Abstract

Introduction: Atherosclerosis represents a disease that begins in childhood, and alterations in lipid concentration play a fundamental role in the development of this condition. Objective: To evaluate which of the currently applied obesity parameters (the body index mass, the percentage of body fat, the waist circumference and the upper arm fat area) can predict the risk for dyslipidemia in Brazilian children and adolescents. Methods: Cross-sectional study, standardized anthropometric data and lipid profile were collected from 874 subjects between the ages of 6 and 19 years. Logistic regression models were used to evaluate the degree of association between the anthropometric measurements and the lipid profile, controlling for potentially confounding variables, such as age and gender. Results: Individuals with excess body weight, elevated percentage of body fat, waist circumference and upper arm fat above the 90th percentile showed a positive correlation with alterations in the lipid profile. After adjusting for age and income, a body mass index above the 85th percentile and an elevated percentage of body fat were the variables most strongly associated with dyslipidemia in the youngest subjects (odds ratio (OR) = 2.00, p < 0.001 and OR = 1.47, p = 0.014, respectively). Children (64.5%) and adolescents aged 10-12 years (51.0%) had the highest rates of dyslipidemia. Conclusion: Compared with other variables, such as the percentage of body fat, the body mass index was the best predictor of dyslipidemia in children and adolescents.

Keywords
Dyslipidemia, Obesity, Fat distribution, Children, Adolescents.