## 937. Factors Associated with Metabolic Syndrome in People with HIV under 40 Years in Guatemala

Hugo E. Marroquín, MD[1]; Dean Ortiz, n/a[1]; Lindsey Larson, MPH[2]; Katherine Franco, MD[1]; Andrej Spec, MD, MSCI[3]; Johanna Melendez, MD[1]; Rodolfo Pinzon, MD[1]; Carlos Mejia-Chew, MD[4]; Johanna Samayoa, MD[1]; Jane A. O'Halloran, MD, PhD[4]; [1]Hospital Roosevelt, Mixco, Sacatepequez, Guatemala; [2]Washington University School of Medicine, St Louis, MO; [3]Division of Infectious Diseases Washington University in St. Louis, ST LOUIS, MO; [4]Washington University in St Louis, St. Louis, Missouri

**Session:** P-44. HIV: Complications and Special Populations

***Background.*** HIV infection and antiretroviral therapy (ART) can lead to metabolic abnormalities associated with increased cardiovascular disease risk, some of these abnormalities (central obesity, elevated fasting glucose, triglycerides, and blood pressure and low HDL cholesterol) are in metabolic syndrome (MetS). The prevalence of MetS increases with age. Currently, the status of MetS in people with HIV (PWH) Guatemala is unknown. We assessed the prevalence of MetS and potential predictors in PWH participating in prospective cohort study at Hospital Roosevelt in Guatemala City.

***Methods.*** We performed a cross-sectional analysis of PWH under 40 years old receiving ART for at least 6 months from July 2019 to March 2020. The harmonized criteria for MetS and the cut-off for waist circumference recommended by the Latin American Diabetes Association were used. Association between MetS and gender, place of residency, ethnicity, educational level, baseline and current CD4 count, smoking, alcohol consumption, physical activity, viral load, body mass index (BMI) and ART exposure was assessed in bivariate analysis. Potential predictors (p-value < 0.1) were included in a multivariate binary logistic regression model.

***Results.*** Of total cohort of 757 participants enrolled390 (51.5%) were younger than 40 years. Of those under < 40 years, 150 (38.5%) were women, 59 (15.1%) Mayan, median age was 32 years (IQR 27, 37). 93 (23.8%) had MetS. Between group differences in Table 1. Of those with Met, 51 (54.8%) had elevated waist circumference, 87 (93.5%) elevated triglycerides, 83 (89.2%) low HDL-c, 56 (60.2%) elevated blood pressure and 35 (37.6%) elevated fasting glucose. Body mass index (BMI) ≥ 25 kg/m$^2$ or higher and 2 years or more of cumulative non-nucleoside reverse transcription inhibitors (NNRTI) where more common in those < 40 years with MetS compared to those without MetS. On multivariable regression, MetS was associated with current CD4 count < 200 (OR 3.1; IC 1.51, 6.34; p-value < 0.01) and BMI ≥ 25 kg/m$^2$ (OR; 6.53; IC 3.64, 11.73; p-value < 0.01).

Table1. Between group differences (No MetS vs MetS)

| Characteristics | No MetS (n=297) | MetS (n=93) | P-value |
|---|---|---|---|
| Female* | 109 (37%) | 41 (44%) | 0.21 |
| Living in Guatemala department | 183 (61.6%) | 54 (58.1%) | 0.54 |
| Mayan ethnicity | 45 (15.2%) | 14 (15.1%) | 0.98 |
| Six or more years of education | 202 (68%) | 69 (74.2%) | 0.26 |
| Smoker | 45 (15.2%) | 14 (15.1%) | 0.98 |
| Heavy drinker | 11 (3.7%) | 4 (4.3%) | 0.79 |
| 150 min of phys activuty | 191 (64.3%) | 57 (61.3%) | 0.6 |
| History of AIDS defining illness | 74 (25%) | 31 (33.3%) | 0.91 |
| BMI ≥ 25* | 117 (39.4%) | 74 (79.6%) | <0.01 |
| Baseline CD4 <200 | 129 (43.4%) | 43 (46.2%) | 0.64 |
| Current CD4 <200* | 37 (12.5%) | 19 (20.4%) | 0.06 |
| Current VL ≥ 200 | 38 (12.8%) | 13 (14%) | 0.77 |
| On ART for 2y or more* | 196 (66.0%) | 70 (75.3%) | 0.09 |
| Currently on NNRTI* | 179 (60.30%) | 66 (71.00%) | 0.062 |
| Currently on IP | 26 (8.80%) | 8 (8.60%) | 0.428 |
| Currently on INSTI* | 98 (33.00%) | 21 (22.60%) | 0.057 |
| *included in multivariable regression | | | |

