need to address this gap among HIV+ individuals. It also emphasizes the need to prioritize ASCVD prevention in the care of the aging HIV-infected population.

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575. Abacavir Use and Risk for Myocardial Infarction and Coronary Artery Disease: Updated Meta-analysis of Data from Clinical Trials

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Background. Several observational studies and randomized controlled trials (RCTs) have suggested an association between abacavir (ABC) use and myocardial infarction (MI) but others, including meta-analyses of clinical trial data, have not.

Methods. This updated meta-analysis estimates exposure-adjusted incidence rate (IR) and relative rate (RR) of MI and coronary artery disease (CAD) in subjects receiving ABC and non ABC-containing combination antiretroviral therapy (cART). Summary data from 52 Phase II-IV RCTs from a previous meta-analysis were combined with aggregate data from 14 new RCTs. Subjects were either randomized to ABC cART vs. other cARTs, or ABC was prescribed as a background medication. Primary analyses included ABC-randomized trials with a follow-up of ≥48 weeks and focused on MI. Secondary analyses included shorter duration trials and non-ABC-randomized trials and estimated IR and RR for both MI and CAD.

Results. In 66 clinical trials (75% male, aged 18–85 years), 13,119 adults were on ABC-containing cART and 7,350 were not. Exposure-adjusted IR for MI was 1.5 per 1,000 person-years (PY) [95% Confidence Interval (CI) 0.67–3.34] in the ABC-exposed group, and 2.18 per 1,000 PY (95% CI 1.09–4.40) in the unexposed group with a RR of 0.69 (95% CI 0.24–1.98). RR for MI was 0.69 (95% CI 0.24–1.99) with inclusion of shorter duration studies, and 0.83 (95% CI 0.44–1.60) with inclusion of ABC non-randomized studies. The IR for CAD was 2.9 per 1,000 PY (95% CI 2.09–4.02) in the ABC-exposed group and 4.69 per 1,000 PY (95% CI 3.4–6.47) in the unexposed group with studies of ≥48 weeks of follow-up, with a RR of 0.62 (95% CI 0.39–0.98). With inclusion of studies of <48 weeks, IR for CAD in the ABC-exposed group was 2.96 per 1,000 PY (95% CI 2.14–4.08) and 4.65 per 1,000 PY (95% CI 3.37–6.42) in the unexposed group with a RR of 0.64 (95% CI 0.4–1.0)

Conclusion. This expanded meta-analysis found comparable IRs for MI and CAD among ABC-exposed and unexposed subjects, suggesting no increased risk for MI or CAD following ABC exposure. These findings provide further evidence against an association between MI and CAD and ABC exposure in this clinical trial population. Modifiable risk factors for MI and CAD should be addressed when prescribing ART for treatment of HIV.

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576. Comparison of Risk Category Predictions of Framingham Risk Score (FRS), Atherosclerotic Cardiovascular Disease Risk Score (ASCVD), Systematic Coronary Risk Evaluation (SCORE) and Data Collection on Adverse Events of Anti-HIV Drugs (D:A:D) in HIV Infected Patients

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Background. Cardiovascular disease (CVD) is a major cause of mortality in HIV infected patients. Agreement between commonly used risk prediction equations for classification of high-risk individuals is varied in different populations. We aimed to compare the degree of agreement of four CVD risk calculators in a multicenter cohort.

Methods. A cross-sectional study was conducted among adult HIV patients who are followed in five tertiary centers between July 2016 and February 2017. Inclusion criteria were: age 40–74 years, without known CVD and not receiving statins. All necessary information to calculate risk scores were collected during follow-up visits with a standardized form. Web-based tools for each score were used for calculations. Persons were considered at higher risk if 10-year CVD risks ≥20% with FRS-CVD, >10% with SCORE for high-risk countries, >7.5% for ASCVD, and 5 year risk ≥5% with DAD or if they had additional risk factors defined for each score for automatic high-risk stratification. Based on the interpretation of CVD risk, the patients were placed in two categories: low/medium and high/very high. Agreement between scores was assessed by Cohen's kappa (κ) statistics.

