

Urinary catecholamine excretion in sexually abused girls

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Objective: The objective of this study was to examine urinary catecholamine excretion in a self-selected sample of sexually abused and demographically matched control girls recruited from a prospective, longitudinal study. **Method:** Twenty-four-hour urinary catecholamine and metabolite concentrations of epinephrine, norepinephrine, dopamine, 3-methoxy-4-hydroxyphenylglycol, metanephrine, normetanephrine, vanillylmandelic acid, 3, 4-dihydroxyphenylacetic acid, homovanillic acid were measured in 12 sexually abused and 9 control girls, aged 8 to 15 years. Psychiatric profiles also were obtained. **Results:** The abused subjects excreted significantly greater amounts of metanephrine, vanillylmandelic acid, and total catecholamine synthesis as measured by the sum of epinephrine, norepinephrine, dopamine, and their metabolites compared to values from control subjects. When the means of all significant biochemical measures were adjusted by the covariate effect of height, only homovanillic acid and group interaction remained significant. There were positive trends toward significantly higher urinary excretion of metanephrine, vanillylmandelic acid, and total catecholamine synthesis. Sexually abused girls also had a greater incidence of suicidal ideation, suicide attempts, and dysthymia than control girls. **Conclusions:** These findings support the idea that sexually abused girls show evidence of higher catecholamine functional activity compared with controls. The clinical significance of these findings is their similarity to the psychobiology of both post-traumatic stress disorder and major depressive disorder. Results from this pilot study may be of value in understanding the mechanisms of depressive and anxiety disorders and in the clinical treatment of maltreated children. *-J. Am. Acad. Child Adolesc. Psychiatry, 1994, 33, 3: 320-327.*