

risk of CDI amongst hospitalized patients. Further prospective and molecular mechanistic studies are required to elucidate how cannabis impacts CDI.

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Association of Clopidogrel Resistance Determinants and MACE Occurrence in Peripheral Arterial Disease

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Association between HIV and early weight loss and the impact on subsequent treatment outcomes among patients with tuberculosis

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OBJECTIVES/SPECIFIC AIMS: Previous research suggests that weight loss during early TB treatment (first two months of anti-TB therapy) is a predictor of poor tuberculosis (TB) treatment outcomes among HIV-negative populations, but the relationship has not been well studied in the context of HIV. We examined the association between HIV and weight change during the first two months of anti-tuberculosis treatment, and also assessed the effects of HIV and early weight change on tuberculosis (TB) treatment outcomes. **METHODS/STUDY POPULATION:** Adults with culture-confirmed, drug-susceptible, pulmonary TB, regardless of HIV status, were enrolled into the Regional Prospective Observational Research for Tuberculosis (RePORT)-Brazil cohort and followed on standard anti-TB therapy. For the primary analysis, we compared weight change in persons living with HIV (PLWH) and HIV-negative patients between baseline and two months using multivariable bootstrapped quantile regression and modified Poisson regression. For secondary analysis, we examined the separate effects of HIV and weight change on poor TB treatment outcome (treatment failure, TB recurrence, or death) using Cox proportional hazards regression. **RESULTS/ANTICIPATED RESULTS:** Among 323 participants, 45 (14%) were HIV-positive. On average, PLWH lost 0.7% (interquartile range (IQR): -5.1%, 4.4%) of their baseline body weight between baseline and two months; those without HIV gained 3.5% (IQR: 0.8%, 6.7%). After adjusting for age, sex, and baseline BMI, PLWH lost 4.1% (95% confidence interval (CI): -6.5%, -1.6%) more weight during the first two months of anti-TB treatment than HIV-negative individuals. HIV infection was associated with weight loss $\geq 5\%$ (adjusted odds ratio = 9.3; 95% CI: 4.2-20.6). Regarding the secondary analysis, 14 patients had a poor TB treatment outcome: 2 treatment failures, 4 cases of recurrent TB, and 8 deaths. PLWH and patients who lost $\geq 5\%$ weight had significantly increased risk of poor TB treatment outcome with hazard ratios of 8.77 (95% CI: 2.96-25.94) and 4.09 (95% CI: 1.11-15.14), respectively. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Our results suggest that HIV is associated with weight loss during early TB treatment, and both HIV and early weight loss were associated with poor treatment outcome. Future research should examine the potential etiologies of these findings and identify the types of interventions that would best promote weight gain during TB treatment, especially among PLWH, in order to prevent poor TB treatment outcomes.

OBJECTIVES/SPECIFIC AIMS: The study aims to identify the short and long-term associations of HTPR and presence of CYP2C19 polymorphism in the occurrence of major adverse cardiovascular events (MACE). The primary outcome of the study will be the presence of MACE including stent thrombosis, need for revascularization, acute limb ischemia events, myocardial infarction and death in relation to the presence of HTPR and CYP2C19 polymorphism. Secondary outcomes will include the prevalence of HTPR and CYP2C19 polymorphism in patients with PAD, and association with other medications including aspirin and cilostazol. **METHODS/STUDY POPULATION:** Patients above 21 years of age with the diagnosis of PAD using clopidogrel therapy for at least for seven days will be recruited at the University of Puerto Rico District Hospital and Cardiovascular Hospital of Puerto Rico and the Caribbean. **RESULTS/ANTICIPATED RESULTS:** A total of 200 patients from Puertorrican, Dominican and Cuban ethnicity will be expected to be recruited. The most common comorbidities will include, coronary artery disease, hypertension, dyslipidemia, and diabetes mellitus type 2. No significant distr **DISCUSSION/SIGNIFICANCE OF IMPACT:** The status quo as it pertains to resistance to clopidogrel in PAD patients is to improve antiplatelet resistance using antiplatelet therapy guided by platelet assays in order to reduce MACE occurrence. Although HTPR and presence of CYP2C19 polymorphisms have been studied on the PAD population, currently there is no gold standard test for measuring antiplatelet resistance. In that regard, this study will expect to identify the contribution that HTPR and CYP2C19 polymorphism might have on MACE in patients with PAD. In this way, the results will allow identification of abnormality parameters in HTPR and CYP2C19 testing in relation to the impact on risk of having MACE. Once the association of these variables with MACE is established, testing for clopidogrel resistance could become a potential strategy to optimize antiplatelet therapy and reduce the impact that MACE have in this population.

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Association of concurrent unhealthy alcohol use, tobacco use, and depressive symptoms on incident cardiovascular disease among HIV-infected and uninfected adults: Veterans Aging Cohort Study

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OBJECTIVES/SPECIFIC AIMS: This study applied a syndemic framework to 1) assess whether the concurrence of unhealthy alcohol use, smoking, and depressive symptoms is associated with increased risk for incident CVD among people living with and without HIV and 2) determine whether the association between this syndemic and incident CVD is differential by HIV status. **METHODS/STUDY POPULATION:** We evaluated 5731 participants (50.3% HIV+) without baseline CVD from the Veterans Aging Cohort Study, a prospective, observational cohort of PLWH and matched uninfected veterans enrolled in 2002 and followed through 2015. We assessed baseline number of conditions (syndemic score: 0-3; unhealthy alcohol use (>14 drinks per week for men [women] or 5 or