Results. Of 667 patients who were active during the study period, CVD scores of 527 HIV-infected patients (82% male) were assessed. Median (interquartile range) age was 48 (43–54) years. Prevalence of CVD risk factors were: 11% family history of early-onset CVD, 50% current smokers, 57% overweight or obese, 22% hypertension, and 8% diabetes mellitus. The prevalence of high CVD scores or risk equivalents was high ranging from 20.3% to 36.3%. The DAD-full, DAD-reduced, ASCVD and SCORE had 83.9%, 85%, 83.5% and 93.2% agreement compared with the FRS-CVD (κ = 0.55, 0.59, 0.61 and 0.80), respectively. European AIDS Clinical Society, European Society of Cardiology, Adult Treatment Panel-III and 2013 American College of Cardiology/American Heart Association guidelines would recommend statin therapy for 35.1%, 21.8%, 31.9% and 36.4% of patients, respectively.

Conclusion. We found moderate/substantial agreement among risk prediction tools evaluated in this study. Agreement was high for lower scores and at higher ages. Whether those scores accurately estimate risk at population level needs further evaluation.

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577. Dyslipidaemia Among Children Living with HIV after 48 Weeks of First-line Antiretroviral Therapy

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Background. Antiretroviral therapy (ART) associated dyslipidaemia has been reported among children living with HIV (CLHIV) in both developed and developing countries. Not much data is available on changes in blood lipid profile among CLHIV on first-line ART in India. Aims: To study the changes in the Lipid profile among CLHIVs, 12 months after initiating a non-nucleoside reverse transcriptase inhibitor-based (NNRTI) ART

Methods. A prospective multicentric study enrolled HIV infected children, between 2-12 years of age, initiating NNRTI-based ART in south India. Clinical details, anthropometry and fasting blood for estimating serum total cholesterol (TC), triglyceride (TGL), high-density cholesterol (HDL-c), low-density cholesterol (LDL-c), plasma viral load and CD4 cell counts was collected. These measurements were repeated at 6th and 12th month after ART initiation. Proportion of children with abnormal lipid profile at baseline and 12 months after ART were compared using McNemar test. Generalized linear model was applied to predict factors associated with changes in serum lipid levels 12 months post-ART.

Results. Of the 393 HIV-infected children, 66 % received Zidovudine and 14 % Stavudine in their ART regimen. After 12 months of ART, TC, LDL-c and HDL-c increased from baseline by a mean of 31mg/dL, 13.7 mg/dL and 19mg/dl, respectively. TC/HDL-c ratio decreased from a mean of 5.1 to 3.5 (all changes, P <0.000). At baseline and 12 months, respectively, TC was >200 mg/dL for 3% and 13% of patients, LDL-c was >130 mg/dL for 5% and 8%, HDL-c was <35 mg/dL for 70% and 16%, and TG were >150 mg/dL for 38% and 24%. Baseline HIV viral load >400 copies/mL (P, 0.01) was associated with increase in HDL-c and lower TG levels (P, 0.008). Baseline CD4 % <15 and younger age group were significantly associated with increase in TC (P, 0.02) and decrease in TGL (P,0.02) after 12-months of ART.

Conclusion. Significant changes in serum lipid profile occurs early in children started on first-line ART. Increase in the cardio protective HDL-c was proportionally greater than increases in TC or TGL. Regular monitoring of lipid levels will help in early identification of metabolic complications of ART

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578. Echocardiographic Assessment of US Air Force Members with Early HIV Infection

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Background. HIV-infected individuals are at increased risk for cardiovascular disease (CVD) compared with HIV-uninfected persons. CVD studies are typically conducted years after HIV diagnosis, however the impact of uncontrolled HIV replication and immune activation on cardiovascular health during early HIV infection has not been adequately studied.

Methods. All US Air Force members with HIV infection receive comprehensive medical evaluations to include cardiovascular assessment by screening transthoracic echocardiography (TTE). This retrospective study analyzed demographic, CVD, and HIV disease characteristics in all newly diagnosed USAF members evaluated between