

ARV Therapies and Therapeutic Strategies

REPORTING ON CROI 2015

Comprehensive Expert Review and Discussion of Key Presentations

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Incidence and Risk of Myocardial Infarction by Type in the NA-ACCORD

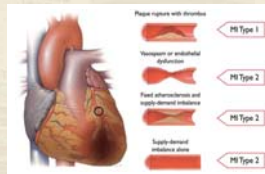
Drozdz DR, Kitahata MM, Althoff KN, Zhang J, Heckbert S, Budoff M, Palella F, Klein D, Moore RD, Crane H¹ for the North American AIDS Cohort Collaboration on Research and Design (NA-ACCORD) of IeDEA

Abstract 748

Incidence and Risk of Myocardial Infarction by Type in the NA-ACCORD

Background

- HIV-infected individuals may be at increased risk of atherosclerosis and myocardial infarctions (MI)
- Few studies in HIV have examined MIs by pathophysiologic type
 - **Primary** – atherosclerotic plaque rupture
 - **Secondary** – supply-demand mismatch



Aims

- Determine the incidence of primary and secondary MIs in NA-ACCORD
- Describe causes of secondary MIs
- Define traditional and HIV-associated risk factors for primary MI

Methods

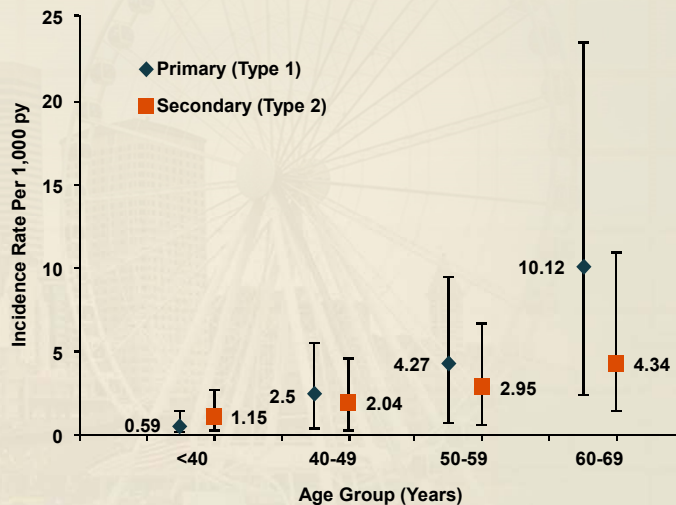
- Central ascertainment, adjudication, and classification of MIs by type
- Crude and adjusted incidence rates using Poisson regression by type

Figure: Differentiation between myocardial infarction (MI) types 1 and 2 according to the condition of the coronary arteries

Thygesen K, et al. J Am Coll Cardiol 2014.

Results

- 271 primary MIs, 219 secondary MIs among 25,094 individuals in >100,000 PYs
- Baseline characteristics
 - Primary MI (vs. secondary)
 - male, elevated total cholesterol, statin users, history of ART
 - Secondary MI (vs. primary)
 - female, black, IDU transmission risk factor, no ART
- Crude IR (per 1000 PYs):
 - Primary 2.68 [2.38 – 3.02]
 - Secondary 2.17 [1.90 – 2.48]



