INTRODUCTION

- Hispanics are the largest and fastest growing minority in the US, increasing from 12.5% of the US population in 2000 to 15% in 2009.1 Hispanics as a whole have the lowest rate of educational attainment2 and the rate of poverty among Hispanics in 2008 was above that of the nation as a whole,3 though lower than that of blacks. These factors may translate into a greater risk of disease.

- Overweight and obesity have been associated with increased risk of cardiovascular disease. Traditionally, body mass index (BMI) has been the most accepted measure. However, recent studies indicate that excess abdominal fat, measured by waist circumference (WC) or waist-hip ratio (WHR) might be a better indicator of cardiovascular risk. Hispanics are known to have disproportionately high levels of metabolic risk factors (BMI, WC and lipids), so it is important to begin to characterize the association between these metabolic risk factors and the risk of cardiovascular disease.

- Nationally, 64.5% of Hispanics are Mexican, 9.2% Puerto Rican, 3.5% Cuban, and 22% of other origin.4

- In 2005, 61.4% of Miami-Dade residents were Hispanic. Of these, 51.6% were Cuban, 16.3% South America, and 14.8% Central American; only 3.4% were Mexican.6

- Florida Heart Research Institute (FHR) has been offering free cardiovascular screenings since 1998; 71.5% of those screened were Hispanic.

STUDY OBJECTIVES

To assess and compare the correlations of WC, WHR, and BMI with associated cardiovascular risk factors in a sample of Miami Hispanics.

METHODS

- The study sample consisted of 315 men and women divided into a single study population.

- The demographic breakdown of the sample is shown in Table 1.

- The study was funded by the National Heart, Lung, and Blood Institute (NHLBI) (Grant Number: 1R01HL077887-01A1).

- The analysis used IBM SPSS version 19.

- Gender and Hispanic ethnicity were considered as fixed factors in the model.

- Multiple linear regression analysis was performed to examine the effect of BMI, WC, and WHR on cardiovascular disease risk factors.

- A significance level of 0.05 was used in the analysis.

RESULTS

- The results are presented in Table 2.

- In women, WHR ≥ 0.88 was associated with high triglycerides and glucose and low HDL, for all (p<0.01). In men, WHR ≥ 0.95 was only significantly associated with high triglycerides (p<0.01).

CONCLUSIONS

- In this unadjusted, pilot data analysis of Miami Hispanics, WC and WHR appeared to be more correlated with cardiovascular risk factors than BMI.

- These results are interesting and suggest that WC and WHR could be important standard anthropometric measures that may help to identify patients at risk of cardiovascular disease who might otherwise not receive healthy lifestyle because of normal BMI.

- A larger study powered to demonstrate these associations and control for confounders is needed.