**OBESITY PARADOX IN RECREATIONAL DRUG USERS: ARE HEART FAILURE OUTCOMES AFFECTED?**

**A. Akinlonu**, T.O. Mene-Afejuku, P.D. Lopez, C. Dumancas, O. Ola, E.M. Ngo, A. Savadkar,

F. Visco, S. Mushiyev, G. Pekler

Medicine, New York Medical College, Metropolitan Hospital Center, New York, NY, USA

**Background:**The global economic burden of heart failure is on the rise, mainly due to re-hospitalization related cost. Obesity and illicit drug use are considered to be independent risk factors for developing heart failure. However, recent studies have suggested better outcomes like low re-admission rates in obese patients with heart failure; this has been called the obesity paradox. We aim to determine if the obesity paradox is demonstrated in 30 days and 6 months re-hospitalization in patients with heart failure with a reduced ejection fraction (HFrEF) who use cocaine and alcohol.

**Methods**: We performed a single-centric, retrospective analysis of 265 patients ages 18-years old and above with (HFrEF). We studied the association between Body Mass Index (BMI) categories: non obese (<30 kg/m2) and obese (>30 kg/m2), recreational substance (cocaine, alcohol) and the primary outcomes (30-days and 6-months re-hospitalization). A sub analysis to study primary outcomes in HFrEF patients who use cocaine based on BMI categories was also performed. Cox regression analysis and event curves were further obtained for determinants of re-hospitalization.

**Results:**Non-obese patients were 2.4 times more likely to be re-hospitalized within 30 days (95% CI 1.02-5.64; p=0.04) compared to obese patients; however, there was no significant difference in 6-months re-hospitalization. Patients who did not use cocaine had lower risk of 30-days (OR 0.43, 95% CI 0.19-0.97, p = 0.043) and 6-months (OR 0.422, 95% CI 0.254-0.70, p = 0.001) re-hospitalization compared to patients who used cocaine. There was no statistical difference in primary outcomes when we compared those who used alcohol versus those who did not use alcohol. In the sub-analysis, the likelihood of being re-admitted in 30 days remained higher in cocaine users who are non-obese compared to those who are obese (OR 8.25, 95% CI 1.05-64.7, p = 0.045).

**Conclusion:**Obesity paradox, exhibited in this study population, is not altered by active cocaine use. In addition, non-obese patients who use cocaine are at very high risk of being re-admitted in the short term. Therefore, therapy and follow up should be intensified in this group of patients.