Depressive Disorders Predicts Incident Acute Myocardial Infarction in HIV+ Veterans: Veterans Aging Cohort Study

Tasneem Khambaty¹, Jesse C. Stewart¹, Samir K. Gupta², Chung-Chou H. Chang¹, Adeel A. Butt¹, Cynthia L. Gibert², Hilary A. Tindle³, Heidi Crane⁴, Roger Bedimo⁵, Matthew S. Freiberg³

¹Department of Psychology, Indiana University-Purdue University Indianapolis, Indianapolis, IN ²Division of Infectious Diseases, Indiana University School of Medicine, Indianapolis, IN ³University of Pittsburgh School of Medicine and Graduate School of Public Health, Pittsburgh, PA ⁴University of Pittsburgh School of Medicine, Pittsburgh, PA ⁵George Washington University School of Medicine, Washington, DC ⁶University of Washington School of Medicine, Seattle, WA ⁷VA North Texas Healthcare System, Dallas, TX

BACKGROUND

Incidence of acute myocardial infarction (AMI) is higher in HIV-infected patients than in uninfected patients. Because depressive disorders are independent risk factors for AMI in the general population and are highly prevalent in those with HIV infection, we examined the relationship between these psychiatric conditions and incident AMI in a large sample of HIV-infected patients.

METHODS

The Veterans Aging Cohort Study-Virtual Cohort (VACS-VC) is a cohort of HIV-infected and age, gender, race/ethnicity, and clinical site matched HIV-uninfected veterans who were identified from U.S. Department of Veterans Affairs (VA) administrative data in the fiscal years 1998-2003 using a modified existing algorithm.

STATISTICAL ANALYSES

RESULTS

RESULTS contd.

CONCLUSION

LIMITATIONS

Using electronic medical record to identify cases with depressive disorders may have led to high specificity but low sensitivity as any depressive disorder variable. Each set was (1) adjusted for demographic factors, CVD risk factors, and other important covariates, and (2) further adjusted for HIV-specific factors.

Kaplan-Meier survival curves to illustrate time from enrollment to first AMI event for participants with any depressive disorder versus no depressive disorder.

All patients were followed for a median of 5.9 years from their first clinic visit on or after April 1, 2003, to an AMI event, death, or the last follow-up date (December 31, 2009).

No depressive disorder

During the baseline period, 6,219 (23%) depressive disorder cases, including 5,204 (19%) MDD cases and 2,480 (9%) dysthymic disorder cases, were identified.

During the 5.9 years of follow-up, 367 (1.3%) incident AMI events occurred.

Figure 2. Kaplan-Meier Survival Curves for Time to Event by Any Depressive Disorder

Odds of incident AMI per 1000 person-years were higher among those with versus without any depressive disorder (ratio 1.28, 95% CI: 1.01-1.62, MDD ratio (rate 1.24, 95% CI: 0.96-1.59), and dysthymic disorder (rate 1.46, 95% CI: 1.06-1.90), although the HR for MDD fell slightly below significance (Figure 1).

Using electronic medical record to identify cases with depressive disorders may have led to high specificity but low sensitivity as any depressive disorder variable. Each set was (1) adjusted for demographic factors, CVD risk factors, and other important covariates, and (2) further adjusted for HIV-specific factors.

Figure 1. Unadjusted Incident AMI Rates Per 1000 Person-Years by Depressive Disorder

Figure 1. Association of Depressive Disorders with Incident Acute Myocardial Infarction (separate models)

Table 1. Baseline Characteristics of Participants Stratified by Depression Status

Table 2. Association of Depressive Disorders with Incident Acute Myocardial Infarction (separate models)

METHODS contd.

Figure 2. Kaplan-Meier Survival Curves for Time to Event by Any Depressive Disorder

Incident AMI rates per 1000 person-years were higher among those with versus without any depressive disorder (ratio 1.28, 95% CI: 1.01-1.62, MDD ratio (rate 1.24, 95% CI: 0.96-1.59), and dysthymic disorder (rate 1.46, 95% CI: 1.06-1.90), although the HR for MDD fell slightly below significance (Figure 1).

Incident AMI rates per 1000 person-years were higher among those with versus without any depressive disorder (ratio 1.28, 95% CI: 1.01-1.62, MDD ratio (rate 1.24, 95% CI: 0.96-1.59), and dysthymic disorder (rate 1.46, 95% CI: 1.06-1.90), although the HR for MDD fell slightly below significance (Figure 1).

Incident AMI rates per 1000 person-years were higher among those with versus without any depressive disorder (ratio 1.28, 95% CI: 1.01-1.62, MDD ratio (rate 1.24, 95% CI: 0.96-1.59), and dysthymic disorder (rate 1.46, 95% CI: 1.06-1.90), although the HR for MDD fell slightly below significance (Figure 1).

Incident AMI rates per 1000 person-years were higher among those with versus without any depressive disorder (ratio 1.28, 95% CI: 1.01-1.62, MDD ratio (rate 1.24, 95% CI: 0.96-1.59), and dysthymic disorder (rate 1.46, 95% CI: 1.06-1.90), although the HR for MDD fell slightly below significance (Figure 1).