Delayed onset of pubertal development in children and adolescents with perinatally acquired HIV infection.

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Delayed onset of pubertal development in children and adolescents with perinatally acquired HIV infection.

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Abstract

OBJECTIVE: To examine whether greater severity of HIV infection is associated with delayed initiation of pubertal development among perinatally HIV-infected children, and to compare sexual maturation of perinatally HIV-infected children with children in the general US population using the National Health and Nutrition Examination Survey III.

METHODS: In a prospective cohort study, the authors studied 983 HIV-infected children aged 6 to 18 years, who had Tanner stage assessed on at least two occasions between 1995 and 2000. Analyses were conducted separately for girls and boys to identify factors associated with onset of puberty or adrenarche (progression beyond Tanner stage 1).

RESULTS: Among children who were in Tanner stage 1 at their first assessment, 185 of 413 (45%) girls and 144 of 434 (33%) boys entered puberty during the observation period. In multivariate longitudinal regression analyses adjusted for age, race/ethnicity, time interval between study visits, and other clinical factors, girls with severe immunosuppression (CD4% <15) were significantly less likely to enter adrenarche (odds ratio [OR], 0.48; 95% confidence interval [CI], 0.29-0.83) and puberty (OR, 0.57; 95% CI, 0.33-0.96) compared with girls...
who were not immunosuppressed (CD4% > or =25). For boys, those with severe immunosuppression were significantly less likely to enter adrenarche (OR, 0.52; 95% CI, 0.28-0.96) and tended to be less likely to begin puberty (OR, 0.69; 95% CI, 0.39-1.22) compared with boys who were not immunosuppressed. Qualitative comparisons suggested that HIV-infected children may experience delayed puberty and adrenarche compared with similarly aged children in the general US population.

**CONCLUSIONS:** Immunosuppression was associated with delayed pubertal onset in perinatally HIV-infected children. Further studies of perinatally HIV-infected and uninfected children are needed to better quantify the delay in pubertal onset and to compare the pace of pubertal maturation.

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