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The prevalence of hyperglycemia and its impact on mortality among people living with HIV

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DISCLAIMER

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ABSTRACT

Abstract

Background

Life expectancy and quality of life of people living with HIV have been dramatically improved after introducing antiretroviral therapy, and the prevalence of non-communicable diseases has increased. Several studies have found that hyperglycemia with or without type 2 diabetes was associated with poor outcomes in people living with HIV.
The study's objective was to determine the prevalence of hyperglycemia and assess its impact on mortality.

Materials and Methods

A retrospective cohort study was conducted among people living with HIV diagnosed in 2012-2018 and followed through 2020 at the Infectious Diseases, AIDS and ClinicalImmunology Research Center in Tbilisi, Georgia. Primary outcomes of interest included the prevalence of hyperglycemia and mortality. Causes of death were classified according to the Coding of Death in HIV(CoDe) protocol.

Results

Our study included 2914 people living with HIV. Two hundred and forty-two (8.3%)patients had hyperglycemia, with an increasing prevalence by age. Three hundred one(9.7%) participants died over the median 3.71 (IQR: 2.14-5.37) years of follow-up. Among these, 139 (46.2%) were due to AIDS-related causes, 123 (40.9%) – were due to non-AIDS causes, and in 39 (12.9%) cases, the cause of death could not be determined. Overall, the cohort contributed to 11,148 person-years offollow-up (PYFU), translating into a mortality rate of 2.70 deaths per 100 PYFU. The mortalityrate was significantly higher among individuals with hyperglycemia - 11.17 deaths per 100PYFU vs 2.07 deaths per100 PYFU amongnormoglycemicpatients($p<0.0001$).

Conclusions

Hyperglycemia was associated with increased odds of mortality. Screening andmanagement of hyperglycemia should be integrated into routine HIV clinical services as part of acomprehensivecarepackage.

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KEYWORDS

HIV, diabetes, hyperglycemia, mortality, Eastern Europe, Georgia

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MATERIALS TEXT

Hyperglycemia_dataset.xlsx

DISCLAIMER:

1 Prepare database just like one in the Materials section.

2 Analyse the data contained in database.

3 Formulate conclusions.

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