

LETTERS TO THE EDITOR

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TESTOSTERONE AND CONDUCT PROBLEMS

To the Editor:

An emerging literature has begun to reveal connections between circulating levels of testosterone and children's aggressive attributes (Olweus et al., 1988; Susman et al., 1987). However, studies have yet to include children with externalizing problems severe enough to warrant clinic referral, capitalize on the technical advances that have made assessment of testosterone in saliva possible, or explore the behavioral correlates of testosterone reactivity to psychosocial stressors. Another gap exists with respect to whether there are distinctive testosterone levels, or reactivity, in children with aggressive behavior problems—only in comparison to those with coexisting externalizing and internalizing symptomatology. We explored (1) whether highly aggressive clinic-referred children have higher levels of salivary testosterone than those who have low levels of such problems; (2) if children with aggressive behavior problems alone have different levels of salivary testosterone than do children with high levels of aggression and depression/anxiety, or children with low levels of both types of problems; and (3) whether there are aggression-related group differences in, or behavior correlates of individual differences in, testosterone reactivity to psychosocial challenge.

We found that clinic-referred boys with levels of aggressive and delinquent behavior above the 95th percentile on national norms had higher levels of salivary testosterone than did boys with low levels of such problems. However, aggressive and delinquent boys were only higher in testosterone than low-problem boys when their conduct problems were not complicated by high levels of anxiety, depression, and social withdrawal. Individual differences in testosterone levels were associated with the boys' aggressive and delinquent behaviors and attention problems, and testosterone elevations in response to the conflict-oriented task were positively associated with the severity of the boys' aggressive behaviors. The findings are among the first to reveal a pattern of discriminating associations among clinic-referred children's externalizing behavior problems and salivary testosterone levels and testosterone reactivity to a psychosocially challenging event.

The results underscore that measurements of hormone in saliva may be informative when included in studies of atypical child development (Granger et al., 1994) and support additional studies aimed at investigating more precisely what types of specific behaviors are most clearly linked with testosterone in clinic-referred children. Additional investigations of the associations among the activity of clinic-referred children's hypothalamic-pituitary-gonadal axis and behavior seem well justified.

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PREPUBERTAL SUICIDE ATTEMPTS

To the Editor:

Suicide attempts during the prepubertal years are extremely rare in contrast to those made in adolescence (Andrus et al., 1991). A 7-year-old boy, Peter, who was referred for outpatient psychiatric services in Germany after two suicide attempts, had previously participated in our longitudinal study on attachment (Jacobsen et al., 1994). As little is known about factors that relate to suicide attempts in young children, we looked at associated attachment patterns from infancy to childhood. Peter is the oldest of two children born to working-class parents. The pregnancy was at risk due to preeclampsia and smoking. Birth and early development were unremarkable, and Peter's IQ fell in the high-average range.

At ages 12 and 18 months, Peter showed an *avoidant* attachment to his mother in Ainsworth's Strange Situation (Ainsworth et al., 1978). This pattern has been associated with the mother's rebuffal of her infant's bids for closeness. Having been turned away, the infant avoids seeking comfort under stress and turns to objects instead.

At age 6, Peter was given a *disorganized* attachment classification on standardized measures. After a 1-hour separation, he ordered his mother around and attempted to control what she did and said. Peter also evidenced fears of