

status, might benefit from initial vaccination at 6 months of age in regions where children are at risk for measles. Confirmation of the child's HIV-infection status prior to vaccination would not be needed. Measles vaccines appear to be safe in HIV-infected children but there is an absence of studies reporting adverse events.

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Metabolic changes in HIV-infected children and adolescents from São Paulo city, Brazil

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Background: HIV infection and the use of antiretroviral therapy can lead to clinical and metabolic changes first described in adults and later in children and adolescents. In this study, we evaluated the presence of lipodystrophy, dyslipidemia, hyperglycemia and insulin resistance determined by biochemical parameters and clinical assessment.

Methods: Prospective transversal study including 40 prepubertal children and adolescents of both gender, aged 7 to 12 years, attended at the Pediatric Infectious Disease Clinic - Universidade Federal de São Paulo, São Paulo city, Brazil, from august to december, 2008. Epidemiological parameters (age, sex, HIV transmission), clinical and immune status (CDC, 1994) and HAART were recorded. Presence of clinical signs of lipodystrophy was assessed by a trained clinician. Lipid panel, glucose and insulin levels were evaluated after an overnight fast (Kwiterovich, 2008; ADA, 2008). HOMA-IR was calculated to assess insulin resistance. Statistical tests such as t-distribution and chi-squared test were performed. Statistical significance was considered as $P < 0.05$, data were analysed using STATA 8.0 software.

Results: The mean age was $9,8 \pm 1,2$ years, 50% were boys, 82,5% children from B e C categories and 97,5% were infected by vertical transmission. Lipodystrophy was present in 11 patients (27,5%), while hypertriglyceridaemia, hypercholesterolaemia, low HDL cholesterol levels and high LDL cholesterol levels were present in 40%, 32,5%, 32,5% and 17,5% respectively. The prevalence of hyperglycemia (5%) and insulin resistance (2,5%) was lower in these patients. There was a significant association between lipodystrophy and insulin levels ($P = 0,043$). In our study, 52,5% patients received protease inhibitors, which showed significant association with higher levels of triglycerides ($P = 0,003$) and total cholesterol ($P = 0,005$).

Conclusion: There was a higher prevalence of lipodystrophy and dyslipidemia in comparison with hyperglycemia and insulin resistance. The protease inhibitors were associated with impaired lipid metabolism, increasing the risk of early cardiovascular disease.

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Body composition measurements and fat redistribution in HIV-infected children and adolescents from São Paulo city, Brazil

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Background: Body composition changes are frequently present in HIV-infected individuals. We studied the relation between body composition measurements and lipodystrophy in children and adolescents infected with human immunodeficiency virus.

Methods: Prospective transversal study including 40 prepubertal children and adolescents of both gender, aged 7 to 12 years, attended at the Pediatric Infectious Disease Clinic - Universidade Federal de São Paulo, São Paulo city, Brazil, from august to december, 2008. Age, gender, clinical and immune status (CDC, 1994), weight and height were recorded. Body Mass Index (BMI) z-score and height-for-age z-score was calculated according to WHO, 2007. Circumferences and skinfolds measurements were assessed. Body fat mass (%) was determined by DXA. Presence of clinical signs of lipodystrophy was assessed by a trained clinician. Statistical tests such as t-distribution and chi-squared test were performed. Statistical significance was considered as $P < 0.05$, data were analysed using STATA 8.0 software.

Results: The mean age was $9,8 \pm 1,2$ years, 50% were girls and 82,5% children from B e C categories. The mean values of BMI z-score and height-for-age z-score were $-0,10 \pm 1,58$ and $-0,80 \pm 1,26$ respectively. Lipodystrophy was present in 14 (27,5%) patients; four had lipoatrophy (10%), three lipohypertrophy (7,5%) and four a mixed pattern (10%). Considering the body composition measurements, the waist circumference ($61 \pm 7,47$ cm; $P = 0,044$) and trunk-arm ratio ($0,95 \pm 0,28$; $P = 0,001$) were related to lipodystrophy presence. No significant association was found between lipodystrophy and arm and calf circumferences ($18,76 \pm 2,58$ cm; $25,93 \pm 2,93$ cm), body fat mass ($17,61 \pm 8,26\%$), tricipital and bicipital skinfolds ($8,37 \pm 2,91$ mm; $5,67 \pm 2,13$ mm).

Conclusion: Waist circumference and trunk-arm ratio were sensitive measurements to show body composition changes in patients with lipodystrophy.

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