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HIV is associated with airway obstruction: a matched controlled study

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ABSTRACT

OBJECTIVE - To explore whether airway obstruction is associated with HIV in a cohort of HIV-infected and uninfected smokers. **METHODS** - People living with HIV (PLWHIV) participated in the ANRS EP48 HIV CHEST study, an early lung cancer diagnosis study with low-dose chest tomography. HIV-uninfected study participants were from the CONSTANCES cohort. Inclusion criteria were an age greater than 40 years, a smoking history of at least 20 pack-years, and for PLWHIV, a CD4 T-lymphocyte nadir less than 350/ μ l and last CD4 cell count more than 100 cells/ μ l. Two randomly selected HIV-uninfected study participants were matched by age and sex with one PLWHIV. Prebronchodilator forced expiratory volume in 1 s (FEV1) to forced vital capacity (FVC) ratio was the primary outcome, and association of FEV1/FVC ratio less than 0.70 and FEV1 less than 80% of the theoretical value, as a proxy of chronic obstructive pulmonary disease, the secondary outcome. **RESULTS** - In total, 351 PLWHIV and 702 HIV-uninfected study participants were included. Median age was 50 years, and 17% of study participants were women. Plasma HIV RNA was less than 50 copies/ml in 89% of PLWHIV, with a median CD4 cell count of 573 cells/ μ l. HIV (β -2.19), age (per 10 years increase; β -2.81), tobacco use (per 5 pack-years increase; β -0.34), and hepatitis C virus serology (β -2.50) were negatively associated with FEV1/FVC. HIV [odds ratio (OR: 1.72)], age (per 10 years increase; OR 1.77), and tobacco use (per 5 pack-years increase; OR 1.11) were significantly associated with the secondary outcome. **CONCLUSION** - Our study found a significant association of airway obstruction with HIV status in smokers aged more than 40 years with previous immunodeficiency.

KEYWORDS: -

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