Framingham risk in Women with Polycystic Ovary Syndrome

Women with polycystic ovary syndrome (PCOS) have an increased prevalence of cardiovascular risk factors. However, there are few studies on the risk of coronary events in PCOS. Objective: To assess the Framingham risk score in women with PCOS at reproductive age. Method: Clinical and biochemical data were collected from Brazilian women (18-40 years) with and without PCOS between 1997-2010. The Framingham risk score (FRS), as modified by NCEP-ATPIII-2002, was used to estimate the 10-year risk of first coronary event. Statistical analyses were performed using the Chi-square test, Fisher's exact test and multivariate logistic regression analysis with statistical significance at 5%. Results: A total of 267 women with PCOS and 190 without PCOS were identified. Median age was 25 years (21-29) in participants with PCOS and 29 years (25-34) in those without PCOS (p<0.0001). Women with PCOS had higher prevalence of obesity (p=0.017), waist circumference (p= 0.012), systemic arterial hypertension (p=0.047), glucose intolerance (p=0.027), type 2 diabetes mellitus (p=0.007), hypercholesterolemia (p=0.005), and hypertriglyceridemia (0.002) compared with those without PCOS. The prevalence of high FRS was 7.5% and 1.3% in women with and without PCOS, respectively (p=0.008). Multivariate logistic regression analysis revealed that women with PCOS had a 5-fold greater chance of having a coronary event than those without PCOS (OR 5.16 95%CI:1.16-22.96, p=0.031). Conclusions: In the study participants with PCOS at childbearing age, the prevalence of high Framingham risk score and the risk of having a coronary event were higher than in participants without PCOS. These findings indicate that programs aimed at detecting and preventing cardiovascular risk factors in women with PCOS are necessary.