

Cardiovascular Afflictions in a COVID-19 Vaccinated Population: An Analysis of a Hispanic Cohort



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Introduction

Minorities experienced a constant absence of data in medical literature during the COVID-19 pandemic. The purpose of our study is to present a Hispanic cohort vaccinated in a Puerto Rican COVID-19 vaccination clinic and their cardiovascular afflictions.

Objectives

- Establish the characteristics and tendencies of a COVID-19 vaccinated Hispanic population and their cardiovascular afflictions.
- Analyze the possible relationships between cardiovascular afflictions and age groups, sex, and race identification.

Methods

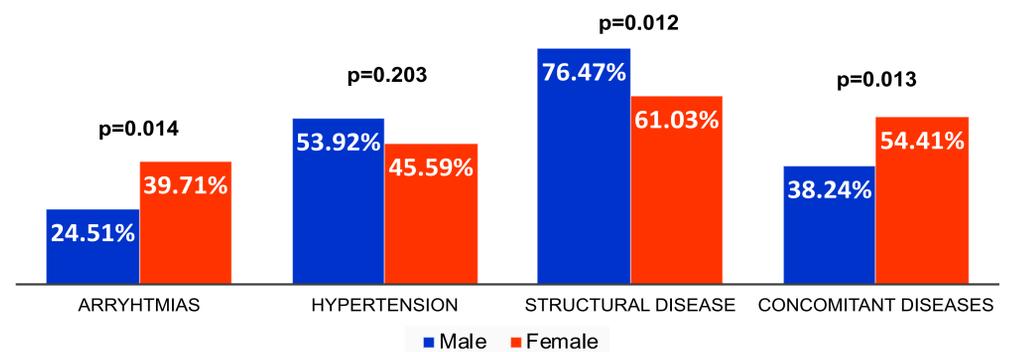
A questionnaire containing sociomedical inquiries was administered to participants receiving the Pfizer/BioNTech COVID-19 vaccine at the Universidad Central del Caribe (UCC) Vaccination Clinics, and we reviewed the database retrospectively. Cardiovascular afflictions were organized into three categories: Arrhythmias, Hypertension and Structural Diseases. Furthermore, the presence of concomitant conditions was assessed. The associations between cardiovascular afflictions and sociodemographic parameters were accentuated using bivariate analyses. The UCC IRB approved this study (Protocol Number: 2021-08).

Results

- A total of 238 participants were recruited.
- 102 were male and 136 were female.
- Mean age was 65.62 ± 16.50 .
- In terms of race: 158 (66.39%) identified as White, 18 (7.56%) as Black, and 62 (26.05%) as Other.
- 79 (33.19%) presented with arrhythmias, 117 (49.16%) with hypertension, 161 (67.65%) with structural diseases, and 113 (47.48%) with concomitant diseases.

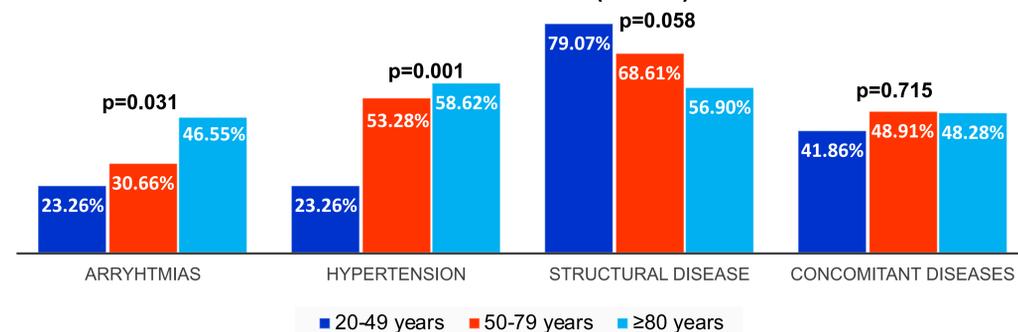
Figures

Prevalence of Cardiovascular Afflictions by Sex in the COVID-19 Vaccinated Hispanic Population at UCC from December 2020 to June 2021 (N=238)



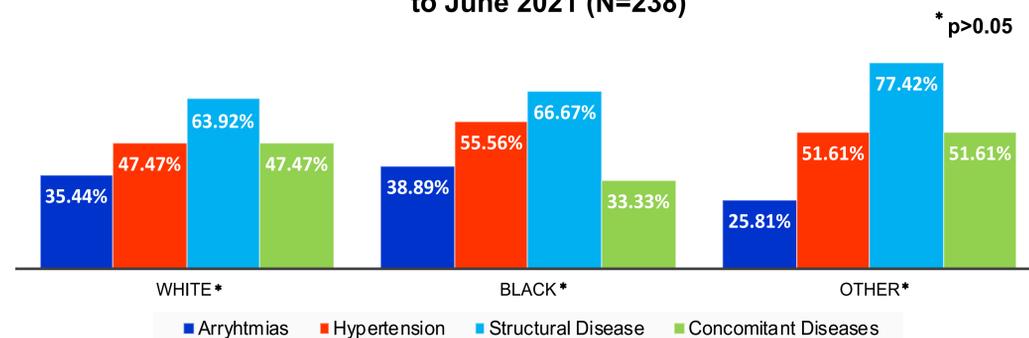
Graph 1. With relation to participant sex, we found statistical significance in prevalence regarding arrhythmias ($p=0.014$), concomitant diseases ($p=0.013$) and structural diseases ($p=0.012$). However, there appeared to be no significant correlation between sex and hypertension prevalence ($p=0.203$).

Prevalence of Cardiovascular Afflictions by Age Group in the COVID-19 Vaccinated Hispanic Population at UCC from December 2020 to June 2021 (N=238)



Graph 2. When assessing cardiovascular afflictions by age group, there was statistical significance in prevalence of arrhythmias ($p=0.031$) and hypertension ($p=0.001$). Nevertheless, there was no statistical significance when evaluating structural diseases ($p=0.058$) nor concomitant diseases ($p=0.715$).

Prevalence of Cardiovascular Afflictions by Race in the COVID-19 Vaccinated Hispanic Population at UCC from December 2020 to June 2021 (N=238)



Graph 3. In terms of race, we found that there is no statistical significance regarding prevalence of arrhythmias ($p=0.341$), hypertension ($p=0.732$), structural disease ($p=0.156$) or concomitant diseases ($p=0.393$) and race.

Conclusions

Prevalence of cardiovascular afflictions in this population showed dissimilarities between age groups and sex, but with no divergence between race groups. Additional medical literature of the Hispanic cohort is of utmost importance for characterizing disparities and benefiting the community.