

INHIBITORY CONTROL OF COCAINE-EXPOSED INFANTS AT THREE YEARS

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Neurotoxic effects of prenatal exposure to cocaine can result in atypical development of the limbic-striatal-prefrontal axis. Cerebral damage involving this pathway has been associated with inhibitory control (IC) deficits on neuropsychological testing. We hypothesized that cocaine-exposed (CE) children could exhibit IC deficits manifest by poor ability to control, plan, execute, and modify intentional motor acts. Cognitive development and IC were evaluated in two groups of healthy term infants at 34 mos. One group (n=31) was exposed to cocaine prenatally as determined by maternal report, maternal or infant urine toxicology, or infant meconium toxicology. The other group (n=57) was not exposed to cocaine or any other controlled substance. Griffiths Mental Development Scales were used to evaluate overall cognitive competence as well as individual profiles of ability. CE children, although within the normal range, had lowered scores on all Griffiths Scales except Personal-Social. A Rapid Sequential Alteration Naming Task (RSANT) and a Graphomotor Task (GMT) were designed to evaluate IC at this age. Completion time and perseverative errors were scored. Performance on RSANT by CE children was marked by more perseverative errors and slowed processing relative to the contrast group, even when the Speech and Language and the Performance Scales of the Griffiths were used as covariates. On the GMT, CE children made perseverative errors (Type 1 & 2) more frequently than the contrast group, even with Griffiths' Eye-Hand Coordination Scale covaried. CE children also were more affected by the increasing demand for effortful inhibition across the 4 GMT levels. They showed more errors even at the lower levels of required effort. These findings indicated effects from prenatal cocaine exposure on IC in healthy term children with normal cognition as manifest by verbal and manual perseverative errors and prolonged processing speed at 34 months, thereby potentially affecting later language, information processing, and motor integration.

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PARENTING PRACTICES AND BEHAVIOR PROBLEMS AMONG CHILDREN OF COCAINE-DEPENDENT OUTPATIENTS

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Children of drug abusers are at risk for behavioral, social and academic problems. Children of parents receiving treatment for drug abuse score higher on the Child Behavior Checklist (CBCL) for the anxious/depressed, delinquent, and aggressive behavior syndromes. We examined the relationship between parenting practices among cocaine and opiate dependent mothers and their children's behavior problems. The CBCL and Alabama Parenting Questionnaire (APQ) were administered to cocaine-dependent outpatients who parented 74 children between the ages of 4-18 yrs. We examined whether CBCL syndrome scores were significantly associated with parenting practices on the APQ. Higher scores on the withdrawn, anxious/ depressed, attention problems, and aggressive syndromes were associated with lower parental involvement scores ($p < .01$). Higher withdrawn, delinquent, and aggressive syndrome scores were significantly associated with lower positive parental interaction scores ($p < .05$). Higher delinquent syndrome scores were associated with lower parent monitoring scores ($P < .05$). Higher somatic complaints, attention, delinquent and aggressive syndrome scores were associated with higher inconsistent parenting scores ($p < .05$). Lastly, higher attention and aggressive syndrome scores were associated with higher corporal punishment scores ($p < .05$). These results provide useful information for the development of effective parenting interventions for cocaine-dependent parents.