

Is the incidence of age-related non-AIDS conditions higher among people living with HIV compared to age-matched people living without HIV?

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Background:

Most previous studies reporting non-AIDS conditions (NAC) among people living with HIV (PLHIV) were cross-sectional and included participants with varying degrees of viral suppression. This study assessed and compared the incidence of common age-related NAC (cardiovascular diseases (CVD), major non-HIV neurological and cognitive disorders, chronic lung/liver/renal diseases, diabetes, osteoporosis, and non-AIDS cancers) among optimally treated PLHIV and their age and lifestyle-matched HIV-negative person over 9-10 years follow-up.

Methods:

This study included 254 PLHIV and 69 HIV-negative (baseline age=49, HIV RNA<50 cp/ml among PLHIV=78%) from Holdsworth House primary care clinic in Sydney, Australia. At baseline, medical history, lifestyle factors, mood status, and cognitive function were assessed. Follow-up outcome data were collected through review of medical records. Kaplan-Meier curves assessed differences in the probability of developing individual and combined NAC over time among younger (baseline age<50) and older (baseline age≥50) PLHIV and younger and older HIV-negative participants. Cox-proportional hazard models assessed the individual and interaction effects of HIV and age on the risk of developing combined NAC adjusting the effects of covariates.

Results:

Older PLHIV had the highest incidence for CVD, major neurological and cognitive disorders, osteoporosis, non-AIDS cancers, and combined NAC, while older HIV-negative had the highest incidence for diabetes and chronic lung/liver/renal diseases. Kaplan-Meier curves showed that the differences among the four HIV and age groups were significant for CVD, osteoporosis, and combined NAC. Multivariate cox-proportional hazard models showed that HIV (HR=2.23(1.03-4.82), p<0.05) and baseline age (HR=1.09(1.06-1.13), p<0.001), but not their interaction effect, were associated with higher risk for developing combined NAC. In addition, smoking and taking Abacavir/Efavirenz/Atazanavir/Darunavir containing anti-retroviral treatments were associated with a higher hazard of developing combined NAC.

Conclusion:

Despite successful ART, the higher risks of NAC among older PLHIV warrant consideration of public health interventions and individualized holistic care plans for effective prevention, detection, and management.

Disclosure of Interest Statement:

Bruce J. Brew contributes to the Natalizumab advisory board (Australia) 2006-; Biogen Idec PML advisory board (Natalizumab) International 2008-; GlaxoSmithKline national advisory board 2009-; Merck Serono PML international advisory board 2009- and contributed to the Biogen Alzheimer's advisory board in 2018. He has received speaker honorarium from Johnson and Johnson in 2018. He is on the IDS editorial board since 2018; and is the Journal for Neurovirology.

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All the other authors declare no conflict of interests.