Comment on Eilam et al. Incidence of acute ischemic cerebrovascular events in a cohort of HIV-infected patients

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In their very interesting study, Eilam et al. [1] investigated the rate of ischemic stroke or transient ischemic attack (TIA) in a HIV population. The study included 300 patients with HIV and age- and gender- matched non-HIV individuals. After adjusting for vascular risk factors in a multivariate regression analysis, the odds ratio for a cerebrovascular events in the HIV patient group was 2.29 ($p=0.057$).

We conducted a similar study in Germany based on a longitudinal database (Disease Analyzer database) that contains information on about 5 million subjects in the time period between 1 January 2015 and 31 December 2019 [2]. This study included adult patients (≥ 18 years) who had received a diagnosis of HIV (ICD-10: B20-B24, R75, Z21) in practices in Germany during 2015–2019. Only patients whose HIV diagnosis was confirmed in two quarters were included.

To investigate the association between HIV and the probability of having stroke or TIA, a multivariate Cox regression model was fitted, with stroke/TIA as a dependent variable and HIV, and co-diagnoses (hypertension, diabetes mellitus, lipid metabolism disorder, obesity and atrial fibrillation) as impact variables. P values < 0.05 were taken to indicate statistical significance. Analyses were performed using SAS version 9.4 (SAS Institute, Cary, NC).

The present study included 579 individuals with HIV (mean $\pm$ SD age 48 ± 13 years, 73% male) and 579 individuals without HIV with same age and sex structure. The cumulative incidence of cerebrovascular events during the average follow-up time of 5.5 years was 2.3% in HIV patients and

4.3% in non-HIV individuals. After adjusting for co-diagnoses, no significant association was observed between HIV and the risk of cerebrovascular events (HR 0.79; 95% CI 0.27–2.31, $p=0.663$). In age- and gender-stratified analyses, there were no significant associations between HIV and cerebrovascular events in different age groups, men and women.

Unfortunately, in our study, no data on smoking or socioeconomic status were available. Moreover, HIV, comorbidity and cerebrovascular event diagnoses relied solely on ICD-10 codes. Moreover, slightly different methods were used, and analyses were performed in two different countries with two different patient populations. Based on our results, we cannot confirm for German outpatients that HIV is a risk factor for cerebrovascular events.

References

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