PREHYPTERTENSION AND ITS RELATIONSHIP TO OTHER RISK FACTORS FOR CARDIOVASCULAR DISEASE IN A SAMPLE OF NON MEXICAN HISPANICS IN MIAMI

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INTRODUCTION

• Hispanics are the largest and fastest growing minority in the USA and now account for 15% of the population.
• Hispanics as a whole have the lowest rate of educational attainment and the highest rate of poverty which may translate into a greater risk of disease.
• Nationally, 64.9% of Hispanics are Mexican, 8.7% Central American, 6.0% South American, 11.2% Caribbean, 3.7% Cuban, and 6.4% of other origin. While the health and mortality risks of Mexican-Americans have been systematically studied, those of other groups have been largely overlooked.
• In 2010, 64.0% of Miami-Dade Residents were Hispanic; 54% Cuban; 32% South or Central American; only 3% were Mexican.
• Florida Heart Research Institute (FHR) has been offering free cardiovascular screenings since 1998; 71.5% of those screened were Hispanics.

STUDY OBJECTIVES

To determine risk factors for hypertension among a sample of Hispanics in Miami who are responsive to public health outreach.

METHODS

• Analysis was performed of retrospective data from 4764 participants age 18 and over collected during the course of free public cardiovascular screenings.
• Screensings were publicized through radio public service announcements, radio interviews in both Spanish and English, bilingual brochures and flyers distributed at public health fairs and, increasingly, by word of mouth.
• No incentives were provided to participants other than a report of their cardiovascular risk factor profile, educational brochures and counseling to seek further medical attention if needed.
• A self-reported medical history was used to determine presence of coronary heart disease and medication use, based on a written questionnaire administered in Spanish and English. Demographics were similarly gathered.
• Two sitting blood pressure measurements performed with a mercury sphygmomanometer were averaged.
• A fasting venous sample was drawn for a lipid profile, glucose and a c-reactive protein (CRP).
• Weight and height were measured and used to calculate body mass index (BMI).
• Chi-square were used to determine bivariate relationship to prehypertension.
• Logistic regression analysis was used to determine independent risk factors. Odds ratios and 95% CI were calculated.

Definition of Risk Factors

• Hypertension:
  Normal: SBP < 120mm Hg or DBP < 80 mmHg
  Prehypertension: SBP 120-139 mmHg or DBP 80-89 mmHg
  Hypertension: SBP ≥140 mmHg or DBP ≥90 mmHg and/or use of antihypertensive medications

• Dyslipidemia:
  Fasting total cholesterol >200mg/dL
  LDL ≥130mg/dL
  HDL ≤40mg/dL
  Triglycerides ≥150mg/dL
  and/or use of lipid lowering medications

• Diabetes mellitus:
  Pre diabetes: fasting glucose levels 100-125mg/dL
  Fasting glucose levels ≥126mg/dL or self report of use diabetes medications

• Body Mass Index (BMI):
  Underweight: <19
  Normal:19-25
  Overweight: 25-29
  Obese: ≥30

• C-Reactive Protein
  ≤3.5 mg/L
  >3.5 and<10.0mg/L

RESULTS

CLASSIFICATION OF PARTICIPANTS BY BLOOD PRESSURE

CHARACTERISTICS OF THE SAMPLE

<table>
<thead>
<tr>
<th>Category</th>
<th>No.</th>
<th>%</th>
<th>Adj. Odds Ratio</th>
<th>95% C.I.</th>
<th>p-value</th>
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<tbody>
<tr>
<td>Age (≥40), male, cholesterol ≥ 200 mg/dL, BMI ≥ 25</td>
<td>p&lt;.001</td>
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<tr>
<td>Triglycerides ≥ 150 mg/dL</td>
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<td>LDL ≤ 130 mg/dL</td>
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<tr>
<td>Pre diabetes</td>
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<tr>
<td>C-reactive protein &gt;3 mg/L</td>
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CONCLUSIONS

1) Prehypertension is prevalent in this Miami population

2) Prehypertension is associated with other CVD risk factors:
   a) age, male, prediabetes, diabetes, cholesterol, triglycerides, hs-CRP, BMI

3) Awareness of CVD risks factors associated with prehypertensive Hispanics will assist in:
   a) the implementation of early aggressive strategies for prevention of hypertension in this group
   b) the design of culturally appropriate lifestyle modification programs and public awareness campaigns