

ABSTRACT

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Glioblastoma multiforme in patients with human immunodeficiency virus: an integrated review and analysis.

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INTRODUCTION: As lifespans for persons living with HIV (PLWH) have improved over the last decade, there has been a simultaneous increase in non-AIDS-related cancer in that group. However, there is a paucity of data regarding the incidence of glioblastoma multiforme (GBM) in PLWH. Better understanding of the oncogenesis, natural history, and treatment outcomes of GBM in PLWH should lead to improved treatment strategies.

METHODS: We performed a comprehensive literature search of six electronic databases to identify eligible cases of GBM among PLWH. Kaplan-Meier estimates, Fisher's exact test, and logistic regression were used to interrogate the data. Epidemiologic data on global HIV prevalence was obtained from the 2016 UNAIDS incidence report, and CNS cancer incidence was obtained from the GDB 2016 Brain and Other CNS Cancer Collaborators.

RESULTS: There is an inverse relationship between the incidence of HIV and CNS cancer globally. Median overall survival (OS) from GBM diagnosis was 8 months. Estimates for survival at 1 and 2 years were 28 and 5%, respectively. There were no statistically significant predictors of OS in this setting. There was a significant difference ($p < 0.01$) in OS in PLWH and GBM when compared to TCGA age matched cohorts.

CONCLUSION: The diagnosis of GBM in PLWH is severely underreported in the literature. Despite maximal treatment, OS in this patient population is significantly less than in HIV-negative people. There was a poor prognosis of GBM in PLWH, which is inconsistent with previous reports. Further investigation is required for PLWH and concomitant GBM. Analyses must consider if HAART is maintained in PLWH during GBM treatment.

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