840-1
Relation Between Fasting Glucose and C-Reactive Protein in Middle-Aged Subjects
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Introduction: Elevation of C-reactive protein (CRP) is associated with components of the metabolic syndrome, and especially with measures of obesity. Hyperglycemia can stimulate release of cytokines from various cell types including adipocytes. However, the relation between glycemic status and CRP is unknown. Thus, we studied the relation of high-sensitivity CRP to fasting glucose (FG) and to diabetes (Figure). Increasing CRP with higher FG levels was apparent even among subjects with FG in the normal range (P = 0.039 for trend). Subjects with FG in the upper quartile of normal FG had higher CRP compared to subjects in the lower quartile (P = 0.035). There was a positive crude correlation between CRP and smoking, postmenopausal hormone use, body mass index, FG, triglycerides, hypertension, and uric acid (P = 0.002 to 0.0001), and a negative correlation with HDL (P < 0.001) and physical activity (P = 0.002). Adjustment for potential confounders in a stepwise multivari- ate linear regression showed that FG remained independently related to CRP (P = 0.019).

Conclusion: CRP increases continuously across the spectrum of FG, beginning in the lowest quintile of normal FG. This finding suggests that improving glycemic control may mitigate the proinflammatory state in subjects with diabetes and insulin resistance.

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Age Dependent Association Between High Sensitivity C-Reactive Protein and Tumor Necrosis Factor Functional Variants
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High sensitivity C-Reactive protein (hs-CRP) is a promising biochemical marker for prediction of coronary events. Genetic factors may influence hs-CRP concentration. We hypothesized that a genetic variant at position -308 in the promoter region of the TNF-alpha gene (TNF-A2 allele), which is related to increased circulating levels of TNF, may be associated with higher hs-CRP in a Brazilian population. This study enrolled 884 healthy adults volunteers, 295 men (43.1%) and 389 women (56.9%), designed to quantify environmental and genetic variables associated with serum hs-CRP. Ethnic distribution was concordant with the ethnic distribution in the country. TNF-308 genotype was obtained through PCR amplification and restriction enzyme digestion in DNA from peripheral leukocytes. In 42A arieties were in Hardy-Weinberg equilibrium in this sample. Ethnicity was the single demographic variable with different distribution regarding harboring or not the TNF-A2 allele (p < 0.03). Finally, the presence of TNF-A2 allele in this age group increased the odds of being in the fourth quartile of hs-CRP concentration (p value = 0.04, OR = 5.12, 95% CI = 1.12 24.89). These data are consistent with an association between a functional genetic variant of the TNF alpha gene and hs-CRP levels at particular age groups.