

thickness (CIMT) measurements have been assessed in several observational and interventional studies. However, previous studies assessing gender differences in CIMT in healthy pediatric populations have generated conflicting results. Aim: The aim of the present study was to evaluate the influence of gender, age and body mass index (BMI) on CIMT in healthy children aged 1 to 15 years old. Methods: We included 280 healthy children (male,  $n = 175$ ; mean age,  $7.49 \pm 3.57$  years; mean BMI,  $17.94 \pm 4.1$  kg/m<sup>2</sup>) in the study. Children with diagnosis of diabetes, dyslipidemia or hypertension were excluded from the analysis. Children considered overweight or obese ( $\geq 85$ th percentile) for age were not included in the study. The subjects were divided into 3 groups according to age: 1 to 5 years old ( $n = 93$  [33.2%]; male,  $n = 57$ ; mean BMI,  $16 \pm 3$  kg/m<sup>2</sup>), 6 to 10 years old ( $n = 127$  [45.4%]; male, 78; mean BMI,  $17.9 \pm 3.7$  kg/m<sup>2</sup>), and 11 to 15 years old ( $n = 60$  [21.4%]; male, 40; mean BMI,  $20.9 \pm 4.5$  kg/m<sup>2</sup>). Results: We observed no significant difference in CIMT values between male and female children in the total population ( $0.43 \pm 0.06$  mm vs.  $0.42 \pm 0.05$  mm, respectively;  $p = 0.243$ ). CIMT was not correlated to BMI in the total population or in the 3 age groups according to the Pearson correlation coefficients (1 to 5,  $p = 0.11$ ; 6 to 10,  $p = 0.91$ ; 11 to 15,  $p = 0.92$ ). Children aged 10 to 15 years had the highest CIMT values (1 to 5 vs. 6 to 10,  $p = 0.615$ ; 1 to 5 vs. 11 to 15,  $p = 0.02$ ; 6 to 10 vs. 11 to 15,  $p = 0.004$ ). Conclusions: Among healthy children younger than 15 years old, there is no significant difference in CIMT between males and females. BMI was not correlated to CIMT in healthy children younger than 15 years old. CIMT is constant in children younger than 10 years old, regardless of gender and BMI. CIMT increases after the age of ten years.

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### A39632

#### Reduction on titers of natural antibodies to ApoB-D peptide is associated with reduction on endothelial function in HIV-infected patients

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Background: Humoral immune responses against oxidized LDL (oxLDL) and ApoB-derived peptides are associated with subclinical atherosclerosis and endothelial function. HIV infection can affect humoral immune responses to these antigens, and also modify cardiovascular risk factors. This study was aimed at evaluating the humoral immune responses and cardiovascular risk factors in HIV-infected patients. Methods: A case-control study included HIV-infected individuals, naïve of anti-viral therapy, and non-infected controls. Subclinical atherosclerosis was assessed by measurements of intimal media thickness of the carotid arteries, obtained by ultrasound (cIMT). Endothelial function was evaluated by flow-mediated dilatation of the brachial artery. The humoral immune responses were assessed by measuring levels of autoantibodies (IgG and IgM) against oxLDL, anti-ApoB-D and anti-pep0033 (ELISA). Inflammatory cytokines (IL-6, IL-8, IL10, TNF- $\alpha$  e IFN- $\gamma$ ) were also analyzed by ELISA. Results: Ninety-three (53 non-HIV / 40 HIV-infected) subjects of both genders, ageing [mean (SD)] 30 (1) years, with 3.6 (1-6) years of infection were included in the protocol. HIV-infected patients presented lower levels of HDL-c ( $P = 0.008$ ) and total cholesterol ( $P = 0.028$ ), when compared with controls. Higher concentrations of the immune markers IL-6 ( $P = 0.028$ ), C-reactive protein ( $P = 0.017$ ), interferon gamma ( $P = 0.021$ ), tumor necrosis

factor ( $P = 0.020$ ), were seen in HIV-infected subjects, without differences between groups in IL-8 and L-10. Flow-mediated dilatation was lower in HIV-infected patients [9.3 (1.1) vs 13.7 (2.4),  $P = 0.04$ ], compared with controls. However, we did not observe differences on cIMT [0.61 (0.56-0.67) vs 0.63 (0.55-0.67),  $P = 0.971$ ]. In HIV-infected patients the titers of IgG anti-oxLDL [6.24 (3.76-8.14) vs 2.09 (1.16-3.45)] and IgG anti-ApoB-D [3.4 (2.92-4.85) vs 2.00 (1.52-2.90)] were higher than in controls ( $P < 0.05$ ), whereas the levels of IgM anti-ApoB-D [0.94 (0.67-1.12) vs 1.00 (0.58-1.58)] were lower than those observed in non-infected controls. We did not observe differences in other humoral immune responses among groups. In addition, IgM anti-ApoB-D titers were associated with endothelial function in HIV-infected individuals [ $\beta = 7.28$ ;  $P = 0.002$ ]. Conclusions: HIV-infected patients, naïve of anti-viral therapy present reduced flow-mediated dilatation of the brachial artery associated with lower titers of natural autoantibodies (IgM) anti-ApoB-D.

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#### Relationship between occupational stress and hypertension

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Introduction: Occupational stress is considered an important factor in worsening the health of workers, being responsible for a significant decrease in job performance and increase in the cardiovascular risk. Stress can cause several changes in the individual's body that can lead to the development of chronic diseases such as high blood pressure (hypertension). Objective: The aim of this study was to identify whether there is a relationship between occupational stress and hypertension in women who develop their work activities in the hygiene sector of a university hospital. Methods: From a total of 42 employees, the sample consisted of 22 female participants aged between 36 and 59, containing 6-smoking participants. For data collection we used two questionnaires, the SF36 which refers to the evaluation of quality of living conditions and Job Stress Scale, in its Brazilian version "Stress Scale at Work" which refers to occupational stress evaluation. Indirect measurement of systolic and diastolic blood pressures and heart rate was also realized. The data were submitted for statistical analysis, in which the stress variables and blood pressure data were grouped in  $2 \times 2$  contingency tables and followed by calculations of prevalence ratio and odds ratio, which can determine the association between exposure (stress) and the outcome/effect (hypertension). Moreover, we calculated the confidence intervals and performed the chi-square test of Pearson to determine the associations. Results: The results showed that 50% of the studied population has high blood pressure rates with indicative of being suffering from occupational stress. Nevertheless, the statistical results for the association between occupational stress and hypertension did not reach a significant value ( $p = 0.065$ ). Conclusion: It was not possible to state a relationship between occupational stress and the incidence of hypertension, although we can notice the tendency of the association between these variables. Furthermore, it was found a high prevalence of hypertension in the population studied. This study exemplifies the need to invest in primary health care, thereby decreasing the rates of chronic diseases in the population.

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