***Conclusion.*** Nearly one in every four PWH under 40 years old in our cohort was affected by MetS. Dyslipidemia (elevated triglycerides and low HDL-c) was the main driver of MetS. Lower CD4 count and overweight were predictors for MetS in PWH under 40.

***Disclosures.*** **Andrej Spec, MD, MSCI**, **Astellas** (Grant/Research Support)**Mayne** (Consultant)**Scynexis** (Consultant)

## 938. Identifying Gaps in the Treatment of Hepatitis C in Patients Co-Infected with HIV in Edmonton, Alberta

Bohdan Savaryn, BSc MD[1]; Jessica Round, MPH[2]; Sabrina Plitt, PhD[3]; Stephen Shafran, MD FRCPC[1]; Carmen Charlton, PhD FCCM D(ABMM)[1]; [1]University of Alberta, Edmonton, Alberta, Canada; [2]University of Alberta School of Public Health, Edmonton, Alberta, Canada; [3]Public Health Agency of Canada, Edmonton, Alberta, Canada

**Session:** P-44. HIV: Complications and Special Populations

***Background.*** The Northern Alberta HIV Program (NAHP) provides care and support for about 2500 HIV positive individuals. Part of the program includes screening and therapy for co-morbidities such as hepatitis C virus (HCV) infection. This study aims to assess the occurrence of HCV co-infection among these patients, determine whether they had received treatment for HCV, and identify patients who are currently viremic so they can be linked to care.

***Methods.*** NAHP patients from 2010 to 2019 were linked to their HCV antibody, RNA, and genotyping laboratory testing data from January 1, 2000 to December 31, 2019 as well as HCV medication dispensation data. Each patient's current and previous state of HCV infection and treatment status was assessed. Chart reviews were conducted for patients presently HCV viremic to assess their HIV care and social determinants.

***Results.*** Of the 2417 NAHP patients, 392 (16.2%) were identified as having been co-infected with HCV at some point between January 1, 2000 to December 31, 2019 and meeting the inclusion criteria. Overall, 198 (50.5%) of the HIV-HCV co-infected patients had received HCV treatment and 232 (59.2%) were no longer viremic at their most recent HCV RNA test. 99 (69.2%) of the 143 HCV viremic patients had a suppressed HIV infection suggesting they are active in their HIV care and good candidates for HCV treatment.

Figure 1. 2417 patients in the Northern Alberta HIV Program were evaluated for the presence of an HIV- HCV co-infection. 404 patients were identified as having been HIV-HCV co-infected at some point between January 1, 2000 and December 31, 2019.

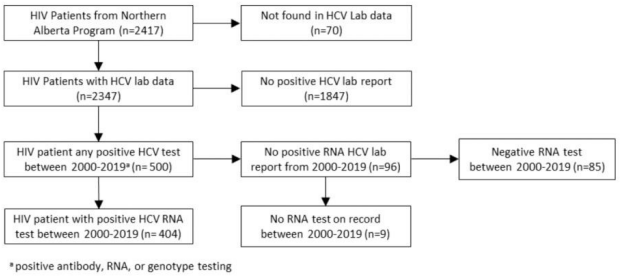


Figure 2. 404 HIV-HCV co-infected patients from the Northern Alberta HIV Program were assessed for the occurrence of treatment as well as the current status of their HCV infection. 143 patients were found to currently have an active HIV-HCV co-infection.