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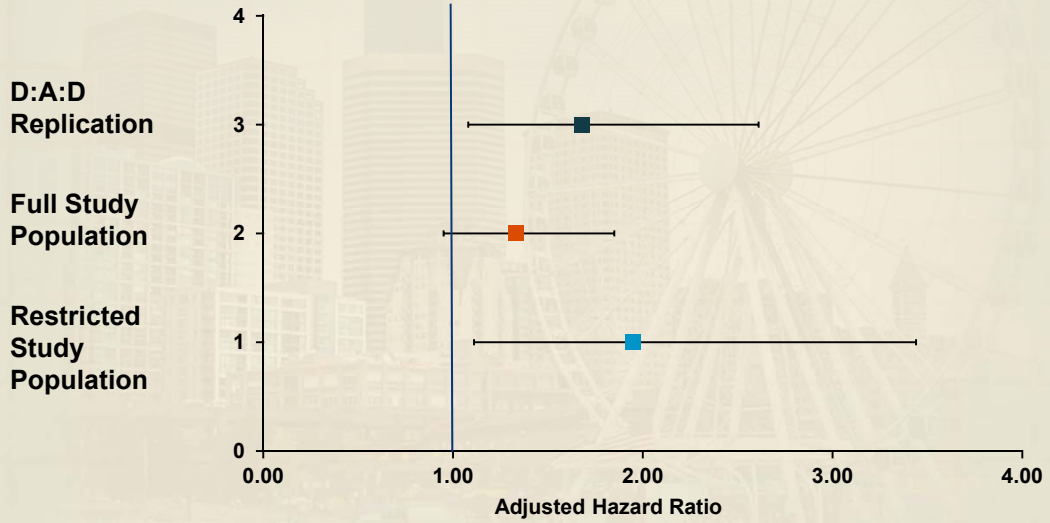
Primary MI Risk Factors

Time-Updated Predictors of Primary MI Risk

| aIRR [95% CI] | | aIRR [95% CI] | |
|---|--------------------------|------------------------------------|--------------------------|
| Demographic & Traditional Risk Factors | | | |
| Age (years) | | Elevated Total Cholesterol | |
| <40 | 1.00 | No | 1.00 |
| 40 – 49 | 2.03 [1.51, 2.72] | Yes | 1.09 [0.87, 1.36] |
| 50 – 59 | 2.76 [2.01, 3.78] | Unassessed | 1.08 [0.76, 1.52] |
| 60 – 69 | 5.13 [3.56, 7.40] | Low HDL Cholesterol | |
| Sex | | No | 1.00 |
| Male | 1.00 | Yes | 1.47 [1.13, 1.93] |
| Female | 0.94 [0.72, 1.22] | Unassessed | 1.14 [0.79, 1.65] |
| Race and Ethnicity | | Renal Impairment | |
| White | 1.00 | eGFR ≥30 | 1.00 |
| Black | 1.02 [0.81, 1.29] | eGFR <30 | 5.49 [4.05, 7.45] |
| Hispanic | 0.67 [0.44, 1.01] | Statin Use | |
| Other/Unknown | 0.68 [0.40, 1.18] | No | 1.00 |
| HIV Transmission Risk | | Yes | 2.01 [1.57, 2.57] |
| MSM | 1.00 | HIV-Related Risk Factors | |
| IDU | 1.29 [0.99, 1.68] | CD4 Count (Cells/mm ³) | |
| Heterosexual | 0.94 [0.72, 1.23] | ≥500 | 1.00 |
| Other/Unknown | 1.14 [0.80, 1.62] | 350 – 499 | 1.27 [0.97, 1.66] |
| Cohort Entry | | 200 – 349 | 1.32 [1.01, 1.73] |
| 1995 – 2000 | 1.00 | 100 – 199 | 1.90 [1.40, 2.58] |
| 2001 – 2005 | 0.76 [0.60, 0.95] | <100 | 3.03 [2.23, 4.13] |
| 2006 – 2011 | 1.02 [0.75, 1.38] | Missing | 0.99 [0.42, 2.37] |
| Cigarette Smoking | | HIV Viral Load (Copies/mL) | |
| Never | 1.00 | <400 | 1.00 |
| Ever | 1.75 [1.33, 2.3] | ≥400 | 1.56 [1.27, 1.93] |
| Hypertension | | Missing | 1.19 [0.75, 1.86] |
| No | 1.00 | History of a Clinical AIDS | |
| Yes | 1.83 [1.49, 2.24] | No | 1.00 |
| Diabetes Mellitus | | Yes | 1.26 [1.03, 1.53] |
| No | 1.00 | | |
| Yes | 1.56 [1.23, 1.97] | | |

Drozdz D, et al. 22nd CROI; Seattle, WA; February 23-26, 2015. Abst. 748.

Primary MI Risk Factors



Palella F, et al. 22nd CROI; Seattle, WA; February 23-26, 2015. Abst. 749LB.