(684) GREATER INCIDENCE OF DIABETES OVER 10 YEARS AMONG DEPRESSED US VETERANS WITH HIV

Kassem Bourgi [1], Suman Kundu [2] , Jesse C. Stewart [3], Matthew Freiberg [2], Samir K. Gupta [1]

[1] Indiana University, Indianapolis, IN, USA; [2] Vanderbilt University, Nashville, TN, USA; [3] Indiana University Purdue University, Indianapolis, IN, USA

BACKGROUND

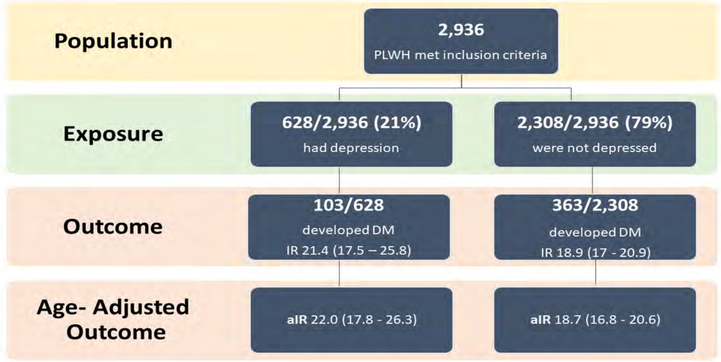
- Persons living with HIV (PLWH) have an increased prevalence of depression and incidence of cardiovascular disease (CVD) and diabetes mellitus (DM).
- Underlying psychiatric disease has been associated with increased risk of cardiovascular disease, liver disease, cerebrovascular disease (CVD) and renal disease.
- Depressed US veterans with HIV have a greater incidence of CVD, possibly due to biological (increased systemic inflammation /coagulation) and/or behavioral (smoking, sedentary lifestyle, poor medication adherence) mechanisms.

METHODS

- We used the Veterans Aging Cohort Study (VACS)-Survey Cohort and included patients without DM at baseline.
- Baseline and incident DM were identified by ICD-9 codes.
- Baseline depressive symptom severity was assessed using the Patient Health Questionnaire-9 (PHQ-9), with prevalent depression defined by a score ≥10.
- Participants were followed until incident DM, death, or last follow-up date (12/31/14).
- Multivariate Cox regression models were constructed to examine the associations between baseline PHQ-9 variables (continuous and categorical) and incident DM.

Acknowledgement:
The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health. This work was supported by National Institutes of Health NHLBI R01126557

RESULTS



	Depressed	Not Depressed
Total	**628**	**2,308**
Age, median (Q1,Q3)	48.5 (43.0,53.7)	49.1 (43.2,54.8)
Male	609 (97%)	2239 (97%)
Race		
White Race	149 (24%)	453 (20%)
Black Race	376 (60%)	1,582 (70%)
BMI ≥ 30 kg/m2	79 (13%)	291 (13%)
LDL ≥ 160 mg/dL	35 (6%)	164 (8%)
Current Smoker	405 (65%)	1182 (51%)
Essential Hypertension	359 (57%)	1734 (75%)
Protease Inhibitor Use	291 (46%)	1093 (47%)
Baseline CD4 T-cell count		
Less than 200 cell/mm3	174 (28%)	491 (21%)
200 – 500 cell/mm3	274 (44%)	1,087 (47%)
More than 500 cell/mm3	176 (28%)	724 (32%)

Table 1. Baseline Characteristics for depressed and non-depressed PLWH included in the study.

Cox- regression models:

Demographic variables: age, sex and race

Clinical variables: BMI, Smoking, Hypertension, prevalent CVD, lipids

PHQ-9 as categorical variable ≥ 10 vs. < 10	*Adjusted for Demographic variables*	**24% increased risk for DM** **HR=1.24,** *95% CI: 1.00-1.55, p=0.050*
	Adjusted for Demographic & Clinical variables	**18% increased risk for DM** **HR=1.18,** *95% CI:0.94 – 1.47, p=0.148*
PHQ-9 as continuous variable 1 SD increase in PHQ-9 (5.6 points of a 0 – 27 scale)	*Adjusted for Demographic variables*	**12% increased risk for DM** **HR=1.12,** *95% CI: 1.02-1.22, p=0.015*
	Adjusted for Demographic & Clinical variables	**10% increased risk for DM** **HR=1.10,** *95% CI: 1.00-1.20, p=0.048*

CONCLUSIONS

1. Among US veterans with HIV, depression is associated with a significant increase in the incidence of DM.
2. More severe depression is associated with higher risk of developing DM.
3. Further research is needed to understand whether depression treatment lowers the risk of DM among PLWH.