Abstract:

Background: Depression is a common condition and it is possibly a cardiovascular risk factor a may be due to autonomic dysfunction and a low heart rate variability. However, this association is unclear and it has been said that this association is driven by metabolic abnormalities related to antidepressants. The purpose of this study was to explore the association between parameters of heart rate variability and depressive symptoms in ambulatory patients.

Methods: We performed a cross-sectional study with 172 outpatients referred for 24-hour Holter monitoring. A questionnaire screening for depressive symptoms (PHQ-9 -Patient Health Questionnaire-) was performed to every participant after consent. This tool investigates nine depressive symptoms according to criteria of the Diagnostic and Statistical Manual (DSM-IV), its results range from 0 to 27 points, and a score ?10 was defined as positive for clinically important depressive symptoms. Patients with previously diagnosed mental illness or those taking any psychotropic drug were excluded. The Mann Whitney U test was applied in the bivariate analysis.

Results: Women were 65.69%, mean age was 41.12 years (20-72, SD: 14.08). High school level education was present in 48.8%, followed by undergraduate 23.3%, technical or technological 16.3%, postgraduate 9.3% and elementary school 2.3%. Holter indications were arrhythmia in 35.0%, palpitations 28.1%, chest pain 19.0%, and dizziness in 17.9%

36.6% of patients had positive depressive symptoms (score PHQ-9?10) when the cut-off point was raised to 15, meaning moderate to severe symptoms, an incidence of 15.7% was found.

We explored the relationship between the presence of depressive symptoms and Holter parameters with Mann-Whitney U test finding a statistically significant difference in heart rate variability: RR interval (p = 0.047) and mean heart rate (HR p=0.048).

Conclusions: Our results support the concept that there must be a significant relationship between depressive symptoms and some parameters of heart rate variability, probably explained by autonomous dysregulation that could be related to long-term cardiac outcomes.